ADOBE® FRAMEMAKER® 8
USER GUIDE

Contents

Chapter 1: Getting started

If you haven't installed your new software, begin by reading some information on installation and other preliminaries. Before you begin working with your software, take a few moments to read an overview of Adobe® Help® and of the many resources available to users. You have access to plug-ins, templates, user communities, seminars, tutorials, RSS feeds, and much more.

Installation

Requirements

To review complete system requirements and recommendations for your Adobe software, see the Read Me file on the installation CD.

Install the software

1 Close any other Adobe applications open on your computer.

2 Insert the installation disc into your CD drive, and follow the on-screen instructions.

Note: For more information, see the Read Me file on the installation CD.

Activate the software

If you have a single-user retail license for your Adobe software, you will be asked to activate your software; this is a simple, anonymous process that you must complete within 30 days of starting the software.

For more information on product activation, see the Read Me file on your installation CD, or visit the Adobe website at www.adobe.com/go/activation.

1 If the Activation dialog box isn't already open, choose Help > Activate.

2 Follow the on-screen instructions.

Note: If you want to install the software on a different computer, you must first deactivate it on your computer. Choose Help > Deactivate.

Register

Register your product to receive notifications of updates and other services.

To register, follow the on-screen instructions in the Registration dialog box, which appears after you install and activate the software.

If you postpone registration, you can register at any time by choosing Help > Registration.

Adobe Help

Adobe Help resources

Documentation for your Adobe software is available in a variety of formats.

In-product and LiveDocs Help

In-product Help provides access to all documentation and instructional content available at the time the software ships. It is available through the Help menu in your Adobe software.

LiveDocs Help includes all the content from in-product Help, plus updates and links to additional instructional content available on the web. For some products, you can also add comments to the topics in LiveDocs Help. Find LiveDocs Help for your product in the Adobe Help Resource Center, at www.adobe.com/go/documentation.

Think of Help, both in the product and on the web, as a hub for accessing additional content and communities of users. The most complete and up-to-date version of Help is always on the web.

PDF documentation

The in-product Help is also available as a PDF that is optimized for printing. Other documents, such as installation guides and white papers, may also be provided as PDFs. All documents available in the OnlineManuals folder in the previous versions of Adobe FrameMaker® are posted on the Adobe web.

All PDF documentation is available through the Adobe Help Resource Center, at www.adobe.com/go/documentation.

To see the PDF documentation included with your software, look in the Documents folder on the installation or content CD.

Printed documentation

Printed editions of the product Help are available for purchase in the Adobe Store, at www.adobe.com/go/store. You can also find books published by Adobe publishing partners in the Adobe Store.

A printed Getting Started Guide is also included with the software.

Customer support

Visit the Adobe Support website, at www.adobe.com/support, to find troubleshooting information for your product and to learn about free and paid technical support options. Follow the Training link for access to Adobe Press books, a variety of training resources, Adobe software certification programs, and more.

Downloads

Visit www.adobe.com/go/downloads to find free updates, tryouts, and other useful software. In addition, the Adobe Store (at www.adobe.com/go/store) provides access to thousands of plug-ins from third-party developers, helping you to automate tasks, customize workflows, create specialized professional effects, and more.

Adobe Labs

Adobe Labs® gives you the opportunity to experience and evaluate new and emerging technologies and products from Adobe.

At Adobe Labs, you have access to resources such as these:

• Prerelease software and technologies

• Code samples and best practices to accelerate your learning

• Early versions of product and technical documentation

• Forums, wiki-based content, and other collaborative resources to help you interact with like-minded developers

Adobe Labs fosters a collaborative software development process. In this environment, customers quickly become productive with new products and technologies. Adobe Labs is also a forum for early feedback, which the Adobe development teams use to create software that meets the needs and expectations of the community.

Visit Adobe Labs at www.adobe.com/go/labs.

User communities

User communities feature forums, blogs, and other avenues for users to share technologies, tools, and information.

Users can ask questions and find out how others are getting the most out of their software. User-to-user forums are available in English, French, German, and Japanese; blogs are posted in a wide range of languages.

To participate in forums or blogs, visit www.adobe.com/communities.

What's new

Top new features of Adobe FrameMaker 8

Unicode support Support for the Unicode text encoding standard lets you author content in multiple languages. All features in FrameMaker, such as find and change, markers, hypertext, and catalog entries, support Unicode. You can export to PDF with Unicode bookmarks, tags, comments, and so on. You can import or export Unicode content from other applications. Additional dictionaries help you author content in more languages.

Enhanced conditional text features Single-sourcing of documents is enhanced by the following features:

• Manage condition tags, using the new Manage Conditional Tag dialog box.

• Add new condition tags, using the new Add Conditional Tag dialog box.

• Rename condition tags.

• Use the New Color button in the Edit Conditional Tag dialog box to define a new color for a condition tag.

• Visually distinguish text with multiple condition tags, as the color of the text depends on the set of tags applied to the text. For more information, see "Appearance of text with multiple condition tags" on page 307.

• Build Boolean expressions with complex combinations of condition tags and Boolean operators to generate conditional output.

Enhanced Structured/XML authoring Structured authoring is improved with the following enhancements:

• XML roundtripping is enhanced to preserve XML comments as markers. System variables and Processing Instructions (PIs) are also roundtripped.

• You can import element formatting from CSS into DTD, so you can ensure consistent formatting across different XML applications. The CSS file can be referenced in the XML document or manually imported. Multiple CSS files can be imported sequentially, for multi-level formatting.

• Support for single-sourcing workflows lets you filter structured documents. The single-sourcing workflows are preserved across other XML applications, which use attribute values for filtering XML documents.

Filter By Attribute You can filter structured documents based on attribute values using complex Boolean expressions. Multiple expressions can be created and saved for generating different outputs.

Track Text Edits You can track text edits made in a document. The added and deleted text are highlighted for visual distinction. You can navigate through the edited sections and accept or reject specific changes. You can also preview the document to see its original or final state. The changed information is preserved in the XML roundtrip.

DITA application pack The in-built DITA application pack and a DITA menu, facilitate DITA authoring. You can generate a FrameMaker document directly from a DITA Map. You can use the standard FrameMaker features while authoring DITA content.

3D workflows (Windows® only) You can insert 3D objects (U3D format) in FrameMaker 8 documents only. You can also set parameters, such as default view, rendering mode, background color, and lighting scheme for the 3D object. You can publish the document in PDF format with active 3D models. The 3D objects are preserved in the XML roundtrip.

Support for SWF files (Windows only) You can create documents with SWF files, such as Adobe Captivate® movies. The SWF object is preserved in the XML roundtrip.

HTTP file path support (Windows only) You can specify an HTTP path to import graphics into a document, either by copying or by reference. The HTTP path is preserved in the XML roundtrip.

Enhanced WebDAV support The WebDAV support is extended to allow authoring and editing of XML files located on the Web-based Distributed Authoring and Versioning (WebDAV) server.

Import of Office 2007 content (Windows only) You can import content from Microsoft® Word® and Microsoft Excel® 2007.

Chapter 2: FrameMaker basics

The Welcome Screen

By default, the Welcome Screen appears when you open FrameMaker only when Adobe Flash® Player is installed in your machine. If you want, you can prevent the Welcome Screen from appearing using the following steps.

To prevent the display of the Welcome Screen:

1 Select File > Preferences > General.

The Preferences dialog box appears.

2 Select the Don't Show Welcome Screen option if you don't want this dialog box to appear when you open the software.

3 Click Set.

The Welcome Screen isn't displayed the next time you open FrameMaker.

Note: You can also select the Don't Show Welcome Screen Again option in the Welcome Screen.

About the workspace

The Adobe FrameMaker workspace comprises structured and unstructured interfaces. A workspace includes a Document window with formatted contents or the Structure View window with the Element Catalog. When you work in the unstructured workspace, the only window available is the Document window, which displays the content of your document as it will appear on a printed page or online. Alternatively, the Document window and the Structure View window are available when you work in the structured workspace. These windows help you organize elements in a valid structure.

When you open the application for the first time, FrameMaker provides you with the option to work in the Unstructured FrameMaker workspace, or in the Structured FrameMaker workspace. You can change the interface you work in by selecting the desired workspace. After you select the workspace, FrameMaker opens in the selected mode in each successive launch of the application, regardless of the structure status of the document you open.

To switch between unstructured FrameMaker and structured FrameMaker:

1 Select File > Preferences > General (Windows), or File > Preferences (UNIX®).

2 In the Product Interface list, select FrameMaker or Structured FrameMaker.

3 Click Set. You are prompted to restart FrameMaker for the preference change to take effect.

Components of the FrameMaker workspace

FrameMakercomprises several components and operations common to the structured and unstructured workspaces.

Document window

A Document window appears when you open a structured or unstructured FrameMaker document. The window shows the document with its text formatted, its graphics and other items in place, and everything laid out in a page design. If more than one document is open, a Document window appears for each one.

Customizing the document display in the Document window

You can change the way each document window looks in the following ways:

• Zooming in and out

• Changing the preset display units

• Showing and hiding window guides

• Changing the set of menu commands

Zooming in and out

You can zoom in to focus on details or zoom out to see more. The Zoom pop-up menu, in both the Document window and Structure View for structured documents, shows the current zoom setting.
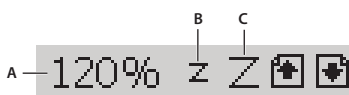
A. *Zoom pop-up menu* *B.* *Zoom Out button* *C.* *Zoom In button*

You can change the zoom setting of one or more documents in a book by selecting the documents in the book window and choosing a command from the View > Zoom menu.However, the Fit Page In Window, Fit Window to Page, and Fit Window To Text Frame will affect only selected documents that are open.

To change the zoom setting:

❖ Do one of the following:

• To magnify text and objects, click the Zoom In button. FrameMaker zooms in on the area of the page containing the insertion point or selection. If the document doesn't contain an insertion point or a selection, FrameMaker zooms in on the center of the page.

• To decrease the magnification, click the Zoom Out button.

• To display text and objects at a particular magnification, select a percentage from the Zoom pop-up menu.

• To display the entire page in the current window, select Fit Page In Window from the Zoom pop-up menu.

To resize the window to the size of the page:

❖ Select Fit Window To Page from the Zoom pop-up menu. If the view options are set to display facing pages, the window is resized to accommodate two pages side by side.

To resize the window to the size of the text frame:

❖ Select Fit Window To Text Frame from the Zoom pop-up menu.

To change the available zoom settings:

1 Select Set from the Zoom pop-up menu.

2 Do one of the following:

• To change the available zoom settings, select the percentage you want to change and enter the new percentage. Enter any percentage from 25% to 1600%. The values are sorted in the ascending order, so you can enter values in any text box.

• To return to the default percentages, click Get Defaults.

Note: You can customize the default zoom settings. For information, see the online manual Customizing FrameMaker on the Adobe website: www.adobe.com/devnet/framemaker/pdfs/Customizing_Frame_Products.pdf.

3 Click Set.

To make 100% zoom match the page size in Windows:

1 Select File > Preferences > General.

2 For Monitor Size, specify the diagonal size of your monitor, and then click OK.

If screen-to-paper fidelity is not critical, you may want to leave Monitor Size set to Default. This ensures cross-application compatibility, which is important if you frequently edit embedded OLE objects within a document.

Changing the preset display units

Some text boxes in dialog boxes require a unit of measurement (such as points or inches) for the value you enter. You can specify the default units for font size and line spacing (font size units) and for other measurements (display units). The default units of measurement appear after the values in the text boxes. If you enter a value without a unit of measurement, FrameMaker uses the default unit.

To change the preset units:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to work in.

2 Select View > Options.

3 Specify values for Display Units and Font Size Units, and then click Set.

To enter different units in a text box:

❖ Enter one of the following abbreviations for the units along with the numeric value:

• **cm** to specify centimeters

• **mm** to specify millimeters

• **"** or **in** to specify inches

• **pc**, **pi**, or **pica** to specify picas

• **pt** or **point** to specify points

• **dd** to specify didots

• **cc** or **cicero** to specify ciceros

• **Q** to specify Q units (refers to font size and line spacing for Japanese language only)

FrameMaker converts the entry to the preset display units when you click a command button in the dialog box.

For example, if your document's display units are picas and if you want to set a paragraph indent of 1 inch, enter 1" in the First Indent text box. When you click Apply, the measurement changes to the number of picas that corresponds to 1 inch.

Showing and hiding window guides

You may want to show several visual guides in the document window. The following types of guides are available:

• Borders around text frames, graphic frames, and imported objects

• Markers, paragraph returns, and other symbols in running text

• Rulers along the top and left side of the window

You can also show a grid of horizontal and vertical lines for drawing, resizing, and aligning graphics. For information on this grid, see "Using grids" on page 308.

The visual guides are all nonprinting, so you do not need to hide them when you print.

To show or hide visual guides:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Do the following:

• To show or hide borders, select View > Borders. (If the book window is active, select View > Show Borders or View > Hide Borders.)

• To show or hide the text symbols, select View > Text Symbols. The following symbols may appear in the document window.

• To show or hide the rulers, select View > Rulers.

Text symbol	Meaning
¶	End of paragraph
§	End of flow and end of table cell
〉	Tab
⊥	Anchored frame and table anchor
⊤	Marker
〈	Forced return
|	Manual equation alignment point
⊔	Nonbreaking space
⊤	Discretionary hyphen
—	Suppress hyphenation

To change the spacing of ruler or grid intervals:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Select View > Options.

3 Select a new setting from the Rulers pop-up menu or from the Grid pop-up menu, and click Set.

Changing the set of menu commands

You can display a subset of menu commands called quick menus. The quick menus do not have commands for formatting text, editing some aspects of graphics, and inserting some objects such as markers and variables.

If you do not see all the menu commands described in this manual, you may have the quick menus displayed.

Note: If you're using a structured document, your application developer may have changed the commands available in the complete menus.

To display the quick menus:
❖ Select View > Menus > Quick.

To return to the complete menus:
❖ Select View > Menus > Complete.

To customize menus:
❖ Add, move, or remove menus and commands as described in the online manual *Customizing FrameMaker*. This manual is available on the Adobe website: www.adobe.com/devnet/framemaker/pdfs/ Customizing_Frame_Products.pdf.

File display options

FrameMaker contains an option that allows you to display the file name before the path in the frame titles of document windows, so that you can see the file name if a long path name would otherwise hide it.

• In Windows, there is a new flag, `DisplayFileLeafFirst`, in the initialization file, `maker.ini`. If the value is `On`, the file name in the document or book window title is shown in the format *filename pathname*. This format is also used to display the file name in the dialog that lists all open files. By default the value is set to `Off`, the line is marked as a comment, and the file name is displayed in the format *pathname filename*, as previously.

• In UNIX, there is a new boolean xresource, `Maker.displayFileLeafFirst`. When this is set to `True`, the file name in the document or book window title is shown in the format *filename pathname*. By default the value is set to `False`, and the file name is displayed in the format *pathname filename*, as previously.

The flag does not affect how the root name of the folder or directory tree is shown in individual file names inside the book window.

Paging through a document in the Document window

You can page through a Document window using controls in the status bar.

A. Previous Page button B. Next Page button

You can also define how FrameMaker displays pages when you scroll—up and down, left and right, or two pages at a time.

If the document you are paging through is part of an open book, FrameMaker may display an alert message prompting you to choose to open the next or previous document in the book. For example, if you click the Previous Page button on the first page of a document, clicking Yes in the alert message box will open the previous document in the book. The last page of that document will appear.

To go to another page:

❖ Do one of the following:

• To go to the next page, click the Next Page button.

• To go to the previous page, click the Previous Page button.

• To go to the first page in the document, Shift-click the Previous Page button.

• To go to the last page in the document, Shift-click the Next Page button.

• To go to a specific page or the page containing a specific line number, click in the Page Status area, specify the page or line number you want to display, and click Go.

• To go to the page containing the insertion point, click in the Page Status area, click Page Containing the Insertion Point, and click Go.

• To move quickly through the pages, scroll vertically.

💡 *You can click or select in the Structure View to display the corresponding page in the document window. This is often the quickest way to go to the page you want. For information on working in Structure View, see "The Structure View window" on page 12.*

To set how pages scroll:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Choose View > Options.

3 Choose one of the following options from the Page Scrolling pop-up menu:

• To display pages from top to bottom (for example, page 2 below page 1), choose Vertical.

• To display pages from left to right (for example, page 2 to the right of page 1), choose Horizontal.

• To display pages two at a time, side by side, choose Facing Pages.

• To display as many pages as will fit in the window from left to right, choose Variable.

4 Click Set.

To make pages display more quickly:

❖ Do the following:

• Open the document by bypassing the update of imported graphics, cross-references, and text insets. (Opening a document without updating references makes a document open faster but may slow down the display of individual pages.) For more information on this, see "Opening documents without updating references" on page 23.

• Turn off the display of graphics by choosing View > Options, deselecting the Graphics option, and clicking Set. The graphics also do not appear in print.

• Display small text as gray bars by choosing File > Preferences > General, entering a point size in the Greek Screen Text Smaller text box, and clicking Set. Whenever text in your document is displayed in a point size smaller than the size you specified, it appears on the screen as a gray bar.

Using command shortcuts

You can use the following types of shortcuts in a structured or unstructured document:

• Keyboard shortcuts for all commands (for a list of these shortcuts, see the online Help).

- The QuickAccess bar, which has several pages of commands for working with documents and editing text, graphics, and tables

- The Formatting bar, which contains text formatting commands

- The Track Text Edit bar, which contains commands for tracking, accepting, and rejecting text edits

- The context pop-up menus, which have commands that are useful at the location of the pointer

Important: When using structured documents, keep in mind that shortcuts have the same effect on your document's structure as their menu-command equivalents. For example, if you paste an element using a context menu, the element may not be valid at its new location. Or if you change text to italics using a QuickAccess command, you may be overriding an element's format rules.

You can view multiple documents in different tabs. When you select the Tabbed Bar option in the View menu, the tabs of open FrameMaker document windows appears.

FrameMaker also provides a formatting bar for quickly modifying a paragraph's spacing, alignment, or tab stops. You should use this bar only in an unstructured document, because in structured documents these properties are usually handled by elements. For more information, see "Changing text without using the catalogs" on page 103.

Note: If you select text to which different font types, font sizes, and paragraph tags have been applied, the Paragraph Format, Font Name, and Font Size menus in the Formatting bar will display blank entries. For example, if you select text containing font sizes 12 and 14, the entry in the Font Size menu will appear blank.

Using the QuickAccess bar
You can keep the QuickAccess bar open in the workspace and click commands as you need them. See the Quick Reference Card for a list of the available commands.

To display the QuickAccess bar:
❖ Select View > QuickAccess bar.

To use the QuickAccess bar:
❖ Do any of the following:

- To select a command from the bar, click the command button.

- To display a different group of commands, click on the bar.

- To change to vertical or horizontal orientation, click on the bar.

- To view help for the commands, click on the bar.

To close the QuickAccess bar:
❖ Do one of the following:

- (Windows) Select View > QuickAccess bar.

- (UNIX) Place the pointer on the bar and press Control+c.

Using context menus
The context menus contain commands for the item under the pointer—for example, text, a graphic, selected table cells, or the document as a whole when the pointer is in the margin.

To display a context menu:
❖ Right-click.

Understanding the structured workspace

About the structured workspace

When you work with structured documents, you'll use the Document window and the Structure View window with the Element Catalog. These windows help you organize elements in a valid structure.
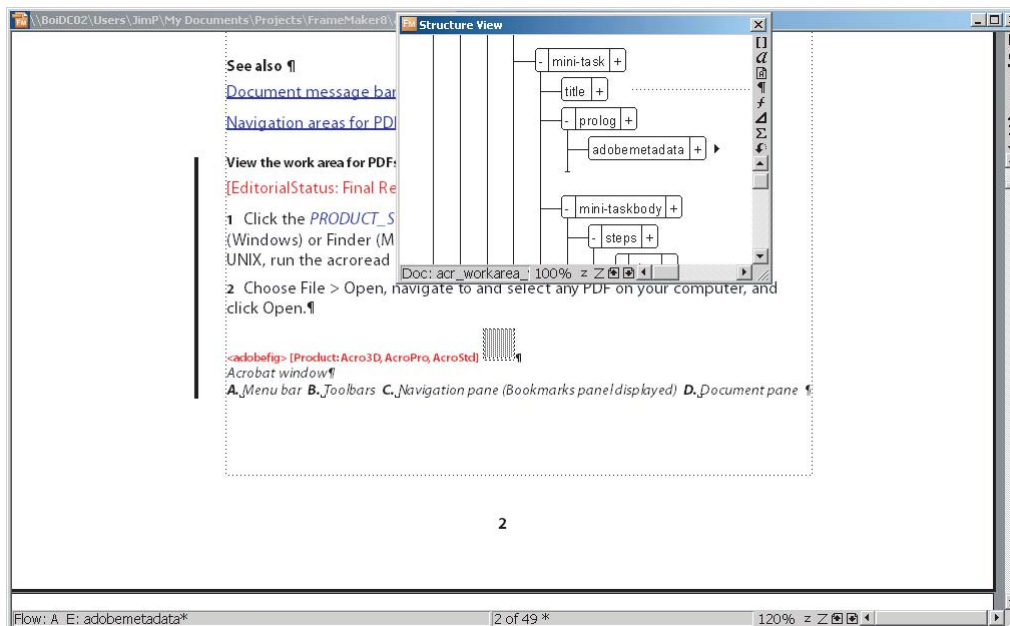
Contents and structure information

To work with the structured workspace, you must be in the Structured FrameMaker interface. For information on working in Structured FrameMaker, see "About the workspace" on page 5.

The Structure View window

The Structure View window shows a hierarchy of elements for the document (or the flow within a document) that has the insertion point or selection. The view uses bubbles to represent elements and their relationship to one another, and it identifies errors in the document's structure. You can also display attributes in the Structure View.

The document window and Structure View are both editable, and anything you do in one is mirrored in the other. You can have the two views open side by side, to keep track of both contents and structure. If you click or select in one view, an insertion point or selection appears at the equivalent place in the other view, and any editing you do in one is reflected in the other. If you click or select in an unstructured flow in a document window, the Structure View is empty.

Note: If you are using the OpenWindows windows system for UNIX, you cannot resize the Structure View window when the pushpin feature is turned on.

To display the Structure View:
❖ Click the Structure View button at the upper right corner in the document window.

You edit text and other contents in the document window. You can edit the structure of a document in either view, but it's usually easier to make your changes in the Structure View, where you can drag and drop bubbles to rearrange elements or select bubbles to edit them in other ways.

The structured document's Element Catalog

A structured document's Element Catalog lists the elements you can use at the current location, provides commands for adding and editing elements, and may display other information about the current location, such as whether you can type text.
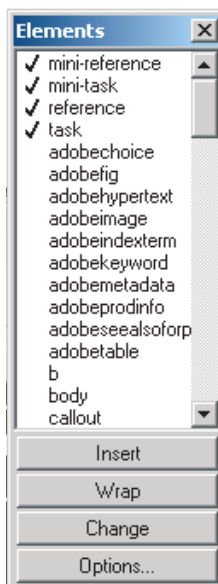
Element Catalog

To display the Element Catalog:

❖ Click the Element Catalog button at the upper right in the document window.

The information in the Element Catalog comes from content rules in the definition for the current element— the element with the insertion point or selection. The current location is the position of the insertion point or selection in that element.

The catalog is initially preset to show only the elements that are valid at the current location, though you can have it display more elements if you want greater flexibility (see "Changing the scope of elements available in a structured document" on page 18).

The catalog is empty if you click or select in an unstructured flow, if the document does not have any element definitions, or if no more elements are required at the current location and no optional elements are available.

The Element Catalog uses the following symbols to identify whether an element is valid:

Heavy check mark The element is valid at the current location. If you insert the element, the current (parent) element will be correct and complete up to this location.

Plus sign (+) The element is an inclusion (SGML only) in the current element and is valid at the current location. The plus sign always appears next to a heavy check mark. Inclusions are valid only in SGML documents, so this sign will not appear in XML documents.

Even though inclusions are as valid as elements identified with just a heavy check mark, you might find it helpful to list inclusions separately (see "Changing the scope of elements available in a structured document" on page 18). If a document has many inclusions, it can be difficult to find other valid elements in the catalog.

Question mark (?) The element is a possible replacement for the element right after the insertion point or for the selected elements. It is valid at the current location, but will make child elements after it invalid. If you insert an element with a question mark, the current (parent) element will be complete and correct up to this location, but you'll have to correct errors after the new element.

Light check mark The element is valid later in the current element. If you insert one of these elements, the current (parent) element will be correct but incomplete up to this location. You'll have to go back and fill in missing child elements.

No symbol If an element in the catalog has no symbol, it is not valid at the current location or later in the current element. It may be valid earlier in the current element or outside the element.

The Element Catalog may also include the following indicators to provide other information about the current location:

<TEXT> You can type text at this point.

<UNDEFINED> The current element does not have a definition in the document. The element was probably pasted from a document with different element definitions. (This does not appear when the catalog is set to display all elements.)

<INVALID> The contents of the current element are invalid. (This does not appear when the catalog is set to display all elements.)

You can use buttons in the Element Catalog to insert an empty element, wrap an element around contents, and change the type of an existing element. For details on working with the catalog, see "About elements" on page 521.

Customizing the display of the structured workspace

You can customize the FrameMaker workspace by showing element boundaries and other guides in a document window, showing attributes for new elements in the Structure View, and changing the set of menus in the menu bar.

Collapsing and expanding elements

You can collapse an element bubble in the Structure View to stack the element and all of its descendants into a single bubble. This does not affect the placement of the insertion point, the contents of the element, or the way in which the element appears in the document window.
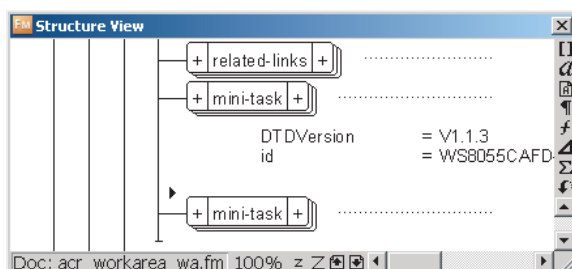
Collapsed element

Expanding an element shows all the bubbles again.
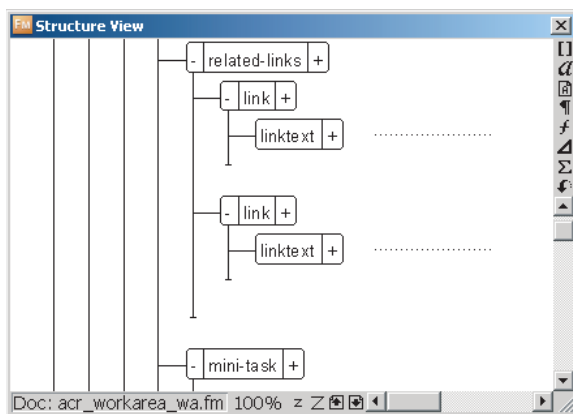
Expanded element

💡 *Collapsing elements gives you a higher-level look at a document's structure and makes it easier to move elements around. You may find it especially helpful to collapse long lists of items and procedures with many steps.*

When an element has descendants, a plus sign or minus sign appears on the left side of the element's bubble:

• A plus sign (+) appears when the element is collapsed, indicating that more element bubbles are available for viewing. The plus sign is red if there is invalid content anywhere inside the collapsed element.

• A minus sign (–) appears when the element is expanded.

To collapse or expand an element:

❖ Click the minus sign or plus sign on the left side of the element's bubble.

To collapse or expand an element and all its siblings:

❖ Shift-click the minus sign or plus sign on the left side of the element's bubble.

Showing and hiding attributes for an element

An element may be defined to have attributes, which provide supplemental information about the element. For example, an attribute might describe the draft version of a Chapter element or the level of classification of a Memo element. For more information on the uses of attributes, see "Attributes for elements" on page 522.

You can show all of an element's attributes, none of its attributes, or only the attributes that are required or have a value. You can also show or hide attributes for all new elements you add to a document (see "Changing the scope of elements available in a structured document" on page 20).

When an element is defined to have attributes, a plus sign or minus sign appears on the right side of the element's bubble:

• A plus sign (+) appears when some or all of the attributes are hidden, indicating that more attributes are available for viewing.

• A minus sign (–) appears when all the attributes are showing.

To show or hide attributes for an element:

❖ Click the plus sign or minus sign on the right side of the element's bubble.

As you click the sign, you cycle through three possible displays. Clicking a minus sign hides the attributes. If no attributes are showing, clicking a plus sign shows attributes that are required or have a value. If some attributes are already showing, clicking a plus sign shows all the attributes.
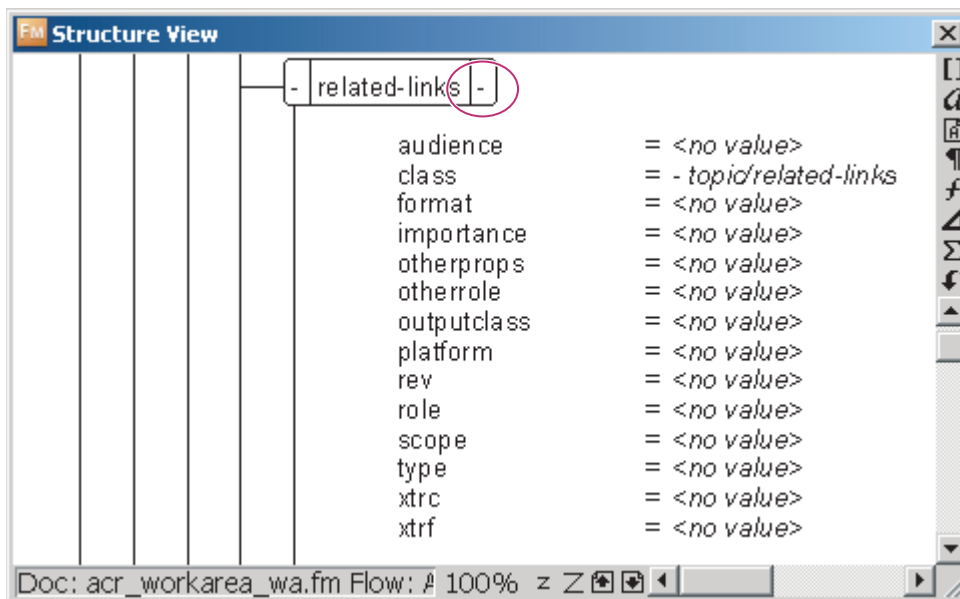
Click the minus sign to the right of the element to hide attributes. The sign will become a plus sign. Click the plus sign to show attributes that are required or have an attribute. The sign then becomes a minus sign. Click the minus sign again to show all attributes.

To show or hide attributes for an element and all its siblings:

❖ Shift-click the plus sign or minus sign on the right side of the element's bubble.

Showing and hiding element boundaries

Element boundaries mark each element's beginning and end in a document window. Working with boundaries showing can help you see how a document's contents fit into its elements, and can make it easier to place an insertion point properly or to make the right selection.

For most elements, the boundaries can appear as opening and closing brackets ([ ]) or as two boxes with an element tag. For some elements (graphics, footnotes, markers, tables, and equations), the element's location can be marked only by one box with a tag. Table parts themselves, such as table titles and cells, do not display element boundaries. However, element boundaries do display inside of table parts.

When elements are inside other elements, their brackets or tags nest to show the hierarchy.

Note: The brackets and tags that mark element boundaries are characters that both print and occupy document space. You may wish to hide them before printing to prevent them from printing and to view a document layout that is not altered by the element boundaries.

To show or hide bracket element boundaries:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Select View > Element Boundaries. (If the book window is active, select View > Show Element Boundaries or View > Hide Element Boundaries.)

Most types of elements have an opening bracket ([ ) and a closing bracket ( ]).

A — [Section One]¶

B — [GNU/Linux command line basics]¶

C — [This is the first paragraph.]¶

[This is the second paragraph.]¶

[This is the third paragraph.]]§

A. Section element *B.* Head element *C.* Para element

To show or hide tag element boundaries:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Select View > Element Boundaries (as Tags). If the book window is active, select View > Show Element Boundaries (as Tags) or View > Hide Element Boundaries (as Tags).

Most types of elements have an opening boundary tag and a closing boundary tag. Some elements, such as footnotes, have no boundary tags. They appear as a single tag.
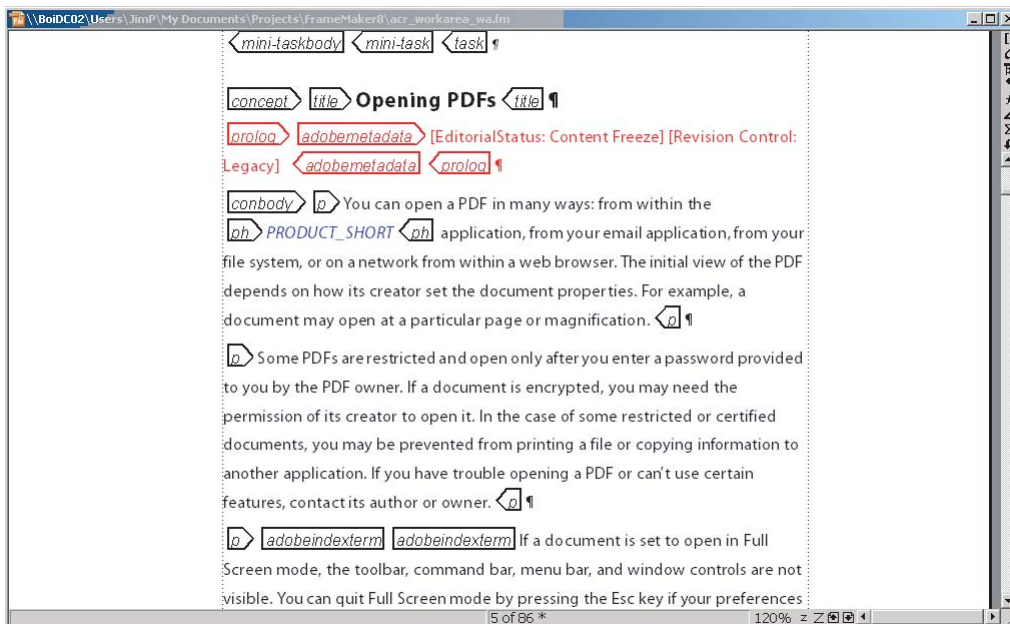
Tag element boundaries

Showing and hiding attributes for new elements

You can show or hide attributes for new elements in the Structure View. The view can display all the attributes in the flow, none of the attributes, or only the attributes that are required or have a value. This setting applies to new elements as you enter them.

You can also show or hide attributes for an individual element (see "Showing and hiding attributes for an element" on page 17).

To show or hide attributes for new elements:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Select View > Attribute Display Options, choose the display option you want, and click Set.

Changing the scope of elements available in a structured document

When adding elements to a structured document, you may want to insert only elements that are valid at the current location. (These are the elements that have heavy check marks, heavy check marks and a plus sign, and question marks in the Element Catalog.) If you prefer to add elements this way, you can work from the beginning of a document to the end and be sure that its structure is valid at every point along the way.

There may be times when you want to work more loosely though, and in these cases you can make more elements available. For example, some draft documents may not need to adhere strictly to a predefined structure, but will follow the structure only as a guideline. Or you may plan to make your document conform to a structure but do not have all the information you need to complete it from start to finish.

When more elements are available, the additional elements appear in the Element Catalog and are available if you insert elements from the keyboard. You can also list inclusions after other valid elements in the catalog.

The Element Catalog displays symbols to identify valid elements (see "Using the structured document's Element Catalog" on page 15). When showing invalid elements, you can still use the symbols as suggestions for building a valid structure.

To change the scope of elements available:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Select Element > Set Available Elements. You can also click Options in the Element Catalog.

3 Select one of the following options in the Show Tags For area:

• To show only elements that are valid for the current location, select Valid Elements for Working Start to Finish. Use this option if you plan to go through a document from start to finish and fill in the elements in their correct order and hierarchy.

• To show elements that are valid for the current location or later in the current element, select Valid Elements for Working in Any Order. Use this setting if you plan to build a valid document but not necessarily by working from start to finish. This is helpful if you don't have all the information you need.

• To show elements allowed anywhere in the current element, select Elements Allowed Anywhere in Parent. Use this setting if you want more flexibility for filling in elements. You can insert elements that are invalid and correct the errors later.

• To show all elements defined for the document, select All Elements. Use this setting if you're not building a valid document, if you want flexibility and will correct errors later, if you're wrapping elements around contents, or if you want to see what's available elsewhere in the document.

- To show a set of elements that you specify, select Customized List. Use this setting to work with a subset of the elements, to display elements in a fixed order, or to work with a list that is static instead of context-sensitive.

4 If you selected Customized List, click Edit and create or change a list of elements.

To move element tags between the Show and Don't Show lists, use the arrow buttons or double-click the element tags. Transfer all of the elements from one list to another by holding down Shift as you click an arrow button. Click the Move Up and Move Down buttons to arrange the elements in the Show list in the order you want them to appear in the Element Catalog. Click Set when the list is the way you want it.

Note: A customized list of tags is always the same regardless of the location of the insertion point, so be careful to include all the tags you'll need. The only indication of validity is a check mark next to a tag.

5 To list inclusions separately in the Element Catalog, turn on List After Other Valid Elements.

This groups the inclusions right after the other valid elements. Use this setting if you have a large number of inclusions that you rarely need.

6 Click Set.

Working with unstructured FrameMaker documents

Creating documents

You can create a document by using a template that defines how a document looks. Or you can start with the equivalent of a blank paper. When you create a document, a document window appears. For information about the Document window, see "Document window" on page 6.

In FrameMaker, you can create either structured or unstructured documents. Structured documents are required for working with SGML and XML formats, while unstructured documents are not set up for exporting to SGML or XML. For information on working with structured documents, see "Working with structured FrameMaker documents" on page 32.

Creating documents from templates

Templates are the foundation of the FrameMaker approach to document publishing. They affect every aspect of a document's appearance and help to keep that appearance consistent from one page to the next and from one document to another. Unstructured FrameMaker comes with Standard Templates for letters, memos, fax, envelope, reports, outlines, pagination sheet, newsletters, and books. However, you can use any document as a template. If the document contains text and graphics, you can delete them and then insert your own.

To create a document from a template:

1 Choose File > New > Document. In UNIX, you can also click New in the main FrameMaker window.

2 Navigate to the document you want to use as a template (either the standard ones or your own). If you want to use a standard template—one in the FrameMaker Templates folder—but the contents of another folder appear in the New dialog box, navigate to the Templates folder in one of the following locations:

- (Windows) The FrameMaker8 folder.

- (UNIX) The fminit/*language*/Templates directory within the FrameMaker installation location. (In the path above, replace *language* with the name of the language you're using—for example, usenglish or ukenglish.)

3 Select a template and click New (Windows) or Create (UNIX). The new, untitled document contains the formats and content from the template.

To view information about the standard templates, choose File > New > Document, click Explore Standard Templates, and select a template in the scroll list. After viewing the information, click Create to create an empty document from the selected template, or click Show Sample to view a document that contains sample text and graphics.

Creating documents from blank paper

If no standard template or other existing document looks the way you want, you can use a blank paper document. A document created from blank paper includes a few basic formats. You can use these formats as is, change them, or create new ones.

You can customize the document FrameMaker uses to create portrait, landscape, and custom documents. For details, see "Changing templates for blank paper and text files" on page 407.

To create a document from blank paper:

1 Choose File > New > Document. In UNIX, you can also click New in the main FrameMaker window.

2 Do one of the following:

• To create a standard one-column document, click Portrait or Landscape.

• To create a document with exactly the page size, margins, and number of columns you want, click Custom.

3 If you clicked Custom, do the following and then click Create:

• Choose a preset page size or enter the width and height for the pages.

• Enter the number of columns and a gap. The gap is the space between columns.

• Enter values for the margins, as measured from the edge of the page.

• Select a pagination option. If you select Double-Sided, choose Right 1st Page or Left 1st Page from the pop-up menu to determine the side on which the document starts.

• Choose the display units for the document. Display units are the units that FrameMaker uses when it measures distances in your document. These display units appear in dialog boxes and in the document window's status bar. For information, see "Changing the preset display units" on page 7.

Opening documents

In addition to FrameMaker documents, you can open text files, files in MIF (Maker Interchange Format), files in MML (Maker Markup Language), and XML and SGML documents in Structured FrameMaker. You can also open files created in other applications, such as Microsoft Word, if the required filter is installed. Much of the file's formatting is retained when you open the file. For information on filters, see the online manual *Using Filters*.

When you open a document, a Document window appears.

To open a file:

1 Select File > Open. In UNIX, you can also click Open in the main FrameMaker window.

2 Locate the document you want to open and click Open. If FrameMaker displays an alert message or a dialog box before opening the document, see "Messages and dialog boxes that may appear when opening documents" on page 21.

Opening a document usually updates graphics imported by reference, text insets, cross-references, and system variables (if there are any). For information on preventing automatic updating of references, see "Opening documents without updating references" on page 23 and "Suppressing automatic updating of cross-references" on page 207.

You can limit the files listed in the Open dialog box by entering wildcards (regular expressions in UNIX) in the Open File Named text box. For example, if you enter *.new, you see any folder or document that has the extension .new. If you enter Chapter?, you see any folder or document whose name consists of Chapter followed by a single character. To re-display the entire contents of the folder, enter * in the text box.

To open a recently opened document:

1 Go to the bottom of the File menu, which lists the last five files you opened.

2 Select the file.

Messages and dialog boxes that may appear when opening documents

If one of the following alert messages or dialog boxes appears, you must click OK or provide more information before continuing.

Missing fonts or font metric information If you click OK to continue, new fonts replace the missing ones. As a result, line breaks, page breaks, and the width of text lines may change (see "Troubleshooting unavailable fonts" on page 21).

Missing imported graphics Skip the missing graphic or specify a new location for it (see "Locating missing graphics" on page 503).

Missing text insets Click OK to continue opening the file. You can locate the insets later (see "Locating the source of unresolved text insets" on page 500).

Text file Specify how to convert the text lines to paragraphs. For details, see "Opening text files" on page 22.

Unresolved cross-references Click OK to continue opening the file. You can resolve the cross-references later (see "Resolving cross-references" on page 207).

Unknown file type Select a file type in the list and click Convert to continue opening the document.

Troubleshooting unavailable fonts

You may get an alert message that indicates the document you're opening uses unavailable fonts. Fonts can become unavailable for a number of reasons: the document may have been edited on a different system with fonts not installed on the system you're using; a font may have been removed or become damaged; the default printer for your system may have been changed.

If the Remember Missing Font Names option in the Preferences dialog box is selected, FrameMaker preserves the names of unavailable fonts. If missing font names are remembered, the original fonts will reappear when you open the document on a computer that has the fonts installed, even if you save the document with substitute fonts.

To fix the problem of missing fonts, consider the following options:

Check for damaged fonts Determine whether the fonts that are unavailable in FrameMaker are installed on your system and available in another application. If another application can use fonts that FrameMaker cannot use, the fonts may be damaged. Reinstall them using the original media. For more information on troubleshooting font problems, isolating damaged fonts or a damaged fonts folder, or reinstalling Type 1 fonts, see the Adobe Web site.

Remap unavailable fonts If you cannot install or reinstall the unavailable fonts, you may want to permanently remap the unavailable fonts to available fonts, so that the alert message does not appear when you open the document. You do this by deselecting the Remember Missing Font Names option in the Preferences dialog box before you open the file. However, be aware that doing this will cause you to lose the original font information referenced in the document.

Switch printers (Windows only) FrameMaker reads font information stored in the printer driver so that it can make fonts stored at the printer available for use within FrameMaker. In some cases, changing the default printer can change one or more fonts available in FrameMaker.

Obtain and install the missing fonts For example, if you and a co-worker are editing the same documents, and you would like to use the same fonts as your co-worker, consider purchasing and installing copies of the fonts.

Opening text files

Text-only files do not contain graphics or formatting information. When you open a text-only file, you may be asked to confirm that it is a text file.

To open a text file:

1 Select File > Open, and open a .txt file (see "Opening documents" on page 20). The Unknown File Type dialog box appears.

2 Select the Text option.

3 Click Convert. The Reading Text File dialog box appears.

4 Select one of the following options:

• To break the text into paragraphs only at blank lines, select Merge Lines into Paragraphs. Use this option for a paragraph-oriented text file such as a file containing document text.

• To break the text into paragraphs at the end of each line, select Treat Each Line As a Paragraph. Use this option for a line-oriented text file, such as a file containing computer code.

• To convert the text into a table, select the Convert Text to Table. Use this option if the content of your source file is tabulated.

5 Select the desired Encoding scheme. By default, the Japanese encoding scheme is selected.

6 Click Read. The text appears in a document that is created from a special template. You can customize the template so that documents created from text files are formatted differently (see"Changing templates for blank paper and text files" on page 407).

7 If you selected the Convert Text to Table option, the Convert to Table dialog box appears.

8 Select the desired options and click Convert. The text file content is converted into a table and opened as a FrameMaker document.

Opening documents that are in use

You can avoid making changes to documents that are already opened by others.

A lock file (*.lck) is created every time you open a document. This lock file prevents others from making changes to the file while you work in it. A lock file is in the same folder as the original document, and is removed when you close the document.

In Windows, you can turn off file locking. For details, see "Using files across platforms" on page 31.

If you try to open a document that's already open and if you have write permission to the document, a dialog box appears, showing the name of the document, who opened it last and when, and the computer on which it is open. You might also see this dialog box after a system crash when you open a document you were last using.

To open a document that's already in use:

1 Open the file (see "Opening documents" on page 20).

2 Do one of the following:

• If you want to look at the file but not change it, click Open for Viewing Only, and then click Continue. The document appears in View Only format.

• If you want to edit a copy of the file, click Open Copy for Editing, and then click Continue.

• If you want to edit the file and you know that no one else is using it, click Reset File Lock and Open, and then click Continue. Use this option after a system crash to open a document that was open at the time of the crash.

Opening documents in an earlier version of FrameMaker

Using FrameMaker 8 you can open .fm files you created using FrameMaker 7. However, if you want to open .fm files you created using FrameMaker 6 or earlier, you must save them as MIF files. You can then open these MIF files in FrameMaker 8.

Opening documents without updating references

A document can open slowly if it contains many cross-references to other files, large imported graphics, or many text insets. You can open a document faster by bypassing the update of imported graphics, cross-references, and text insets. However, if you use this method to open documents, keep in mind that FrameMaker will not warn you about missing items or unresolved cross-references. For this reason, you should occasionally open a document in the normal way.

To open a document without updating references:

1 Choose File > Open, and select the file you want to open.

2 Do one of the following:

• (Windows) Control-click Open.

• (UNIX) Shift-click Open.

After the file is open, FrameMaker will import and display graphics as needed on a page-by-page basis. You can manually update cross-references and text insets by using Edit > Update References. If the page display is too slow, reopen the document in the usual way. For displaying pages faster, see "Customizing the document display in the Document window" on page 6.

Opening files after a system crash

If your system crashes, an automatically saved file will contain recent changes to the file. A file is saved automatically in the following situations:

• If you selected Automatic Save in the General Preferences dialog box, autosave files (whose filename contains *.auto*) are created at regular intervals.

• If your system becomes unstable, FrameMaker tries to create a recover file (whose filename contains *.recover*) with your most recent changes.

To reopen a file after a system crash:

1 Open the file you were working on last (see "Opening documents" on page 20).

2 Do one of the following:

• If a recover file exists, open it when prompted and check whether your latest changes are there. If they are, save the recover file with the same name as the document you were originally working on and then delete the recover file.

• If no recover file exists, open the autosave file when prompted and save it with the same name as the file you were originally working on. The autosave file contains all the changes you made up until the time of the last automatic save. The amount of work lost depends on the time interval you set between saves and when your system crashed.

Saving documents

You can save a document using its current name and location, or save a copy of the document using a different name or location. You can save a document in several formats, including Hypertext Markup Language (HTML), Extensible Markup Language (XML), and Portable Document Format (PDF).

When a document or a book needs to be saved, an asterisk (*) appears in the Page Status area of the status bar.
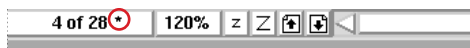
An asterisk indicates unsaved changes.

It's a good idea to avoid using accented characters, symbols, and other special characters in your filenames. You may encounter problems if you try to open the file in another operating system.

To save a document:

1 Do one of the following:

• To overwrite the current version on the disk, choose File > Save.

• To save the file in a different folder or using a different name, choose File > Save As.

2 If you choose the Save As command, or if the file has never been saved, specify the new filename and location. If you want to save the file in a different format, choose the format from the pop-up menu (see "File formats you can save in" on page 25).

3 Click Save. If you choose Text Only format, you must specify how to treat the text and tables in the document (see "Saving documents in Text Only format" on page 26).

To save a book:

1 Do one of the following:

• To overwrite the current version on the disk, choose File > Save Book.

• To save the file in a different folder or using a different name, choose File > Save Book As.

2 If you choose the Save Book As command, or if the file has never been saved, specify the new filename and location.

Note: The Save Book As command saves the book file only, not the files in the book. If you are saving the book to a new location, you will need to open and save each file individually.

To save all open documents:

❖ Hold down Shift and choose File > Save All Open Files.

To return to the saved version of your document:

❖ Choose File > Revert to Saved and click OK.

File formats you can save in

You can use the Save As command to save a file in the following formats:

Document 8.0 Saves the FrameMaker 8 document or book as a document or book that you can open and edit in FrameMaker 8.

View Only 8.0 Produces a book or document that users can open but can't edit. If you accidentally save a file in View Only format, you can make it editable by pressing Esc Shift+f l (lowercase *L*) k. Then you can save the document or book in Document or Book format.

Document 7.0 Saves the FrameMaker 8 document or book as a 7.0 document or book that you can open and edit in FrameMaker 7.0. FrameMaker 8 specific features are ignored in FrameMaker 7.0.

MIF 8.0 Creates a text file containing FrameMaker 8 statements that describe all text and graphics. To avoid overwriting your original document, save the MIF file under a different name. (For example, add a *.mif* extension to the name.) For information on MIF, see the online manual *MIF Reference*.

MIF 7.0 Creates a text file containing FrameMaker 7.0 statements that describe all text and graphics. To avoid overwriting your original document, save the MIF file under a different name. (For example, add a *.mif* extension to the name.) For information on MIF, see the online manual *MIF Reference*.

Text Only Creates a text file without graphics or formatting information. To avoid overwriting your original document, save the text file under a different name. (For example, add a *.text* extension to the name.) For information, see "Saving documents in Text Only format" on page 26.

PDF Creates a Portable Document Format (PDF) file that can be viewed in Adobe Acrobat® and other applications that support PDF files (see "About Adobe PDF" on page 568).

SGML Creates an SGML file with the contents, elements, and attributes from your document (see "Opening and saving structured files" on page 60).

HTML Creates an HTML document that can be viewed on the World Wide Web. For information on adjusting the mapping of paragraph and character tags to predefined HTML elements, see "Adjusting HTML mappings" on page 554.

Note: When you save a structured FrameMaker document as HTML, all attributes with the same name are mapped to the same value, even if the attributes have different values for different elements. To use different values for these attributes after exporting, use a text editor to edit the resulting file.

XML Creates an XML document that can be used for data exchange and viewed on the World Wide Web. For more information, see "Saving a structured document in SGML or XML format" on page 63.

Other file formats Create files that can be read by other applications. For example, you can save in Rich Text Format (RTF), which is supported by many word processors, or in any other format for which an export filter is installed. Most formatting is preserved, and formats are usually converted to word-processing styles. For details, see the online manual *Using Filters* and "Using Save As to export to other formats" on page 508.

Note: You can use the Print command to save a PostScript® file (see "Creating PostScript files" on page 30).

Filename extensions for saved files (Windows)

When you save a file for the first time in Windows, FrameMaker automatically adds these extensions: *.fm* for documents, *.book* for book files, and *.mif* for MIF files. With these extensions, the files will continue to be recognized as FrameMaker files by the Windows operating system.

If you don't want these special extensions to be added to the filenames you assign, enclose the filenames in double quotation marks. Windows won't recognize a file without one of these extensions as a FrameMaker file, but you'll still be able to open the file in FrameMaker.

If you assign an extension that's registered by another application (for example, *.doc*), your extension won't be replaced by the FrameMaker extension.

Saving documents in Text Only format

Saving a document in Text Only format creates a text file with the text encoding of your choice: ANSI (Windows), ISO Latin-1 (UNIX), or ASCII. (On Japanese-language systems, you can also use JIS, Shift-JIS, or EUC. On other Asian-language systems, you can use encodings for the supported languages.) Only ordinary text—text in text frames and tables—is saved; graphics, text in graphic callouts, footnotes, and formatting information are not saved. Reformat line lengths and hyphenation as needed before saving the file (see"Changing indents and alignment" on page 110 and "Changing hyphenation and line breaks" on page 118).

If some characters are not available in the text encoding that you choose, those characters will be replaced in the text file. For example, when you save a document in Text Only format using ANSI (Windows), ISO Latin-1 (UNIX), or ASCII encoding, spaces (including thin, en, em, and numeric spaces) are converted to regular spaces.

To save a document as text only:

1 Choose File > Save As.

2 Specify the filename and location, and choose Text Only format.

3 Click Save.

4 Do one of the following:

• To break each line into a separate paragraph, click At the End of Each Line. This option maintains a file's original line breaks and blank lines. Use this option for a line-oriented file such as computer code.

• To merge adjacent lines into paragraphs and insert a carriage return only at blank lines, click Only Between Paragraphs. Use this option for paragraph-oriented files, such as files containing document text.

5 If you want to save table text, select Include Text from Table Cells. Then do the following:

• Specify the order in which you want the table cells saved (row by row or column by column).

• Choose whether to separate cells with tabs or with carriage returns by choosing items from the pop-up menus.

6 If the text file will be used on a platform that uses a different text encoding, choose an appropriate encoding from the Text Encoding pop-up menu.

7 Click Save.

Exporting XML from unstructured documents

You can export both structured and unstructured files to XML. The mapping used by the export to specify what element to create for each paragraph tag in the source FrameMaker file is defined on a reference page, and the export function creates an XML file and a corresponding cascading style sheet (CSS), which can be used with the document.

For information on exporting structured documents as XML, see "Saving a structured document in SGML or XML format" on page 63.

To save a document in XML format:

1 Do one of the following:

• Select File > Save As XML.

- Select File > Save As and choose XML from the pop-up menu. Give the filename an extension of *.xml*.

2 Specify the file location.

3 Click Save.

Backing up and saving automatically

FrameMaker can back up and save your work automatically.

To specify an automatic save option:

1 Do one of the following:

- (Windows) Choose File > Preferences > General.

- (UNIX) Choose File > Preferences.

2 Do the following:

- To create a backup file every time you save, select Automatic Backup on Save. This creates a copy of the file before your latest changes are saved. If a backup file already exists, the new backup file overwrites it. (The filenames of backup files contain *.backup*.)

- To create an autosave file at regular intervals, select Automatic Save and enter an interval (in minutes) in the text box. This causes a copy of the file to be saved periodically without your having to choose File > Save. (The filenames of autosave files contain *.auto*.) When you save manually or revert to the last-saved version with the Revert to Saved command, the autosave file is deleted.

3 Click Set.

Adding metadata to a document

FrameMaker includes built-in support for Extensible Metadata Platform (XMP). Metadata, or file information, is descriptive information that can be searched and processed by a computer. Use it to provide information about the contents of a document, and to preserve information about a document that will be opened in other Adobe applications. If you export the file to PDF, much of this metadata will appear in Acrobat.

Metadata tags travel with the document and describe its content. By embedding them in your documents, you make the documents easier to track, manage, and retrieve.

Note: Metadata in a book file may override metadata in a document file. If your document is part of a book file, you may want to open the book file and select the document before you add metadata.

To add metadata to a document:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Choose File > File Info.

3 Enter the desired information in the text box next to any or all categories.

4 For Marked, choose Yes if the document is copyrighted, or No if the document is explicitly in the public domain. Choose Unknown if you're not sure.

5 Click Set.

Printing documents

When you print a document, you can specify options such as how many copies to print and whether to print crop marks and registration marks. The available options vary slightly with the platform and the printer you are using.

When you're working with structured documents, element boundaries, either as brackets or as tags, are printable characters. If you're showing these boundaries in the document window, you may want to hide them before you print (see "Showing and hiding element boundaries" on page 16).

Note: For PostScript printing, FrameMaker recommends a PostScript Level 2 or higher output device. Make sure you use a print driver and PPD for such a device.

For information on printing a book made up of several documents, see "Printing from a book window" on page 460.

Important: If you have turned off graphics in the View Options dialog box, graphics will not appear in the printed document.

Note: The Printing feature supports the Unicode text encoding standard.

To print a document:

1 Choose File > Print.

2 Specify the page range you want to print.

3 Select other print options, and then click Print.

In UNIX, if you want to change the print settings for a document but don't want to print it yet, change the settings in the Print dialog box and click Save Settings Only.

Print options

The following print options are available for all printers. All these options are in the Print dialog box. For information on additional options available for your printer, see your printer documentation.

Note: (Windows) FrameMaker products for Windows have no control over the abilities or limitations of any printer driver. FrameMaker products can only support printer drivers that have been approved for use in the version of Windows FrameMaker is running on. If you are using an outdated printer driver, you may experience problems, such as lost graphics and characters and the inability to open documents. See the Adobe Web site for information on installing the latest PostScript drivers.

Collating To print one complete copy before printing the next copy, select Collate when you're printing multiple copies. Printing might be slower when Collate is selected.

Printing double-sided To print a double-sided document when you're not using a duplex printer, print the odd-numbered pages, turn the paper over in the printer, and print the even-numbered pages. Depending on how your printer produces pages, you may need to select Last Sheet First before you click Print, because turning the paper over in the printer may reverse the page order.

Changing page order To print a document starting with the last page, select Last Sheet First.

Printing more quickly To print a document more quickly, select Low-Resolution Images. In Windows, imported images are printed as gray boxes. In UNIX, they are printed with lower resolution.

Printing crop marks and registration marks To print a document with crop marks and registration marks, choose an option from the Registration Marks pop-up menu. In some instances, you may want to scale down the printed page image so that crop marks and registration marks will fit on the page.

You can choose between Western and Tombo (Japanese) crop marks.
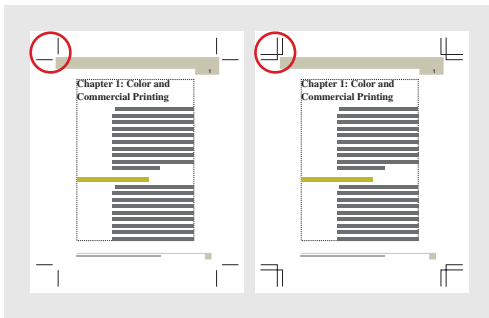
Western and Tombo crop marks

Reducing or enlarging the page image To print a reduced or enlarged page image centered on the page, enter a percentage in the Scale text box.

Printing thumbnails To print thumbnails (small images of several pages on one page), enter values in the Thumbnails text boxes. In the Rows text box, enter the number of thumbnails you want to print down the page. In the Cols text box, enter the number of thumbnails you want to print across the page.
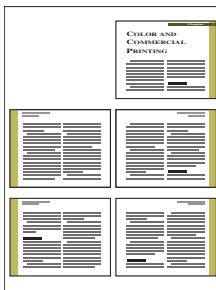
Thumbnails

Skipping blank pages (Windows) To prevent printing blank pages, select Skip Blank Pages.

Printing colors in black and white To ensure that colored items (FrameMaker drawn images and text) are printed in black and white rather than in shades of gray, do one of the following:

• (Windows) Select Spot Color As Black/White.

• (UNIX) Edit the beginning of the ps_prolog file in $FMHOME/fminit. The ps_prolog file contains instructions for changing print settings. Changes to the file take effect immediately. To make changes without affecting other users, save a copy of the file with the changes to your personal fminit folder (~/fminit/ps_prolog).

Feeding paper manually To print the document on paper that is not in your printer's paper cassette, do one of the following:

• (Windows) Choose File > Print Setup. Choose Manual Feed from the Source pop-up menu, and click OK.

• (UNIX) Select Manual Feed.

Note: (Windows) The Print Document dialog box in FrameMaker contains some options that may also appear in the Windows printer Properties dialog box, such as the number of copies. When you print a document, FrameMaker printer settings override Windows printer settings.

Changing paper size (UNIX) To print the document on a different paper size, choose a paper size from the Paper Size pop-up menu, or type the dimensions in the Width and Height text boxes. Because these dimensions describe the physical size of the paper in the printer's paper cassette (not the orientation of the document), the Width setting should always match the width of the edge of the paper that feeds into the printer.

If your document's pages are larger than the size of the paper, you'll see an alert message. If you decide to print the document, the printer crops the document.

Downloading fonts (UNIX) To choose the fonts to download to the printer, choose from the Download Roman Fonts pop-up menu. You don't need to download fonts that are already in the printer's memory or on a hard disk attached to the printer. For example, if your printer contains the Standard 35 fonts, choose All but Standard 35. To enable subsetting and downloading of Asian fonts, select the Download Asian Fonts option. If your document includes TrueType fonts and you're printing to a PostScript Level 1 printer, select the Download TrueType as Type 1 option.

The Standard 35 fonts (Avant Garde, Bookman, Courier, Helvetica, Helvetica Narrow, New Century Schoolbook, Palatino, Symbol, Times, Zapf Chancery, and Zapf Dingbats font families) are usually included with PostScript printers.

You can modify the UNIX font configuration file (fontlist) to override the Download options in the Print dialog box.

To print out a list of resident fonts on a PostScript printer, print the printerfont.ps script located in the $FMHOME/fminit/pstools folder.

Using a different printer (UNIX) To use a different printer, choose the printer name from the Destination pop-up menu. All printers configured for your computer should appear in the pop-up menu. If a printer doesn't appear, or if you're using a special printing script (for example, to send a fax), choose Other Printer from the pop-up menu and type the appropriate parameters into the text box that appears.

Creating PostScript files

You can create a description of a document called a *PostScript file* (also called a *print file*). You might use a PostScript file to download the document later to a PostScript printer or to send the document to a service provider for typesetting. In addition, you can create an Adobe PDF file; see "Enabling and disabling SWF file embedding in PDFs" on page 573.

To create a single print file from a document:

1 Choose File > Print.

2 Do one of the following and then click Print:

• (Windows) Select Print to File and enter the path and filename in the text box, or click Browse to specify a folder and filename.

• (UNIX) Choose PostScript File from the Destination pop-up menu and enter the path and filename in the text box, or click Browse to specify a directory and filename.

You might want to enter a .ps extension for your PostScript file.

To create a single print file for a book:

1 In the book window, choose File > Print Book, or select the documents you want to print and choose File > Print Selected Files.

2 Do one of the following and then click Print:

• (Windows) Select Print to File and enter the path and filename in the text box, or click Browse to specify a folder and filename. Choose Single File from the Save Book As (or Save Selected Files As) pop-up menu. Then click Print.

• (UNIX) Choose Single PostScript File from the Destination pop-up menu and enter the path and filename in the text box, or click Browse to specify a directory and filename. Then click Print.

To create a series of separate print files for a book:

1 In the book window, choose File > Print Book, or select the documents you want to print and choose File > Print Selected Files.

2 Do one of the following:

• (Windows) Select Print to File and enter the path and filename in the text box, or click Browse to select a folder and type a filename. Choose Single File or Separate File for Each Document from the Save Book As or Save Selected Files As pop-up menu. Then click Print.

• (UNIX) Choose PostScript File for Each Document from the Destination pop-up menu, and then click Print.

Using files across platforms

You help keep FrameMaker files fully compatible across platforms with compatibility preferences. For more information on cross-platform and network compatibility, see the online manual *Working on Multiple Platforms*, which is located in the OnlineManuals folder.

To change compatibility preferences:

1 Do one of the following:

• (Windows) Choose File > Preferences > General.

• (UNIX) Choose File > Preferences.

2 Do the following:

• To preserve the names of unavailable fonts when FrameMaker substitutes existing fonts, select Remember Missing Font Names. The original fonts will reappear when you open the document on a system that has the missing fonts installed. For more information, see "Troubleshooting unavailable fonts" on page 21.

• (Windows) To display errors that FrameMaker finds as it opens files, select Show File Translation Errors.

• (Windows) To specify another platform with which to maintain filename compatibility, choose a setting from the Cross-Platform pop-up menu.

• (Windows) To warn a user on a network before opening and modifying the document if it is already open for another user, select Network File Locking.

• (Windows) To add a FrameImage facet to bitmap graphics imported by copying, select Save FrameImage with Imported Graphics. Each graphic will be saved in its native format and in FrameImage format (a format that is supported on all platforms). When you open the document on another computer or on a platform that doesn't support the native format, the FrameImage copy will be used.

3 Click Set. The settings take effect immediately.

Closing documents

You can close a document at any time. If you have unsaved changes, you'll be asked whether you want to save the changes. (A document with unsaved changes contains an asterisk in the Page Status area of its status bar.)

If imported graphics, text insets, cross-references, or system variables were updated when you opened your document, the document is marked as changed (with an asterisk in the status bar) when it opens. Similarly, because printing a document causes cross-references (if there are any) to be updated, printing a file may also cause a document to be marked as changed.

To close a document:

❖ Choose File > Close.

To close all open documents:

❖ Hold down Shift and choose File > Close All Open Files.

Working with structured FrameMaker documents

Elements in structured documents

You can add elements to a document to build its structure, and you can edit existing elements in many ways. The Structured FrameMaker interface guides you so that you build a structure that is valid.

If you create a FrameMaker document by opening a structured file, you do not need to add elements to it. The document already has elements generated from the structured markup. But you can edit the document's elements, and add more elements, just as if you had created the document in FrameMaker.

About elements

To build a document's structure, you can either add elements to the document and then fill in the contents, or select existing contents and wrap them in elements.

A structured document has *element definitions* stored in its Element Catalog. These definitions describe the allowable contents for each type of element the document can have, and they may also specify attributes and formatting for the elements. If all the elements in a document have contents and attributes that meet these specifications, the document is *valid*.

Valid contents for elements

An element's definition has *content rules* that determine what the element can contain. For example, the definition of a Section element might specify that a Section must begin with a Head element, then must have a Para element, and then can have any combination of Para, Figure, and other Section elements. A Para element might allow text and CrossRef elements, in any order.

You don't need to know the specifics about whether or where your contents will be valid. Use the Element Catalog as a guide—it lists elements that are valid for the current location and tells when text is allowed. (Valid elements have a heavy check mark in the catalog.)

Valid contents for the current location

Two classes of elements

Elements fall into two basic classes determined by their allowable contents:

• A *container element* can hold text, other elements, or both. Container elements build the document's structure. In a typical document, most elements are containers—such as heads, paragraphs, sections, and tables. These elements are represented in the Structure View by bubbles with round corners.

• An *object element* is a single object—a marker, cross-reference, system variable, equation, or anchored frame. You cannot type in these elements or add child elements to them. Object elements are represented by bubbles with square corners.
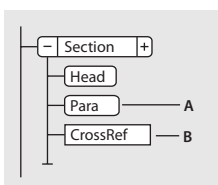
A. Containers have round-cornered bubbles.
B. Object elements have square-cornered bubbles.

A container element can be defined to remain empty. For example, a table cell might be empty as part of a table's design. If an element is defined as empty, its text snippet in the Structure View is <EMPTY>. If an element contains only spaces or nonprintable characters such as tabs, the snippet is <WHITESPACE>.

Attributes for elements

An element can have *attributes*, which provide information about the element that is not part of the element's contents. You can show attributes and their values in the Structure View.

Attributes are optional—it is up to the developer to define them for an element. Your document might use attributes for several purposes:

• To control the formatting of an element. For example, a Type attribute in a List element might have two possible values—Bulleted and Numbered—that determine whether the list has bulleted or numbered items. Or a Prefix attribute in a Note element might provide text such as *Important* to display at the beginning of the note.
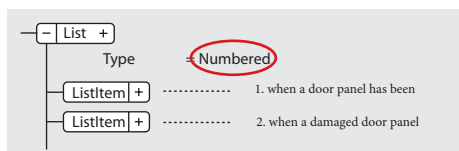
Attributes can provide formatting information.

• To record descriptive information about an element. For example, an attribute called Security in a Memo element might describe the level of classification for the memo, such as TopSecret. An attribute value can even affect how the file is processed—a TopSecret value, for example, might trigger a custom routine that hides the element when the document is displayed.

• To store source and destination information for elements, typically for cross-referencing. For example, a Section element might have an ID attribute that stores a unique value. A Cross-Reference element that points to the Section stores the same value in a Reference attribute, to maintain the connection between the elements. This use of attributes conforms to structured requirements.

You typically enter and edit the values for attributes, unless the attributes are defined to be read-only. (ID attributes used in cross-references are often read-only so that they will be generated by FrameMaker.)

Adding elements

To add an element to a document, you either insert an empty element and enter contents, or wrap an element around existing contents. If the element has been defined to have attributes, you can also provide attribute values as you add the element.

Note: Before you can begin, your document must have element definitions in its Element Catalog. If necessary, import the element definitions from a structured template (see "Importing element definitions" on page 44).

The Element Catalog shows the elements that are available at the current location. You can change the scope of elements available—for example, to show elements that are not valid at the current location (see "Changing the scope of elements available in a structured document" on page 18).

Ask your application developer for a summary of what each element can contain. It may be helpful to refer to this information as you work.

When you add an element, you may see text or other elements inserted along with it. For example, if you insert a Note element, the word *Note* may appear, or if you insert a List element, a ListItem child element may appear. An element's definition determines whether text or child elements are inserted automatically.

Note: Element names support the Unicode text encoding standard.

Adding elements to an empty document

You add structure to an empty document by inserting elements one at a time. You can enter all the elements in their correct order and hierarchy as you go along, or you can work more loosely, concentrating on contents rather than on structure, and then validate later to correct errors.

To add elements to an empty document:

1 If the document does not have element definitions, import the definitions (see "Importing element definitions" on page 44).

2 Specify the scope of elements available (see "Changing the scope of elements available in a structured document" on page 18).

3 Insert elements from the Element Catalog (see "Adding elements" on page 34). Begin at the highest-level element and then let the catalog guide you.

4 If necessary, supply attribute values (see "Assigning attribute values" on page 46).

5 Add contents to the elements. You can add contents as you insert elements, or later.

Validate the document and correct any errors (see "Validating documents" on page 52).

Adding elements to a document with contents

You add structure to an existing unstructured document by wrapping its contents in a hierarchy of elements. The conversion process retains formatting in paragraphs, tables, and in objects of all types (cross reference, marker, graphic, equation, footnote, system variable, Rubi and Rubi group). (If the document has a conversion table, you can apply the table to the document to give it structure, rather than adding structure manually. See "Adding structure to documents using conversion tables" on page 66.)

Enhanced conversion to structure

The conversion tool that allows you to add structure to unstructured documents is enhanced in several ways:

• The root element can now be specified in the conversion table and added automatically, where it was previously necessary to add it manually after performing the conversion.
  Specify "`RE:RootElement`" in the first column of the conversion table, and the name of the root element in the second column.

• The conversion process can now retain formatting in paragraphs, tables, and in objects of all types (cross reference, marker, graphic, equation, footnote, system variable, Rubi and Rubi group).

Use the FrameMaker utility "Create and Apply Formats" before conversion to turn format overrides and untagged formatted text into named paragraph and character formats, which can be carried forward into the structured document and EDD.

For additional details of conversion table specifications and how the conversion is performed, see Appendix A, "Conversion Tables for Adding Structure to Documents," in the *Structure Application Developer's Guide.*

To add elements to a document with contents:

1 If the document does not have element definitions, import the definitions (see "Importing element definitions" on page 44).

2 Specify the scope of elements available (see "Changing the scope of elements available in a structured document" on page 18). You may find it easier to use the All Elements option.

3 Select contents and wrap them in elements from the Element Catalog (see "Adding elements" on page 34). Begin at the lowest levels and work your way up.

4 If necessary, supply attribute values (see "Assigning attribute values" on page 46).

5 Change the NoName element to the valid highest-level element. The NoName element is created as the highest-level element once you wrap your initial content. Change elements with default tags (such as TABLE) to valid elements.

6 Validate the document and correct any errors (see "Validating documents" on page 52).

Inserting elements

You can insert an empty element and then fill it in with contents. If you have turned on element boundaries, then once you insert an element, a pair of element boundaries appears in the document window, and a new bubble appears in the Structure View.
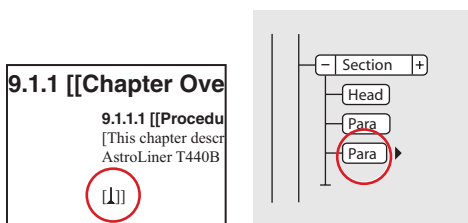
Empty element boundaries (left) and bubble for the new element (right)

If you haven't yet fully planned your document, you may want to insert just the high-level elements, such as Section and Head elements, and then use this structure as an outline for developing the document.

To insert an element using the Element Catalog:

1 Click where you want to insert the element. If you're inserting it between other elements, you might find it easier to work in the Structure View rather than the document window.

2 Select an element tag in the Element Catalog, and click Insert. If only one element appears in the catalog, you can click Insert without selecting it.

You can also double-click an element tag to insert the element.

3 If the Attributes for New Element dialog box appears, enter attribute values for the element and click Insert Element (see "Entering attribute values as you insert elements" on page 46).

This dialog box appears only if the element has attributes and if an option is set in the New Element Options dialog box to prompt for attribute values when you insert new elements.

4 If you inserted a table, a marker, a graphic, or a cross-reference, provide more information about the element in the dialog box that appears.

To insert an element using the keyboard:

1 Click where you want to insert the element, and press Control+1 (one).

2 Start typing the element's tag until it appears in the Tag area of the document window's status bar. The elements available are the same ones that currently appear in the Element Catalog.
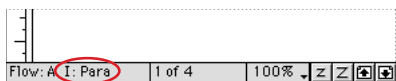
Element tag

You can also type lowercase letters to search forward or uppercase letters to search backward through the elements that begin with those letters, or you can use the up and down arrow keys to scroll through all the elements.

3 Press Return. If you decide to cancel, press Esc (Windows) or Control+c (UNIX).

Pressing Return to insert elements

In many cases, pressing Return inserts an element automatically. Whenever you press Return, FrameMaker checks the current element's definition for the following conditions—*in the following order*—and may insert a child element:

One valid element If only one child element is valid at the current location, pressing Return adds that element. For example, after you add a Section, a Head might be the only element permitted next. This technique can also work to create repeating elements, where pressing Return inserts the same type of element. Body paragraphs and list items are often defined as a repeating element.

More than one valid element If more than one child element is valid, pressing Return highlights the Tag area to prompt you for an element tag. You can type until the tag you want appears, and then press Return to insert the element.

End of an element If the insertion point is at the end of an element and no more child elements are valid, pressing Return looks for valid elements in ancestors after this location. If a valid element is found, the insertion point moves to the ancestor and the element is inserted (if only one is valid) or the Tag area is highlighted (if more than one element is valid).

Other conditions If none of the preceding conditions are true, pressing Return causes a beep and no element is inserted.

Wrapping elements around existing contents

You can add structure to contents already in a document by wrapping a new element around the contents. The contents can be any part of a document, including other elements.

When you wrap an element, a pair of element boundaries appears around the contents in the document window (if element boundaries are showing), and a new bubble appears in the Structure View. The element's contents are formatted as specified in the element's format rules.
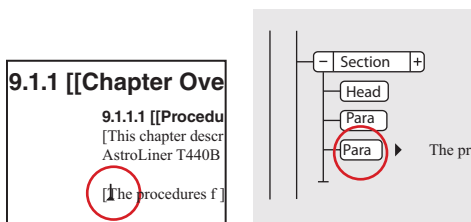
Element boundary (left) and Bubble for the new element (right)

Note: You cannot wrap contents in elements that are for parts of tables (such as rows or cells), but you can wrap text or other elements that are within a cell or a table title element. If you want to convert text and elements to a table, use Table > Convert to Table rather than wrapping (see "Converting text to tables" on page 160).

After wrapping an element, you may need to edit the document to correct structure errors. For example, if you wrap Para elements in a Section element that requires a Head element, you'll need to insert the Head. For help on finding and correcting structure errors, see "Finding and correcting errors" on page 51.

To wrap an element using the Element Catalog:

1 Select the contents you want to wrap in an element. If you're selecting text, use the document window. If you're selecting entire elements, you may find it easier to use the Structure View.

2 Select an element tag in the Element Catalog, and click Wrap. If only one element appears in the catalog, you can click Wrap without selecting it.

You can also double-click an element tag to wrap an element around the selection.

3 If the Attributes for New Element dialog box appears, enter attribute values for the element and click Insert Element (see "Entering attribute values as you insert elements" on page 46).

This dialog box appears only if the element has attributes and if an option is set in the New Element Options dialog box to prompt for attribute values when you insert elements (see "Setting options for inserting new elements" on page 39).

To wrap an element using the keyboard:

1 Select the contents you want to wrap in an element and press Control+2.

2 Start typing the element's tag until it appears in the Tag area of the document window's status bar. The elements available are the same ones that currently appear in the Element Catalog.
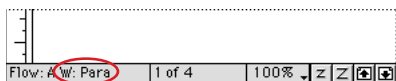
Element tag

You can also type lowercase letters to search forward or uppercase letters to search backward through the elements that begin with those letters, or you can use the up and down arrow keys to scroll through all the elements.

3 Press Return. If you decide to cancel, press Esc (Windows) or Control+c (UNIX).

When wrapping elements throughout a document

Wrapping is useful for providing an existing unstructured document with a structure. (For an overview of this process, see "Adding elements to a document with contents" on page 35.) It's easiest to wrap the document's contents by starting at the lowest levels and working your way up, as follows:

• Begin by working in the document window and wrapping text ranges, system variables, and other items that are inside paragraphs. Don't worry about errors you see in the Structure View. You'll correct many of these errors when you wrap the lowest levels in parent elements, and you can correct the other errors when you're finished.

• Next, wrap paragraphs, headings, and other paragraph-level items in their elements.

• Finally, work in the Structure View and wrap the elements you have so far in parent elements, such as Section and List.

If you find yourself wrapping selections in the same type of element over and over again, you can repeat the last Element Catalog command by pressing Esc e e.

After editing one part of a document, you may need to edit the document further to correct content errors. For example, if you split a Section element in two, you may need to add a Head element for the new second Section. Use the Structure View as a guide for finding errors as you work, or validate the document when you're finished.

Changing elements to another type

You can change an existing element to another element of the same type. For example, you may want to convert a Para element into a Head element, or a series of Para elements into ListItem elements that you plan to wrap in a List element.

However, not all elements can be converted to other elements. For example, if you change a Para element containing text to a Marker element containing the same text, the name of the element will change, but the text will not be converted to marker text.

Note: If you want to change contents to a table, use Table > Convert to Table to convert text rather than changing an element (see "Converting text to tables" on page 160).

To change an element using the Element Catalog:

1 Select the element. You can select more than one element, even if the elements do not have the same tag. All the elements will be changed to the new type of element. However, the elements' children are not changed, but they may become invalid due to the changed parent.

2 Select an element tag in the Element Catalog and click Change. The element's bubble in the Structure View changes to the new tag, and the contents are formatted as specified in the new element's format rules. Attributes in the element may become invalid.

To change an element using the keyboard:

1 Select the element and press Control+3.

2 Start typing the tag of the new element until it appears in the Tag area of the document window's status bar. The elements available are the same ones that currently appear in the Element Catalog.
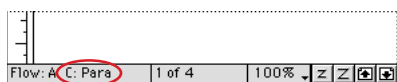
Element tag

You can also type lowercase letters to search forward or uppercase letters to search backward through the elements that begin with those letters, or you can use the up and down arrow keys to scroll through all the elements.

3 Press Return. If you decide to cancel, click in the document without pressing Return.

You can use Edit > Find/Change to change many occurrences of an element at one time (see "Finding elements and attributes" on page 49). For example, if you've imported new element definitions that use an element named Par instead of Para, you can change all Para elements to Par.

Merging two or more elements into one

You can merge two or more elements into a single element. For example, you might combine two Section elements into one. Merging puts the contents of the second element (including any child elements) at the end of the first element.
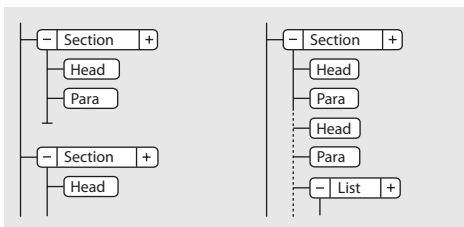
Merging two Sections, before and after

You may need to edit the document after merging elements.

Note: If you want to combine table cells, use Table > Straddle rather than merging the cells (see "Straddling and unstraddling cells in structured tables" on page 196). You cannot combine other table parts.

To merge two or more elements into one:

1 Select the elements you want to merge. The elements can be of different types, but they must be siblings and next to each other in their parent element.

2 Choose Element > Merge.

Merging retains the attributes for the first element only.

Splitting elements in two

You can split an element into two elements that have the same tag and are at the same level. For example, you might split a Section element in two.
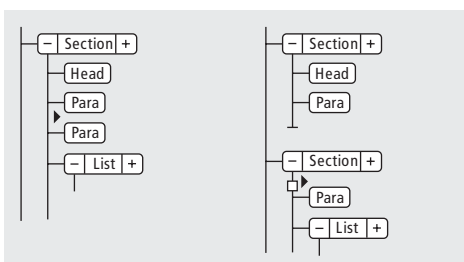
Splitting a Section, before and after

You may need to edit the document after splitting an element. In the example above, after splitting you would add a Head for the new second Section.

Note: You cannot split an element that is a table part (such as a row or cell).

To split an element in two:

1 Click where you want to split the element. The contents after the insertion point will go in the new second element.

2 Choose Element > Split.

Splitting might result in two elements with identical attributes. However, if the original attribute had a Unique ID attribute, the second element loses its ID value.

Unwrapping the contents of elements

Unwrapping deletes an element but leaves its contents in the same place in the document. You usually unwrap elements as part of a larger editing process. For example, if you plan to convert ListItem elements into Para elements, you might need to unwrap the parent List element first. Then use Edit > Find/Change to convert the ListItem elements to Para elements.
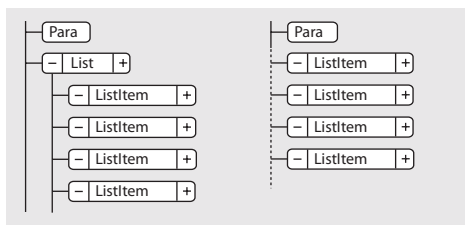
Unwrapping ListItems, before and after

You may need to edit the document after unwrapping an element. For this example, you would change the ListItem elements to valid elements or rewrap them.

Note: You cannot unwrap an element that is a table part (such as a row or cell).

To unwrap the contents of an element:

1 Select the element with the contents you want to unwrap. For example, if you're unwrapping ListItem elements in a List, select the List element.

2 Choose Element > Unwrap.

Moving elements

You can move an element to another location in a document by dragging its bubble in the Structure View. When you move an element, its contents, including descendants, all move along with it. This does not affect the contents of the Clipboard.

If you're moving an element that has many descendants, collapse the element first (see "Collapsing and expanding elements" on page 14).

You can also move an element by cutting it to the Clipboard and pasting, even across documents. If you paste an element from another document, the element may not be defined in your document. If you don't plan to add a definition for the element, change the element to a valid one. You cannot cut and paste elements in a book file.

To move an element by dragging:

❖ Drag the element's bubble to the location you want. As you drag, the pointer changes to a solid up-and-down arrowhead, and an arrow moves to indicate where the bubble will go if you release the mouse button.
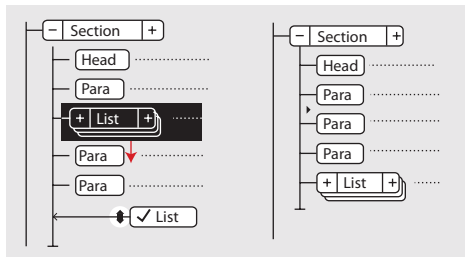
Moving a List, before and after

If the element is valid in the location where the arrow points, a check mark or question mark appears in the bubble. These symbols have the same meanings as they do in the Element Catalog (see "The structured document's Element Catalog" on page 13).

To nudge an element one place:

❖ Drag the element's bubble slightly to one side or up or down. As you drag a small distance, the pointer changes to a single arrow. (If you drag too far, the arrow changes to an up-and-down arrowhead.)
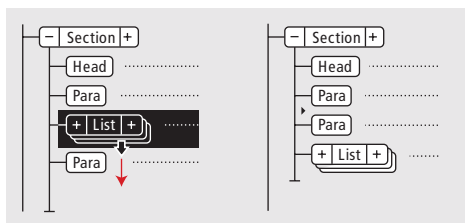
Nudging a List one place, before and after

When you release, the element moves one place in the indicated direction, as follows:

• Moving an element up puts it right above the sibling right before it. Moving an element down puts it below the sibling after it.

• Moving an element to the left makes it a child of its parent. Moving an element to the right makes it a child of the sibling after it.

Copying elements

You can use the Structure View to make a copy of an existing element and put the copy in a new location. This does not affect the contents of the Clipboard.

When you copy an element, the element's contents are copied along with it. Generally, the element's attributes are also copied—but if you duplicate an element with an ID attribute, the ID value is discarded in the copy.

💡 *If you're copying an element that has many descendants, collapse the element first (see "Collapsing and expanding elements" on page 14).*

You can also copy an element by copying it to the Clipboard and pasting, even across documents. If you paste an element from another document, the element may not be defined in your document. If you don't plan to add a definition for the element, change the element to a valid one. You cannot copy and paste elements in a book file.

To copy an element by dragging:

❖ Do one of the following:

• (Windows) Hold down Alt and drag the bubble to the location you want.

• (UNIX) Hold down Control and use the middle mouse button to drag the bubble to the location you want.

As you drag the bubble, the pointer changes to a hollow, stacked up-and-down arrowhead, and a horizontal arrow moves to indicate where the copy will go if you release the mouse button.
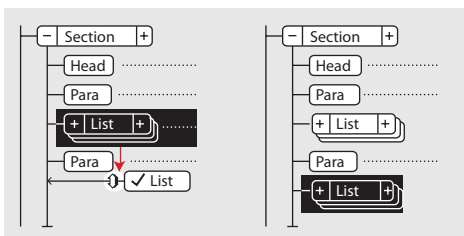
Copying a List, before and after

If the element is valid in the location where the arrow points, a check mark or question mark appears in the bubble. These symbols have the same meanings as they do in the Element Catalog (see "The structured document's Element Catalog" on page 13).

Importing element definitions

A document's element definitions describe allowable contents for each type of element, and may also describe how the elements are formatted and whether they have attributes for storing supplemental information. Before you can add elements to a document, the document must have element definitions in its Element Catalog.

💡 *If you're not sure whether a document has element definitions, open the Element Catalog and click in a text flow. If you see elements in the catalog, the document has definitions. You may need to select the All Elements option to get elements to appear (use Element > Set Available Elements).*

Usually you import definitions from a template, but your developer may ask you to import them directly from the EDD.

To import element definitions:

1 Open the template or EDD with the element definitions. The template or EDD must be named and saved.

2 Open the document or book that you want to update. If a book window is active, select the documents you want to update.

3 In the document or book you're updating, choose File > Import > Element Definitions.

4 Choose the template or EDD from the Import from Document pop-up menu. The menu lists all open, named documents.

5 If you want to remove special formatting and book-related changes in the document, do the following:

• To remove format rule overrides, select While Updating, Remove Format Rule Overrides. Use this setting if you have made text or paragraph formatting changes to elements and now want to return to the formatting described in the element definitions. See "About formatting overrides" on page 52 for cautions on this.

• To remove element information derived from a book file, select While Updating, Remove Information Inherited from Book. Use this setting if the document used to be included in a book but is now a stand-alone document.

6 Click Import. FrameMaker adds the definitions to the document's Element Catalog, replacing any definitions that are already there. Then it validates the document so that errors are identified in the Structure View, and reapplies format rules from the definitions.

Removing elements

You can remove any element, with or without its contents. For example, you may want to delete a Section element and its contents, or delete the Section but leave the contents in place, so you can put them in a different element.

For elements that are defined to contain text or other elements (round-cornered bubbles in the Structure View), you can also delete the contents and leave the empty element in the document. But you cannot do this for elements that are a single object (square-cornered bubbles). Because these elements do not have contents, you must delete the entire element.

To remove an element and its contents:

❖ Select the element and press Delete.

To remove an element but not its contents:

❖ Select the element and choose Element > Unwrap. The contents may be reformatted as defined by their new context.

To remove the contents of an element but not the element itself:

❖ Select the contents and press Delete. For details on selecting contents, see "Placing the insertion point" on page 71 and "Selecting text" on page 75.

To remove an element and its contents and replace it with another element:

❖ Select the element. Then select the replacement element in the Element Catalog, and click Insert. A new empty element replaces the selected element and its contents.

Removing all elements from a document

There may be times when you want to remove all elements from a document so you can base the document on paragraph and character formats rather than on elements.

To remove all elements from a document:

❖ Choose Special > Remove Structure from Flow. If the document has additional structured flows, repeat this command for each flow.

FrameMaker removes all elements from the current text flow. If the formatting was created or modified by format change lists in the element catalog, the removed elements become format overrides in the document.

Note: If you want to create named formats for each removed element variation and save them in the catalog, use the Create & Apply Formats command.

Assigning attribute values

Attributes store supplementary information about an element that does not appear with the contents of the document. You can see attributes and their values in the Structure View. (See "Showing and hiding attributes for new elements" on page 18 for details on displaying attributes.)
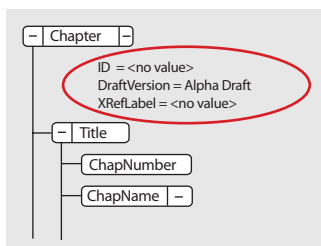
Attributes in the Structure View

An attribute's definition specifies the type of values that are acceptable (such as text or numeric) and might include a list of possible values or a numeric range.

The definition also determines whether the value is optional, required, or read-only, and it might provide a default value. You can assign values to an attribute if the attribute is not read-only.

If an attribute's current value does not conform to the specifications in its definition, the attribute is invalid. For information on finding and correcting problems with attributes, see "Finding and correcting errors" on page 51.

Note: You may want to let FrameMaker provide the values for ID and ID Reference attributes used in cross-referencing. (In fact, these attributes are often defined to be read-only.)

Entering attribute values as you insert elements

You may want to enter some attribute values as you insert elements, particularly for required attributes and attributes that affect formatting. Optional attributes might wait for a later pass.

Some font property values used in an element definition document (EDD) require that you use specific units. For example, if the Offset Horizontal value is set as a percentage of an em space, typing *5pt* will create an offset of 5 em spaces instead of 5 points.

Do not use multibyte (Asian-language) characters when entering attribute values. These characters may not be exported to SGML correctly because multibyte characters are not supported in the SGML workflow.

Note: Attribute names support the Unicode text encoding standard.

To enter attribute values as you insert an element:

1 Make sure you are prompted for attribute values when you insert elements (see "Setting options for inserting new elements" on page 39).

2 Insert the element (see "Inserting elements" on page 36). If attributes are defined for the element, the Attributes for New Element dialog box appears, listing all the attributes (except read-only ones) defined for the element.

3 For each attribute value you want to provide, select the attribute in the Attribute Name scroll list, enter the value in the Attribute Value text box, and click Set Value. If an attribute is required, you must enter a value for the element to be valid.

If an attribute has a set of predefined values, choose from the Attribute Value pop-up menu rather than entering a value.
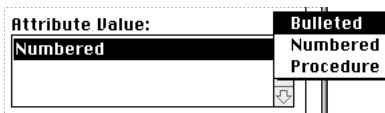
Attribute Value pop-up menu

The value you can enter, such as text or a number, is determined by the attribute's type. For details on attribute types, see "Types of attributes" on page 48.

A description of the selected attribute (its type, whether a value is required, and so on) appears in the dialog box below the Attribute Value area.

4 Click Insert Element.

Entering or editing attribute values for elements already in a document

You can enter and edit attribute values for elements already in a document if the attributes are not read-only.

If you need to change an attribute name rather than a value, use Edit > Find/Change (see "Changing elements or attributes you find" on page 50). You may need to do this if you imported element definitions that use different attribute names with identical meanings, such as Security instead of SecurityLevel. The new attribute name must be defined for the element.

To enter or edit an attribute value for an element already in a document:

1 Select the element with the attribute value you want to change.

You can select more than one element of the same type, and apply the change to all. The elements must be contiguous. For example, if several Para elements in a row have a Security attribute, you can change the value of that attribute for all the Para elements at one time.

2 Display the Attributes dialog box by doing one of the following:

• Click the Attributes button a at the upper right corner in the document window. When you open the dialog box this way, you can keep it open to edit attribute values for more than one element.

• Double-click an attribute name or value in the Structure View. Or, click in the element, press Control+7, type the name of the attribute to edit, and press Return. When you open the dialog box this way, you'll close it after editing attribute values for the element.

3 For each attribute value you want to enter or edit, select the attribute in the Attribute Name scroll list, enter the value in the Attribute Value text box, and click Set Value.

If an attribute has a set of predefined values, choose from the Attribute Value pop-up menu rather than entering a value.

4 If you displayed the Attributes dialog box by double-clicking in the Structure View or pressing Control+7, click Done.

To remove an attribute value:

❖ Select the value in the Attributes dialog box, and click Delete Value.

You can use Edit > Find/Change to edit attribute values for many occurrences of an element at one time (see "Changing elements or attributes you find" on page 50).

Types of attributes

An attribute's type determines the kind of values that are allowed in the attribute. For example, the value *version 1* is not valid for an attribute defined as an integer, but the value *1* is valid. Numeric types (such as integer or real) can also be limited to a predefined range by their attribute definition.

Choice An attribute with a list of predefined values.

ID Reference An attribute with a value that is a Unique ID value from another element. It is typically used for element-based cross-references.

ID References An attribute with a value of one or more Unique ID values from another element. (Your developer may specify this attribute if you're exporting to a structured application that uses multiple values for source information.)

Integer An attribute with a whole number value (no decimal parts). Examples of valid integers are 22, -22, and +322. An integer can be defined to fall within a range.

Integers An attribute with a value of one or more integers. Enter each number on a separate line in the Attribute Value text box.

Real An attribute with a real number value, with or without a decimal part (the value can also be expressed in scientific notation). Examples of valid real numbers are 2, 22.4, -0.22, and 2.3e-1. A real number can be defined to fall within a range.

Reals An attribute with a value of one or more real numbers. Enter each number on a separate line in the Attribute Value text box.

String An attribute with a value of a series of characters (text).

Strings An attribute with a value of one or more strings. Enter each string on a separate line in the Attribute Value text box.

Unique ID An attribute with a value of a unique text string. An element can have only one ID attribute (which can be of type Unique ID or Unique IDs). All ID values must be unique in the document or book. An element with a Unique ID attribute can be the source for an element-based cross-reference.

Unique IDs An attribute with a value of one or more unique text strings. Enter each string on a separate line in the Attribute Value text box. (Your developer may specify this attribute if you're exporting to a structured application that uses multiple values for source information.)

Copying attribute values

You can use the Clipboard to copy and paste attribute values from one element to another. If you paste values to an element that does not have corresponding attributes defined, the attributes will be invalid. To preserve element-based cross-references, an ID attribute value is not pasted.

If you copy an attribute from another document, the attribute may not be defined in the current document.

To copy attribute values:

1 Select the element with the attribute values you want to copy, and choose Edit > Copy Special > Attribute Values. All attribute values associated with the element are copied to the Clipboard.

2 Select a different element and choose Edit > Paste.

To delete an undefined attribute copied from another document:

❖ Select the element with the undefined attribute, open the Attributes dialog box, select the attribute, and click Delete Attribute. In the next dialog box that appears, remove the attribute for the current element or for all elements that have the attribute.

Improved validation of EDD attributes

When validating the elements in an EDD, attributes in if-then clauses were not validated in earlier versions of FrameMaker. For example, suppose that the possible values of an attribute are A or B or C, and a context rule says If [attrval = "D"]. This was not previously flagged as an error when the element definitions were imported. It is now correctly reported as an invalid structure.

Similarly, if an element's text formatting rules or prefix/suffix rules use attribute names in the context specifications, the attribute name and case must match the attribute definition in the element's definition.

If an attribute's value is changed to the same value it previously had, the action is not flagged as a change. This enhances performance by eliminating unnecessary value checking.

Finding elements and attributes

You can search for elements and attributes in a structured document to help keep track of these items or to make changes to them quickly. This is especially useful when you want to apply the same change to more than one occurrence of an element or attribute.

You can also search for many other items in FrameMaker, including strings of text, specific formatting, unresolved cross-references, and objects (such as anchored frames) that are not elements. See "Searching for any item" on page 77.

Note: The Find/Change feature supports the Unicode text encoding standard.

Searching for element tags, attribute names, or attribute values

You can search for an element tag, attribute name, and attribute value either separately or in combination. For example, you can search for an element tagged List to find each List element, or you might limit the search to find only List elements that have a Security attribute set to Classified.

To search for an element tag, attribute name, or attribute value:

1 Choose Edit > Find/Change.

2 Choose Element from the Find pop-up menu.

3 Select the options you want in the Find Element dialog box.

The settings can be used in many combinations. These are a few examples:

• To find any element, leave all three text boxes empty.

• To find a specific element, type an element tag but leave the Attribute Name and Attribute Value text boxes empty.

• To find any element with a specific attribute, type an attribute name but leave the Element Tag and Attribute Value text boxes empty.

• To find any element with a specific attribute value, type an attribute value but leave the Element Tag and Attribute Name text boxes empty.

• To find a specific combination of element and attribute, type an element tag and choose an attribute name.

- To find a specific combination of element and attribute value, type an element tag and choose an attribute name and an attribute value. (If the attribute type is Choice, type the value.)

- To find a specific element with an attribute that has no value, type an element tag, choose an attribute name, and choose <No Value> from the Attribute Value pop-up menu.

Leave a text box empty if you do not want to restrict the search. An empty text box has the same effect as searching for any element, or choosing either <Any Attribute> or <Any Value>.

4 Click Set.

5 In the Find/Change dialog box, select Consider Case, Whole Word, Use Wildcards, or Find Backward.

6 Click Find.

Note: FrameMaker normally begins searching at the insertion point and continues throughout the document. When a search reaches the end of the document, it continues at the beginning. After searching the main flow, it looks at other text frames and text lines. Because a search is flow by flow, it may appear to jump around the document.

To search for the next occurrence of the item:

❖ Click Find Again in the Find/Change dialog box, or choose Edit > Find Next.

To reverse the search direction:

❖ Select Find Backward in the Find/Change dialog box and click Find.

To cancel a search:

❖ Do one of the following:

- (Windows) Press Esc.

- (UNIX) Press Control+c.

Changing elements or attributes you find

After you find an element, attribute, or attribute value, you can change it to another element, attribute, or value. For example, you can quickly and globally change the value of a SecurityLevel attribute from Declassified to Top Secret.

When changing items in a document, you can change each occurrence of the item as it is found or have FrameMaker automatically make the change throughout the document.

If you've pasted material from another document or have imported new element definitions, the Find/Change command is a powerful clean-up tool for returning your document to its proper state. For example, if you paste a table from an unstructured document, the table and its parts receive default, invalid element tags. You can use Find/Change to change CELL elements, for example, to TableCell elements.

To change an element or attribute you find:

1 Choose Edit > Find/Change.

2 In the Find/Change dialog box, choose Element from the Find pop-up menu.

3 Select the options you want in the Find Element dialog box, and click Set. Then choose an option from the Change pop-up menu in the Find/Change dialog box, and type the replacement tag or value.

The Find Element dialog box and the Change pop-up menu work together. These are a few examples of combinations you can use:

- To change one element to another, type an element tag in the Find Element dialog box but leave Attribute Name and Attribute Value empty. Then choose Element Tag To in the Change pop-up menu and type an element tag.

- To change one attribute to another, type an attribute name but leave Element Tag and Attribute Value empty. Then choose Attribute Name To and type an attribute name that is defined for this element.

- To change one attribute value to another, type an attribute value but leave Attribute Name and Attribute Value empty. Then choose Attribute Value To and type a value.

- To change an attribute with a specific name to a certain value, type an attribute name but leave Element Tag and Attribute Value empty. Then choose Attribute Value To and type a value.

- To change a specific element with a specific attribute value to another element, type an element tag and choose an attribute name and attribute value. Then choose Element Tag To in the Change pop-up menu and type an element tag.

- To remove an attribute value, type an attribute value but leave Element Tag and Attribute Name empty. Then choose Attribute Value To and leave the Choose text box empty.

If you try to make a change that is not allowed—for example, if you try to remove an element tag—an alert message appears explaining the problem.

4 Click Find.

5 When FrameMaker finds the element or attribute, do one of the following:

- To make the change but not continue searching for other occurrences of the item, click Change.

- To make the change and continue searching for other occurrences, click Change & Find.

- To change all occurrences of the item, specify all occurrences in the document or only occurrences in the current selection and click Change All.

Important: When you change all occurrences, you cannot undo the changes with Edit > Undo. Consider saving the document and then manually changing several occurrences of the text. When you're confident that the changes are exactly what you want, click Change All.

To delete an element you find:

❖ Choose To Text from the Change pop-up menu, leave the Change text box empty, and click Change. You can also simply press Delete.

Finding and correcting errors

An error in a structured flow can be a structure problem, such as an element in an invalid location, or an invalid attribute, such as an attribute with a missing required value. Your element definitions have content rules and attribute information that describe what is correct for your document.

You can use the Structure View to find errors in elements and attributes. When a collapsed element has invalid content in its structure, the plus sign on the left of the element name is red. You can also *validate* a document to find errors. After you know where the errors are located, use the Element Catalog and the Structure View as guides to help you correct them.

If you've made any formatting changes to text in elements, the elements may not conform to their format rules. For information on removing format rule overrides, see "Removing format rule overrides in structured documents" on page 138.

Using the Structure View to find errors

When an element doesn't conform to content rules and attribute descriptions in the document's element definitions, the Structure View identifies the error for you.

Missing elements If an element is missing one or more child elements required by the element definitions, a small red hole appears on the vertical line where the child element should be.
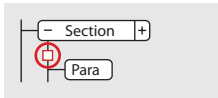
At least one required child element is missing.

Elements at an invalid location If an element is at a location not allowed by the content rules, the vertical line next to it is broken from the position of that element to the end of the parent element.

The Para element is invalid at this location.

Undefined elements If an element is not defined for the document, its bubble is red. This may happen if you have pasted the element from another document.

Invalid attributes If an attribute has an invalid value or is not defined for the document, it appears with a red *x* to the left of the attribute name and its value is red.
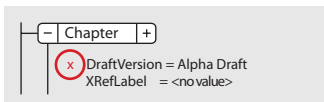
The DraftVersion attribute is invalid.

Attributes missing a required value If an attribute does not have a value, *<no value>* appears to the right of the attribute name. If the attribute requires a value, *<no value>* is red and a red hole appears to the left of it.
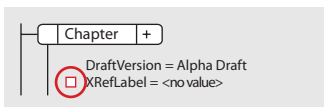
The XRefLabel attribute is missing a required value.

Validating documents

When FrameMaker validates a document, it searches for elements that do not conform to content and attribute rules in the document's element definitions. If FrameMaker finds an error, it selects the element and describes the error.

You can validate an entire document, the current flow, or the current element. If you validate the current element, FrameMaker does not check the descendants of the element's child elements. For example, if you validate the Section element below, FrameMaker makes sure that the Head element, the two Para elements, and the List element are valid, but does not check the List Item elements in List.
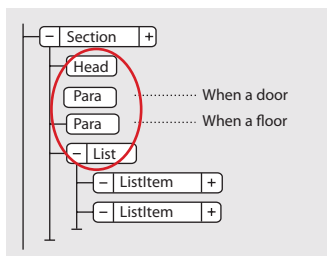
Only the section's child elements are validated.

If the document has conditional text, only the versions that are showing are validated.

You can also validate an entire book including all its files, only the book file, or only the current element in the book file (see "Validating structured books" on page 473).

To validate a document:

1 Choose Element > Validate.

2 Select Entire Document, Entire Book, Current Flow, or Current Element to specify the scope of the validation.

3 To exclude missing elements or attribute values from the search, select Ignore Missing Elements or Ignore Missing Attribute Values.

If these settings are selected, FrameMaker does not look for places where a required child element or a required attribute value is missing. You may want to select these if you are not trying to build a complete document yet.

4 Click Start Validating.

FrameMaker starts checking at the beginning of the current element. If you're validating only the current element, it checks the element with the insertion point or the selected element. If more than one element is selected, it checks the first element in the selection.

5 If FrameMaker finds an error, click Start Validating again when you're ready to continue validating.

The top of the Element Validation dialog box shows the tag of the element and a brief message about the problem. (See "Validation error messages" on page 54 for descriptions of the messages that can appear.)
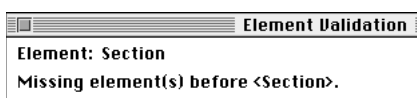
Element and error identified

You can correct the error, ignore it, or click Allow as Special Case. If you mark it as a special case, FrameMaker won't identify the error the next time you validate the document.

6 Repeat step 5 until FrameMaker does not find any more errors.

When FrameMaker reaches the end of the document, it returns to the beginning and continues validating. When FrameMaker reaches the end of a flow, it continues to the next one.

Note: When validating a book, FrameMaker tells you if a file in the book has invalid content, but for a more detailed evaluation, you must open and validate the file.

While validating the elements in an EDD, attributes in if-then clauses are validated. For example, suppose that the possible values of an attribute are A or B or C, and a context rule says `If [attrval = "D"]`. This is flagged as an error and reported as an invalid structure when the element definitions are imported.

Similarly, if an element's text formatting rules or prefix/suffix rules use attribute names in the context specifications, the attribute name and case must match the attribute definition in the element's definition.

If an attribute's value is changed to the same value it previously had, the action is not flagged as a change. This enhances performance by eliminating unnecessary value checking.

To clear all special cases:

1 Choose Element > Validate.

2 Click Clear Special Cases. FrameMaker clears the special cases in the document, the flow, or the element—whichever scope is selected in the dialog box.

Validation error messages

The following error messages can appear at the top of the Element Validation dialog box. (In the descriptions, *tag* represents an element tag, *name* represents an attribute name, and *value* represents an attribute value.)

Current flow is unstructured. The current flow does not have elements in it.

Element is undefined The element is not defined in the document. You may have copied this element from another document.

Missing element before *tag* At least one required element is missing before the specified element.

More contents required at end At least one more child element is required at the end of the current element.

No current element There is no insertion point or selection. (This message appears when the scope is set to Current Element.)

No current flow There is no insertion point or selection. (This message appears when the scope is set to Current Flow.)

Not highest-level element The element is not permitted at the highest level in the document.

<TEXT> not permitted in this element The element contains text, but text is not allowed.

<TEXT> not valid at this position The element is allowed to have text but not at this location.

The *name* attribute refers to an undefined ID value The attribute is an ID Reference and refers to a Unique ID value that doesn't exist in the document (or in the book, if you're validating a book).

The *name* attribute is undefined for this element The definition of this element does not include a *name* attribute.

This element should be a *type* The element is the wrong type, where *type* can be *graphic*, *marker*, *cross-reference*, *equation*, or *system variable*. For example, a cross-reference element might consist of text instead of a cross-reference.

Value must be a *type* for *name* attribute The attribute value is the wrong type for the attribute.

Value for *name* attribute must be in the range from *n* to *n* The attribute's numeric value is out of the specified range.

Value for *name* attribute is not one of the allowed choices The attribute's value must match a value from the pop-up menu of valid choices.

Value for *name* attribute must be unique A Unique ID value must be unique for all elements in the document or book.

Value required for *name* attribute. The attribute does not have a required value.

***tag* excluded in this element** The *tag* element is not allowed because of an exclusion rule for the parent or one of its ancestors.

***tag* not permitted in this element** The *tag* element is not allowed anywhere in the parent element.

***tag* not valid at this position** The *tag* element is allowed in the parent element but not at the current location.

Correcting errors in elements

After you have identified errors in elements and attributes, use the Element Catalog and Structure View as guides for correcting them.

To correct an element in an invalid location:

❖ Move the element to a valid location (see "Moving elements" on page 42), or change it to an element that is valid for its current location (see "Changing elements to another type" on page 40).

You can select an invalid element, or if you're validating, FrameMaker selects the element for you. When the element is selected, the Element Catalog shows which elements are valid at that location.
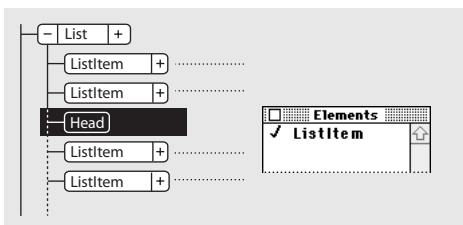
ListItem is valid at this location.

To correct a structure with a missing child element:

❖ Insert the required element (see "Inserting elements" on page 36).

You can click where an element is missing, or if you're validating, FrameMaker places the insertion point there for you. When the insertion point is at the location of the missing element, the Element Catalog shows which elements are valid at that location.
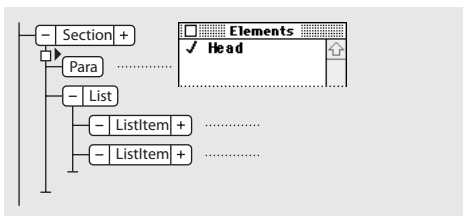
Head is required at this location.

To correct an element with invalid contents (with the text snippet <INVALID CONTENT>):

❖ Change it to an element that allows those contents (see "Changing elements to another type" on page 40).

To correct an invalid attribute value:

❖ Change the value to one that is valid for the attribute (see "Entering or editing attribute values for elements already in a document" on page 47).

To remove an undefined attribute:

❖ Select the element with the undefined attribute, open the Attributes dialog box, select the attribute, and click Delete Attribute. In the next dialog box that appears, remove the attribute for the current element or for all elements that have the attribute.

To resolve a cross-reference with an invalid ID:

❖ Select the cross-reference, choose Special > Cross-Reference, and change to a source that has a valid ID (see "Maintaining cross-references" on page 206).

About structured documents

Almost all documents have an implicit structure. In each type of document, the contents naturally consist of logical units that appear in a consistent order and with a particular hierarchy. In FrameMaker, you can work with a document's structure explicitly by organizing the contents of the document—its sections, heads, paragraphs, figures, tables, and so on—in logical units called elements. (See "About elements" on page 32). Together, the elements form the hierarchy that represents the structure.

For example, a Section element for a section of a book might include a Head element with heading text, a Para element with body text, and a List element that contains several ListItem elements with text.
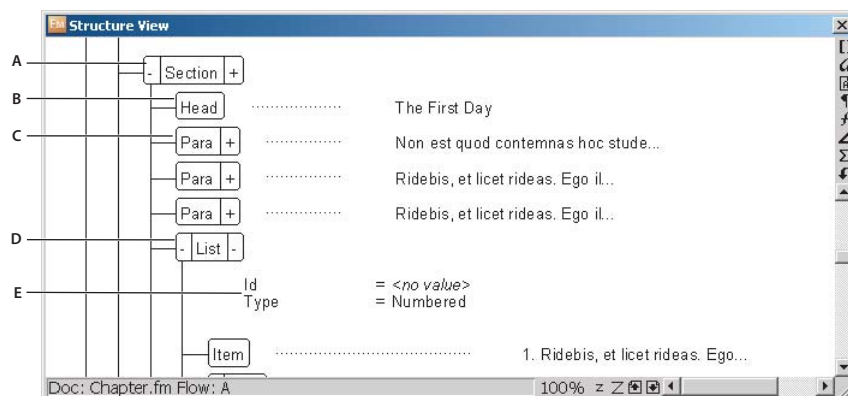
A. Section element that contains everything in the section *B. Head element* *C. Para element* *D. List element*
E. ListItem elements in the List element

Structured formats in FrameMaker

Using FrameMaker, you can import and export structured documents in either SGML or XML (including XHTML 1.0) format. Once you import a structured file, it is no longer an SGML or XML file; it is a structured FrameMaker document. To return it to its original format, save it as SGML or XML (see "Saving a structured document in SGML or XML format" on page 63).

About SGML

Standard Generalized Markup Language (SGML) is the international standard for all markup languages for data exchange and storage.

SGML is a descriptive, rather than procedural, markup language, meaning the same document can be processed by different systems, each applying different processing instructions to relevant sections. You can transfer SGML documents from one system (hardware and software environment) to another without any loss of data.

SGML was the first language to instigate the Document Type Definition (DTD), which formally defines the document by its components and structure. Documents of the same type can then be verified and processed uniformly.

A document that conforms to the structure of a DTD is said to be valid.

About XML

Extensible Markup Language (XML) is a generalized format for representing structured information, especially for the Web. Like HTML and SGML, XML requires the use of elements and structure. However, XML differs from HTML in that it is extensible—users may define custom sets of element tags. XML is a subset of SGML, and can be used for essentially the same purposes as SGML, without many of the complex SGML features.

You can use XML for storing data in an XML repository, which lets you easily reuse materials, search for text, collaborate with other authors, and manage documents. You can also use XML and the template-driven workflow in FrameMaker for multichannel publishing.

An XML document that conforms to the structure of a DTD is said to be valid. An XML document that uses tags that conform to the standard XML specifications is said to be well-formed.

About XHTML 1.0

Extensible HyperText Markup Language (XHTML) is an extension of HTML that is based on XML and is designed to work with XML-based applications. It can be viewed, edited, and validated with standard XML tools. Using XHTML is an easy way to migrate from HTML to XML while retaining your content's forward and backward compatibility. For more information on HTML, see "About HTML" on page 549.

About structured templates

A template is a document that stores properties you use in more than one place. You can create a new document from a template to give it all the template's properties, or you can import specific properties from the template later. FrameMaker templates give your documents their layout and formatting, and specify their structure requirements. Structured FrameMaker comes with Structured Templates for letters, memos, fax, envelope, reports, outlines, newsletters, books, FAQs, and Single source book.

Templates can store the following properties:

- Element definitions that specify allowable contents, attributes, and formatting for elements
- Paragraph, character, and table formats that work with formatting information in the element definitions
- Page layouts that determine the number and position of columns on pages, and background items such as running headers
- Reference pages that store repeatedly used graphics and formatting information
- Variables you use as placeholders for text that FrameMaker updates
- Formatting information for cross-references, equations, and conditional text

- Definitions for colors you can apply to text and objects

- Document-wide settings, including footnote properties, custom marker types, and feathering options for line spacing

- Specifications for combined Japanese and Western fonts (on Japanese-language systems)

Note: If you're working with structured files, an application developer may have set up special documents that handle the translation to and from the structured application. These documents may include a template that formats the structured files in FrameMaker. This template is applied automatically when you import from the structured application.

Using structured documents in FrameMaker

In the typical workflow, you begin working with structured documents by creating a new document (most often from a template) or by opening an existing document in Structured FrameMaker.

A structured document contains more than just the elements and contents you add to it. It can also store page layouts, catalogs of element definitions and formats, and other properties that facilitate and even automate your work. These properties normally come from the document's template.
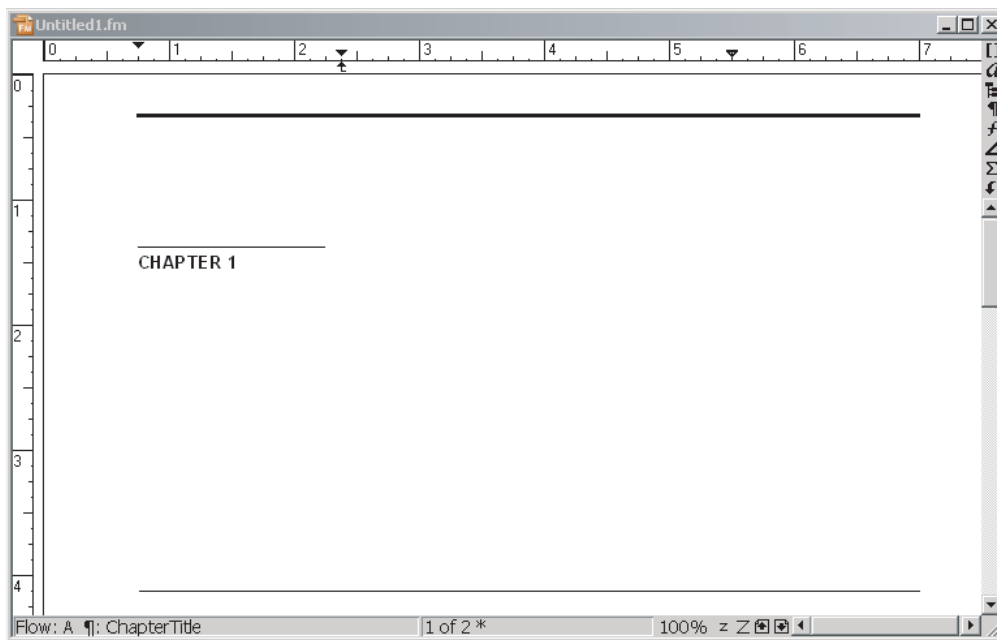
A template provides a foundation for other documents.

Creating documents from a structured template

When you create a document from a structured template, the document is an exact copy of the template, including its element definitions and other properties and any contents it might have.

Typically, you use a custom template that is part of your application, but FrameMaker also comes with some predefined structured templates for reports, viewgraphs, and outlines.

As you work in the template, FrameMaker helps you organize elements in a valid structure and formats everything for you automatically—you don't need to know XML or SGML syntax to create XML- or SGML-compatible documents.

Your developer may provide documentation that describes how to work with the elements defined for the application. If you want to create a document that will not be structured, either use an unstructured template or start with the equivalent of a blank piece of paper. For more information, see "Creating documents" on page 19.

To create a document from a structured template:

1 Make sure you are running Structured FrameMaker. If you are not running Structured FrameMaker, choose File > Preferences > General, select Structured FrameMaker for Product Interface, click Set, and restart FrameMaker.

2 Choose File > New > Document. In UNIX, you can also click New in the main FrameMaker window.

3 Navigate to the template you want. If you want to use a structured template that came with Structured FrameMaker, navigate to the Structured folder in the Templates folder in one of the following locations:

• (Windows) The FrameMaker8 folder

• (UNIX) The fminit/language/Templates/Structured folder within the FrameMaker installation folder (where language is the name of the language you're using—for example, usenglish)

4 Select the template and click New (Windows) or Create (UNIX).

5 When the template opens, resize the document window so that you can clearly see the page. Then click the Structure View [icon] button in the upper right corner of the document window to display the Structure View, which shows the structure hierarchy. Position the two windows so that you can see both at once. You can also click the Element Catalog button to display the Element Catalog.
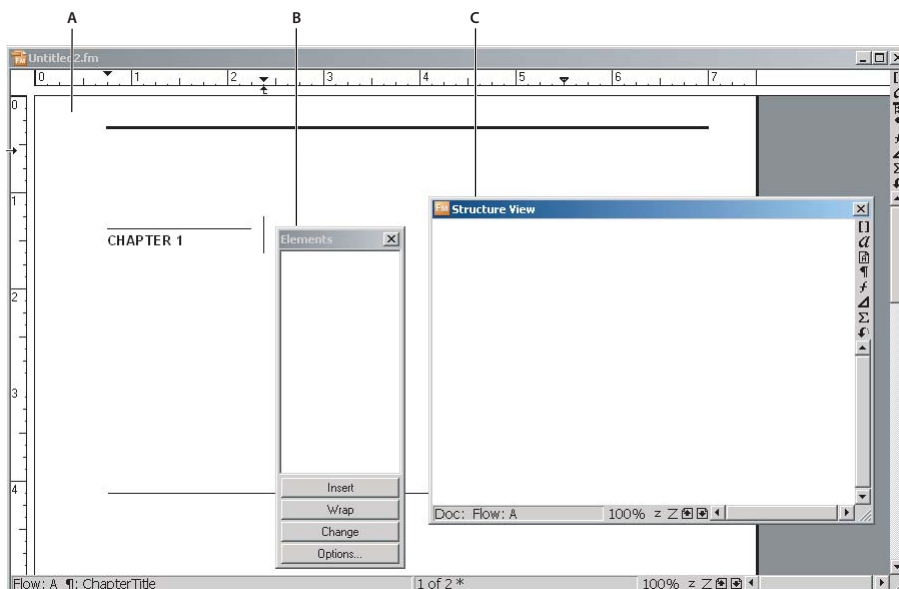
A. Template in a document window B. Element catalog C. Structure view

6 Do any of the following:

• Add text for each required element and any optional elements you want. You can add text by clicking to place the insertion point in the document window (see "Working with text in structured documents" on page 95 and "Entering text in a structured document" on page 99).

• Add new elements from the Element Catalog (see "Adding elements" on page 34).

• In the Structure View, expand the elements by clicking the + (plus sign) on the left side of the element bubbles; collapse them by clicking the - (minus sign) on the left side (see "Collapsing and expanding elements" on page 14).

- View the element's attributes by clicking the + (plus sign) on the right side of the element bubbles (see "Showing and hiding attributes for an element" on page 15).

- Change an element's attributes (see "Assigning attribute values" on page 46).

- Rearrange or restructure elements or sections in the document (see "Moving elements" on page 42).

- Add cross references (see "Working with cross-references in structured documents" on page 215).

- Manipulate the current structure—change an element to another type, merge two elements, split an element in two, or wrap an element in a new parent element (see "Editing elements" on page 39).

- Validate the document to ensure that it has a valid structure for export to XML or SGML (see "Finding and correcting errors" on page 51).

- Save or export the document to XML or SGML (see "Saving a structured document in SGML or XML format" on page 63).

Creating a new structured document
To create a structured document from scratch, make sure you have an EDD and a structure application available (see "About structured applications" on page 60). You can use the EDD file and sample structure application included with FrameMaker (see the folders located in the Structure folder), or you can create your own. For information on creating a structured application and EDD, see the *Structured Application Developer's Guide*, located in the Online-Manuals folder in the FrameMaker8 folder.

To create a new structured document:
1 Make sure you are running Structured FrameMaker.

2 Choose File > New > Document.

3 Select Portrait, Landscape, or Custom to set the page dimensions.

4 Open a structured document or EDD that includes the elements you want to use, and then import elements into the new document (see ""Importing element definitions" on page 44).

5 Add text and elements to the document (see "Adding elements" on page 34).

6 Save the document as a structured FrameMaker document or in the desired format (see "Saving a structured document in SGML or XML format" on page 63).

Opening and saving structured files
You can open and work with any structured file in FrameMaker, as long as the file has an associated application. The contents, elements, and attributes from the file are preserved, and the file appears just like a regular FrameMaker document.

Using Structured FrameMaker you can open XML and SGML documents. After editing the structured file, you can save it back to its original format, such as XML or SGML; any changes you made to contents, elements, and attributes will usually be preserved. (See your developer about limitations your application may have on mapping between structured files and FrameMaker.)

About structured applications
A structured application is a collection of files that describes how to process a structured file in FrameMaker. The application usually includes a DTD, which defines the elements and attributes, and other items, such as read/write rules and an import template.

To be able to work with a structured file, you need to have an application associated with the file. A developer typically sets up this application for you and may associate it with the appropriate files. You can also select the application yourself as you open or save, or change the application while the file is open.

Important: Use the application that was designed for the file. If you're not sure which one to use, ask your application developer.

You can open an SGML or XML file without using an application—for example, if you're just browsing the file, or if you don't know which application to use and will select one later. The file will have structure but only basic default formatting (with all text in body paragraphs), and objects such as tables and graphics will generally not be imported. You'll be able to edit the structure and contents of the file, but you may not be able to save it back to the structured format (XML or SGML), because some mapping information may be unavailable.

An SGML or XML file does not include any specifications on how its contents are to be formatted, but your structured application may have a template that formats the file in FrameMaker. If you use an application that does not have a template, the file opens using basic default formatting.

Opening structured files

You can open a structured file just as you open any other kind of file. A new FrameMaker document appears, with all the contents of the structured file.

If you want to view or edit the structure markup directly, you can also open the file as text (see "Opening SGML, XML, MIF, and MML files as text" on page 68).

Default encoding settings for opening structured files are ISO-8859-1 for SGML and UTF-8 for XML. If the original files have different encoding settings, FrameMaker uses those settings instead of the default settings.

To open a structured file:

1 In Structured FrameMaker, choose File > Open. On UNIX systems, you can also click Open in the main FrameMaker window.

2 Locate the file you want to open and click Open. If the file has an associated application, the document opens and you're ready to begin.

3 If the Use Structure Application dialog box appears, choose an application name from the Use Structured Application pop-up menu and click Set. Then do one of the following:

• To associate an application with the file, choose the name of an application.

• To use default mapping and no read/write rules, choose <No Application>. You may want to use this option to browse a file you don't plan to save.

Note: When characters in an original XML file don't map into the FrameMaker document, the characters are marked as unknown. They don't appear in FrameMaker, but they are preserved on XML export.

Converting structured files to FrameMaker format without opening

You can convert one or more structured files to FrameMaker without having to open them. The files you convert should either be the only contents of a single folder or all have a unique filename extension in a folder, and they should all use the same structured application.

To convert structured files to FrameMaker format:

1 Choose StructureTools > Utilities > Convert Structured Documents.

2 Choose an application for the converted files from the Application pop-up menu.

3 In the Input Structured Documents area, specify the location and filename extension of the original files. If you need to look for the location, click Browse and navigate to it.

The filename extension is required. You can type an asterisk (*) in the Suffix text box to convert all files in the folder.

4 In the Output FrameMaker Files area, specify a location and filename extension for the FrameMaker files. If you need to look for the location, click Browse and navigate to it.

The filename extension is optional. If you leave the Suffix text box empty, the converted files will have no extension. If you type *, the files will have the same extension as the original structured files. If you use *, store the structured files in a different folder from the converted files.

5 To overwrite an existing batch of converted files in the output folder, select Allow Existing Files to Be Overwritten.

Important: Use this option for overwriting an earlier version of converted files with the same name. Be careful not to overwrite the original structured files. Either store the structured files in a separate folder or give them a different filename extension.

6 Click Convert.

Changing the associated structured application

After you open a structured file, you can change the application associated with it. The new application is used for the file when you next open the file or save it as a structured document.

FrameMaker 8 allows you to associate a structured book with the DITA-Book- FM application, or a structured document with a DITA-Map-FM or DITA-Topic-FM application. Use the DITA-Book- FM application to build a FrameMaker book that contains all of the files in an open DITA map (<dita>, <ditamap>, or <map>). The element definition document (EDD) and structured template used in this application can be customized for hardcopy or PDF output. Use the DITA-Map-FM application to create and edit DITA maps (both .map and .ditamap files). Use the DITA-Topic-FM application to author topic, concept, reference, or task information types. If needed, the EDD and structured template can be optimized for screen viewing or topic proofing.

Important: Consult your developer before changing the application. For best results, use the application that was designed for the file.

If you need to change the application for a group of files, you can ask a developer to specify this in an application definition file so that you don't need to change it in each file manually.

To change the associated structured application:

1 Click in the document you want to change.

2 Select StructureTools > Set Structured Application, choose the name of the application from the Set Structured Application pop-up menu, and click Set.

Converting structured FrameMaker documents to SGML or XML

You can convert one or more structured documents to SGML or XML, without having to save them individually. The files you convert should either be the only contents of a single folder or all have a filename extension that is unique in a folder, and they should all use the same structured application.

For information on opening SGML or XML files as text, see "Opening SGML, XML, MIF, and MML files as text" on page 68.

To convert FrameMaker documents to a structured format:

1 Choose StructureTools > Utilities > Convert Documents to Structured Format.

2 Choose an application for the converted files from the Application pop-up menu.

3 In the Input FrameMaker Files area, specify the location and filename extension of the FrameMaker files. If you need to look for the location, click Browse and navigate to it.

The filename extension is required. You can type an asterisk (*) in the Suffix text box to convert all files in the folder.

4 In the Output Structured Documents area, specify a location and filename extension for the converted files. If you need to look for the location, click Browse and navigate to it.

The filename extension is optional. If you leave the Suffix text box empty, the converted files will have no extension. If you type *, the files will have the same extension as the FrameMaker files. If you use *, store the FrameMaker files in a different folder from the converted files.

5 To overwrite an existing batch of converted files in the output folder, select Allow Existing Files to Be Overwritten.

Important: Use this option for overwriting an earlier version of converted files with the same name. Be careful not to overwrite the FrameMaker files. Either store those files in a separate folder or give them a different filename extension.

6 Click Convert.

Saving a structured document in SGML or XML format

You can save any structured FrameMaker document as SGML or XML. The contents, elements, and attributes from the document are preserved; however, formatting is not preserved. You can save to a different structured document type than the original (such as SGML to XML), but you may encounter errors due to differences in DTDs.

When you save Unicode content as an XML file, Adobe FrameMaker 8 specifies the encoding automatically. By default, Adobe FrameMaker 8 uses the UTF-8 encoding format.

Before saving a document as SGML or XML, you should validate it and correct any errors in the elements and attributes (see "Validating documents" on page 52). Otherwise, the markup may be invalid.

When saving structured XML documents, make sure valid XML element names start with a letter and contain only alphanumeric characters, periods, or hyphens. Spaces, underscores, and other characters in XML element names are invalid characters, and are either converted to hyphens (-) or generate errors.

Headings, tables, and reference pages are not used in XML export, and the default tag names are simply the format names.

Default encoding settings for exporting structured documents are ISO-8859-1 for SGML and UTF-8 for XML. If the structured document is an imported SGML or XML file, FrameMaker uses the encoding settings in the original file instead of the default settings.

To save a document in SGML or XML format:

1 Select File > Save As.

2 Specify a filename and location. You may want to add the appropriate extension (such as .sgm or .xml) to the filename.

3 Select SGML or XML from the pop-up menu and click Save. If the document has an application associated with it, the document is saved.

4 If the Set Structured Application dialog box appears, choose an application name from the Set Structured Application pop-up menu and click Continue. Then do one of the following:

• To associate an application with the document, choose the name of an application.

• To use default mapping and no read/write rules, choose <No Application>.

If FrameMaker finds any structure errors when you save a document, it lists error messages in a view-only error log. If a message refers to an error in the FrameMaker document, the message is linked to the document. For most errors, you can click the message to go to the location of the problem.

When you open the structured documents, import element definitions into them (see "Importing element definitions" on page 44). You'll probably also need to make a few corrections to their structure.

Importing properties from a template

You can import element definitions and other properties into your document from any FrameMaker document. Typically, this other document is a template that you did not use for creating the document. (If you created your document from the appropriate template, you don't need to import properties; the document already has the properties it needs.)

If your document's template has been revised, you should import from the template again to update your document.

You can also import properties into all the files in a book at once (see "Importing formats into a structured book" on page 474).

Importing formats

You can import a wide variety of formatting information—including page layouts, paragraph and table formats, variable and color definitions, and conditional text settings.

To import formats:

1 Open the template with the formats. The template must be named and saved.

2 Open the document or book that you want to update. If a book window is active, select the documents you want to update.

3 In the document or book you're updating, choose File > Import > Formats.

4 Choose the template from the Import from Document pop-up menu. The menu lists all open, named documents.

You can also choose the current document to reapply the formats the document already has. This is useful mainly for removing formatting changes, as described in step 6.

5 Select the Import and Update settings you want to apply to the current document. See "Importing format settings" on page 65 for details on the settings.

• If you're updating cross-reference formats, math definitions, or variable definitions, and if any of these items uses character formats, also select Character Formats so that any new formats are added to the document.

• If the HTML mappings have been modified, select Reference Pages.

6 If you want to remove formatting changes that are not saved in catalog formats, do the following:

• To remove page breaks that are not part of a paragraph format, select Manual Page Breaks.

• To remove paragraph, character, page layout, and table formatting overrides, select Other Format/Layout Overrides.

Important: In most cases, you should not select Other Format/Layout Overrides in a structured document because the element definitions may use format overrides. See "About formatting overrides" on page 66 for more information.

7 Click Import.

Importing format settings

When you import formats, FrameMaker merges the new formatting information into the document. For example, if you import table formats, the formats are added to the Table Catalog. If a format already in the catalog has the same name as an imported format, the imported format replaces the original one. But any formats not overwritten remain in the catalog.

Paragraph formats The template's Paragraph Catalog is merged into the document, and all formats in the catalog are reapplied in the document.

Character formats The template's Character Catalog is merged into the document, and all formats in the catalog are reapplied in the document.

Page layouts The template's master pages are merged into the document, and body pages are updated with the master page changes. If the template and the document both have a master page with the same name, the master page of the template replaces that of the document. FrameMaker copies the change bar properties, all the settings in the Page Size and Pagination dialog boxes, and most settings in the View Options dialog box.

Table formats The template's Table Catalog and ruling styles are merged into the document, and all formats in the catalog are reapplied in the document.

Color definitions The template's color definitions and views are merged into the document.

Reference pages The template's reference pages (except for FrameMath™ reference pages) are merged into the document. If the template and the document both have a reference page with the same name, the reference page of the template replaces that of the document. To import the FrameMath reference pages, select Math Definitions.

Document properties The template's custom marker types and footnote properties; the volume, chapter, page, paragraph, footnote, and table footnote numbering styles in the Numbering Properties dialog box; the characters in the Allow Line Breaks After setting in the Text Options dialog box; and the Feather settings in the Line Layout dialog box are merged into the document. The PDF Setup settings (other than the bookmark settings) are also merged into the document. On Japanese-language systems, the rubi properties and kumihan rules (Japanese-language typesetting rules) are also merged into the document.

Variable definitions The template's variable definitions are merged into the document.

Cross-reference formats The template's cross-reference formats are merged into the document, and internal cross-references are updated.

Conditional text settings The template's condition tags and Show/Hide settings are merged into the document.

Math definitions The template's equation size and font settings, custom math element definitions, and FrameMath reference pages are copied into the document. If any custom math elements in the document are deleted when the reference pages are merged, FrameMaker replaces the math elements in equations with the name of the math element enclosed in question marks.

Note: In FrameMaker equations, the term "math element" refers to part of an expression. A math element is not a structural element.

Combined fonts On Asian-language systems, the specifications of combined fonts are merged into the document.

About formatting overrides

The formatting information for a document can come from format rules in element definitions and from predefined formats stored in catalogs. It is possible for a document to have overrides to both sources of information:

• A format rule override is a deviation from a text element's format rules. For example, if the rules specify a paragraph format for an element and you apply a different format, or if the rules specify boldface text and you change the text to italics, you are overriding the element's format rules.

• A format override is a deviation from a catalog format for text or a table. For example, a paragraph format may specify the Times font family. If you change some text that uses that format to the Palatino font (without saving the change in the format), you are overriding the format. Format rules often use a few catalog formats and specify format overrides to them as needed to describe many different formatting variations.

Generally, you should not introduce either type of override into your structured document. Let the document handle the formatting automatically, and see your application developer if you'd like to change any of the formatting properties.

If your document does have overrides, you can remove them throughout the document all at once when you import and update.

Important: If you need to remove both kinds of overrides from a document, import formats and remove format overrides first, and then import element definitions and remove format rule overrides. Removing the rule overrides last ensures that the elements will conform to their format rules.

Adding structure to documents using conversion tables

If an application developer has set up a conversion table for a document, you can use the table to wrap contents in elements throughout the document in one operation. This is a quick way to turn an unstructured document with contents into a structured document.

When you apply a conversion table to a document, FrameMaker uses elements throughout the document but does not put definitions in the Element Catalog. To do that, you'll still need to import the element definitions.

You'll probably need to make a few corrections to structure that was added from a conversion table. For information on validating and editing structured documents, see "Validating documents" on page 52 and "Editing elements" on page 529.

About conversion tables

A conversion table identifies types of contents by their paragraph and character tags, and specifies the particular elements for those contents; it might also specify parent elements. A paragraph tagged Body might be wrapped in an element tagged Para, for example, and a Head and the Para elements that follow it might be wrapped in a parent Section element.

Note: The Conversion Tables feature supports the Unicode text encoding standard.

Because conversion tables work with paragraph and character tags, they are particularly helpful when these tags have been used consistently in a document.

Even if paragraph and character tags are not consistent in the document, you may still want to use a conversion table to wrap basic contents such as body paragraphs. Then wrap the rest of the contents manually (see "Wrapping elements around existing contents" on page 37).

Applying a conversion table to a document or a book

A conversion table can quickly add structure to the current document or to the book and its files. FrameMaker puts the structured version of the document in a new unnamed file.

To apply a conversion table to a document:

1 Open the document or book you want to add structure to, and open the file with the conversion table.

2 Make sure that the document is not already structured by clicking in the main flow and looking in the Structure View. If the view is empty, the document is unstructured.

3 In the document you're adding structure to, choose StructureTools > Utilities > Structure Current Document or Structure Current Book.

4 Choose the file with the conversion table from the Conversion Table Document pop-up menu and click Set. FrameMaker applies the conversion table to the document.

If FrameMaker finds any errors in the table, it creates an error report in an unnamed document. Ask your developer to correct the errors and then apply the table again.

5 Save the newly structured document or documents.

6 Import element definitions into the document (see "Importing element definitions" on page 44). In most cases, you'll also need to make corrections and refinements to the new structure.

Applying a conversion table to a group of documents

You can add structure to one or more documents without having to open them. The documents should either be the only contents of a single folder or all have a filename extension that is unique in a single folder.

For more information on conversion tables, see the *Structured Application Developer's Guide*, located in the Online-Manuals folder.

To apply a conversion table to a group of documents:

1 Open the file with the conversion table.

2 Choose StructureTools > Utilities > Structure Documents.

3 Choose the file with the conversion table from the Conversion Table Document pop-up menu.

4 In the Input Unstructured Files area, specify the location and filename extension of the documents you're adding structure to. If you need to look for the location, click Browse and navigate to it.
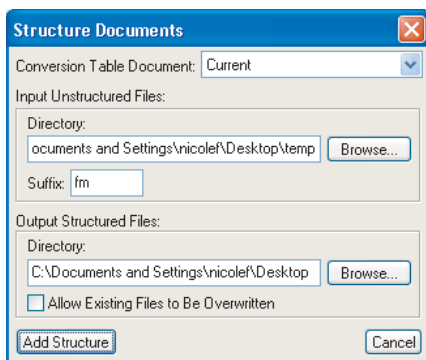
Applying a conversion table to a group of documents

The filename extension is optional. You can leave the Suffix text box empty to add structure to all documents in the folder.

5 In the Output Structured Files area, specify a location for the structured versions of the documents. If you need to look for the location, click Browse and navigate to it.

6 To overwrite an existing batch of structured files in the output folder, select Allow Existing Files to Be Overwritten.

7 Click Add Structure.

Working with XML documents

About Element Definition Document (EDD) and Document Type Definition (DTD)

Element definitions are defined in an Element Definition Document (EDD), which is normally embedded in the template. The EDD contains both structural rules for the document (Document Type Definition or DTD) and styling rules, which dictate how elements of a specific type are styled. An application developer generally creates the EDD from an existing DTD file or from scratch. For more information, see the *Structured Application Developer's Guide* located in the OnlineManuals folder.

All structured documents in FrameMaker use elements. Each element has a name, or tag, such as Section, Head, or List. The element tags that are available are determined by the document's element definitions.

You can add and edit elements in a structured document, as well as work with the contents in more conventional ways. Structured FrameMaker templates contain definitions of all the elements that can be used in the document as well as the document's page layout and formatting. For more information about working with Elements, see "Elements in structured documents" on page 32.

Opening SGML, XML, MIF, and MML files as text

SGML, XML, MIF, and MML are all text formats, so you can open them as text. SGML and XML are structured document formats that contain the content of a document (the styling is typically defined by a template, which contains the page layout and element definitions). For more information, see "Structured formats in FrameMaker" on page 56. MIF lets you exchange information between FrameMaker and other applications. MML is a markup language you can use with any text editor to create simple, unstructured FrameMaker documents.

When you open an SGML, XML, MIF, or MML file, it is normally opened in the FrameMaker format. You may want to open one of these files as text to view or edit the markup.

```
<chapter draftversion = "Alpha Draft"><title><ch
</chapnumber>
<chapname>Doors</chapname ></title>
<reviewinfo></reviewinfo>
<chapintro><autohead></autohead>
<chapoverview><autohead></autohead>
<section><head>Procedures in This Chapter</he
<para>This chapter describes maintenance proce
doors on the AstroLiner T44OB and T442 light rail
safety guidelines, an overview of door componer
```

Markup in an SGML file

To open an SGML, XML, MIF, or MML file as text:

1 Select File > Open and choose the file you want to open.

2 Do one of the following:

- (Windows) Control-click Open.

- (UNIX) Shift-click Open.

3 In the Reading Text File dialog box, select an option for reading the file and click Read.

Importing CSS element styles into an EDD file (Windows)

You can import element formatting from CSS into EDD to ensure consistent formatting across different XML applications. The CSS file can be referenced in the XML document or manually imported. Multiple CSS files can be imported sequentially for multi-level formatting.

When importing element styles, FrameMaker retains the context information (element property or selector) from the CSS and imports it into the appropriate EDD contexts.

Note: FrameMaker imports style information only at the element level.

You can also set CSS2 preferences in XML using Structured FrameMaker. For more information, see the *Structured FrameMaker Developer's Guide*, located in the Documents folder.

1 Open the EDD file in structured FrameMaker.

2 Select StructureTools > Import CSS Styles. The Import CSS dialog box appears.

3 Select a CSS file, and click Open.

4 If the Structured Application element in the EDD file doesn't define an application name, the Use Structured Application dialog box appears. Select the application that was used to create the EDD file. Click Continue.

The CSS file is imported into the EDD file.

Note: If the EDD already contains formatting rules, the CSS properties are appended to the existing rules. If the CSS properties overlap some of the existing rules, the CSS properties replace the existing rules in the EDD. The EDD doesn't support all properties and selectors defined in CSS 2.0. If a property or selector in the CSS file can't be mapped to an equivalent EDD rule, that property or selector is ignored. No error is displayed when this happens, and no error log is created.

After importing the CSS styles, you can import element definitions from the EDD into a template and use the template to open an XML file.

As an alternative to the CSS import process, you can use FrameMaker to open an XML file that already has CSS styles associated with it. When you open the XML file, FrameMaker reads the DTD and CSS files and generates a temporary template that is used to open the XML file.

About CSS export

You can export XML style information available in your document for all elements using the Cascading Style Sheets 2 (CSS2) format, to an EDD file. You can then import these CSS Style definitions from the EDD file to new XML files. Cascading Style Sheets let authors attach styles, such as fonts and spacing, to structured XML files. CSS2 format is a W3C standard.

When you choose the Generate CSS2 command, styles from well-formed structured documents are generated, based on the formatting information available in the EDD associated with the source document. FrameMaker exports style information only at the element level. For example, if you apply a style to only one particular word in the Text element, that one instance of style is not exported.

You can set CSS2 preferences in the XML application. For example, you can determine whether the CSS2 file is automatically generated when you export to XML. For more information, see the *Structured Application Developer's Guide*, located in the OnlineManuals folder.

To export CSS for a FrameMaker XML file:

1 Open the template or document with an associated EDD in Structured FrameMaker.

2 Select StructureTools > Generate CSS2.

About XML namespaces

An XML namespace is a collection of names for specific element types and attribute names within an XML document. The scope of a namespace extends beyond its containing document.

Because a single XML document can contain elements and attributes that can be used by multiple software applications, you can use namespaces to differentiate which elements and attributes are to be used by which applications. Software applications that process XML use namespaces to recognize which tags and attributes they are designed to process.

Names from XML namespaces may appear as qualified names, which contain a single colon, separating the name into a namespace prefix and a local part. The prefix, which is mapped to a Uniform Resource Identifier (URI) reference, selects a namespace. The combination of the universally managed URI namespace and the document's own namespace produces identifiers that are universally unique.

Using XML namespaces in FrameMaker

FrameMaker supports namespace usage for all elements in an XML document. When you import an XML document containing namespaces, all namespace information is preserved.

You can view, edit, add, or delete namespaces to an XML document in Structured FrameMaker using the Namespaces command. You can also use this command to view the definition of the prefix on an element tag and select the element that defines the prefix.

By default, namespaces in FrameMaker are handled as namespaces, appearing in the Namespaces dialog box. However, you can disable namespaces in the application and have them handled as attributes instead, appearing in the Structure View.

To view or edit namespaces:

1 Open the document in Structured FrameMaker.

2 Select an element in the Structure View.

Note: Elements that contain namespaces appear in Structure View with an asterisk (*) next to their names.

3 Choose Element > Namespaces.

4 In the Namespaces dialog box, click Select Defining Element to view the namespace for the selected element in the Structure View.

5 Make any desired changes to the Declared Namespaces, Prefix, or Path and then click Add, Change, or Delete. To close without saving your changes, close the dialog box without clicking an option.

Word processing

For editing text, FrameMaker is flexible and straightforward. You can add or delete text, and you can copy or move it to another location.

FrameMaker includes the following powerful editing tools:

• The Find/Change command, which can find not only text but also items such as character formats, paragraph tags, anchored frames, and the contents of the Clipboard

• The Spelling Checker, which can find and correct misspellings and common typing errors such as extra spaces and repeated words

• The Thesaurus, which defines words and provides synonyms, antonyms, and related words

Note: The Find/Change, Spelling Checker, dictionary, and thesaurus features support the Unicode text encoding standard.

Placing the insertion point

Click to put the insertion point in any text in the document window. The insertion point marks where you enter or edit text. When you click on a special text item such as a cross-reference, variable, or text inset, you select the entire item.

The location of the insertion point determines the current paragraph—the paragraph to which paragraph formatting commands are applied.

If you can't place the insertion point in or next to text, the text might be background text that was typed on a master page. You can display the master page that contains the text and put the insertion point in the text on that page (see "Displaying master pages" on page 376). In other cases, you might not be able to place the insertion point in text because the text is automatically generated (for example, paragraph autonumbers or cross references) or because it's repeated from the previous page (for example, table titles or table headings).

Entering and editing text

You enter text by typing in the document window. As you type, the text flows to another line or column. Press Return only when you want to begin a new paragraph. When you reach the end of a page, FrameMaker automatically creates a new page. If you want to force a line or page break at a specific location, see "Changing hyphenation and line breaks" on page 118 or "Changing page and column breaks" on page 119.

To adjust the space between paragraphs, change the spacing properties in the paragraph format rather than press Return repeatedly. For details, see "Changing spacing" on page 114.

Along with the standard characters on your keyboard, you can type bullets, mathematical symbols, spaces of various widths, international characters, and other special characters.

Many features make typing easier. For example, Smart Quotes inserts the appropriate left or right quotation mark when you type a straight quotation mark. Smart Spaces prevents you from typing more than one space in a row.

Using tabs

Each time you press Tab, a tab symbol ⟩ is embedded in the text. The symbol does not appear in the printed document, but it is visible on-screen when text symbols are visible.

If the current paragraph has tab stops set, FrameMaker moves the insertion point and text one tab stop each time you press Tab. If tab stops are not set, pressing Tab doesn't move the insertion point and text. If you press Tab more times than you have tab stops, the Tab symbols overlap. If you later add tab stops to the paragraph, FrameMaker positions the text correctly at the tab stops.

FrameMaker uses tab stops that are absolute rather than relative. With relative tab stops, each time you press Tab, the insertion point moves to the next available tab stop. With absolute tab stops, the *n*th tab on a line moves the insertion point to the *n*th stop. If that tab stop is to the left of the insertion point, the insertion point does not move.
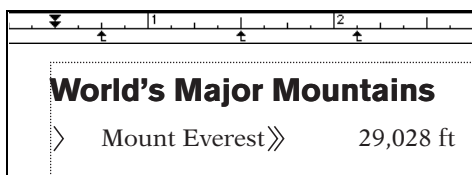
Press Tab three times to move to the third tab stop.

For information on the types of tab stops you can add to a paragraph, see "Changing tab stops" on page 112.

Typing special characters

You use combinations of keys to type bullets, dashes, fixed-width spaces, and accented characters such as ç, ñ, and ö. If the Symbol font is installed on your system, you can type any of the symbols in that font—for example, ©, ∴ and ∝ If the Zapf Dingbats font (or any other "picture" font) is installed on your system, you can type any of the special symbols in that font—for example, ▲ ✃ ■ ✓. In FrameMaker 8, character (ALT) sequences are not implemented for Dingbats and Symbol fonts, as Microsoft® Windows® provides Unicode equivalents of codepage 1252 for these fonts, by default. The character (ALT) sequences are implemented for the MakerRoman font family only.

You can type bullets and dashes. You can also type fixed-width spaces. For a list of characters in the Symbol and Zapf Dingbats fonts, a list of accented characters in the standard character set, and information on inserting the Euro currency symbol, see the online manual *FrameMaker Character Sets*.

Note: Some special characters are entered or displayed differently in dialog boxes. In Windows, you enter a sequence of characters beginning with a backslash (\); these sequences are listed in "Appendix A: Typing in dialog boxes" on page 670. On UNIX systems, the backslash sequences may appear in text boxes, even though you don't have to type the sequences to enter the characters

To type a bullet (•):
❖ Press Control+q Shift+%. You can also press Meta+period (UNIX).

To type an em dash (—):
❖ Press Control+q Shift+q.

To type an en dash (–):
❖ Press Control+q Shift+p.

Typing special spaces

When you press the spacebar, you insert a proportional space (whose width depends on the characters on either side of it). You can also insert special fixed-width spaces—for example, to increase the space between two words. When you type a special space between two words, the words always remain together on one line.

You can use the following types of special spaces:

• An em space is the same width as the point size of the font you use. For example, if you use a 10-point font, an em space is 10 points wide.

• An en space is half the width of an em space.

• A numeric space is the same width as the font's zero (0) character. All digits are typically the same width. This space is useful for aligning numbers in a column without using tabs.

• A thin space is one-twelfth the width of an em space. A thin space is often used when a very small space is needed to separate two characters—for example, between a number and the unit of measure that follows it, or between characters that appear too close together—for example, */)*.

• A nonbreaking space is the same width as the default space width for the font.

To type an em space:
❖ Do one of the following:

• (Windows) Press Esc space m or Control+Shift+space.

• (UNIX) Press Esc space m.

To type an en space:
❖ Do one of the following:

• (Windows) Press Esc space n or Alt+Control+space.

• (UNIX) Press Esc space n.

To type a numeric space:
❖ Press Esc space 1 (one).

To type a thin space:
❖ Press Esc space t.

To type a nonbreaking space:
❖ Press Control+space.

A nonbreaking space symbol ␣ appears when text symbols are visible.

Using Smart Spaces or Smart Quotes
When Smart Spaces is on, you can't type more than one proportional space in a row. However, you can type multiple fixed-width spaces (see "Typing special spaces" on page 72).

When Smart Quotes is on, FrameMaker uses a curved left or right quotation mark whenever you press the ', ', or '' key. If you prefer to use straight quotation marks, turn off Smart Quotes. You can use combinations of keys to type curved quotation marks when Smart Quotes is off, or to type straight quotation marks when Smart Quotes is on.

Smart Quotes doesn't apply to text in dialog boxes. For information on typing quotation marks and apostrophes in dialog boxes, see the online manual *FrameMaker Character Sets* and "Appendix A: Typing in dialog boxes" on page 670."

Note: For information on customizing quotation marks for languages other than US English in Windows or on UNIX systems, see the online manual Customizing FrameMaker. This manual is available on the Adobe website: www.adobe.com/devnet/framemaker/pdfs/Customizing_Frame_Products.pdf.

To turn Smart Spaces or Smart Quotes on or off:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Choose Format > Document > Text Options.

3 Change the Smart Spaces or Smart Quotes option and click Apply. When you select Smart Quotes, FrameMaker doesn't change any quotation marks that are already in the document. To find straight quotation marks and apostrophes, and change them to curved quotation marks and apostrophes, use the Spelling Checker (see "Checking spelling" on page 85) or the Find/Change command (see "Searching for any item" on page 77).

To enter straight and curved quotation marks in Windows:

❖ Do one of the following:

To type	With Smart Quotes on, press	With Smart Quotes off, press
'	Control+'	Control+'
"	Esc "	"
`	Control+`	Control+`
´	Control+q plus (+)	Control+q plus (+)
' and '	' and '	` and '
" and "	" and "	Alt+Control+` and Alt+Control+'

To enter straight and curved quotation marks on UNIX systems:

❖ Do one of the following:

To type	With Smart Quotes on, press	With Smart Quotes off, press
'	Control+'	Control+'
"	Control+"	"
`	Control+`	Control+`
´	Control+q plus (+)	Control+q plus (+)
' and '	' and '	` and '
" and "	" and "	Meta+` and Meta+'

Typing special text items

In addition to text, you can insert special text items such as cross-references, footnotes, variables, and markers. Inserting a variable automatically places the date, time, page count, filename, or text that you define into a document. FrameMaker updates variables when they change. Markers can be used to generate lists and indexes and to insert hypertext commands.

To insert a special text item:

❖ Choose the appropriate command from the Special menu. For information, see the following:

• On cross-references, see "Inserting cross-references" on page 199.

• On footnotes, see "Working with footnotes" on page 209.

• On variables, see "About variables" on page 224.

- On markers for generated lists and indexes, see "Preparing documents for a list of markers" on page 414 and "About indexes" on page 420.

- On markers for hypertext commands, see "Inserting hypertext commands" on page 525.

Selecting text

You usually select text before you edit it. You also select text before you change its format, such as its font size or style. Selected text is highlighted.

For information on selecting text in tables, see "Typing and selecting text in tables" on page 156.

To select text:

❖ Do one of the following:

- To select a range of text, drag through the text (or click one end of the text and Shift-click the other).

- To select a word, double-click it.

- To select a paragraph, triple-click it.

- To select all the text in a flow, click in the flow and choose Edit > Select All in Flow.

- To shorten or extend an existing selection, Shift-click at the new beginning or end of the selection.

Copying, moving, and deleting text

You use the Edit menu commands to cut, copy, and paste text to and from the Clipboard. When you use Edit > Cut or Edit > Copy, the cut or copied text remains on the Clipboard until you choose Cut or Copy again.

Pasted text always retains its character format properties. If the pasted text contains paragraph symbols ¶, the paragraph format associated with each paragraph is also pasted. Otherwise, the pasted text takes the paragraph format of the paragraph in which it's pasted.

You copy text more quickly if you bypass the Clipboard. You can do this, however, only if the original text and the new location are visible and exist in the same document. You must use the Clipboard to copy and paste text from one document to another.

Note: Text pasted into a new document retains the character and paragraph tags that were assigned to it in the original document. The tags of the pasted text may not be similarly defined in the new document. An asterisk appears next to the tag name in the status bar when the cursor is within the pasted text to indicate that the text has no equivalent tag in the current document.

To copy text quickly without using the Clipboard:

❖ Put the insertion point where you want to insert the copied text, and then do one of the following:

- (Windows) Hold down Alt and select the text you want to copy.

- (UNIX) Hold down Control and use the middle mouse button to select the text you want to copy.

To delete or replace text:

❖ Select the text and do one of the following:

- To delete the text, press Delete. You can also choose Edit > Clear.

- To replace the text, type the new text.

If the text you delete or replace contains the end of a paragraph and the paragraph symbol, the beginning of the paragraph is merged with the next paragraph. If you didn't intend to combine the two paragraphs, immediately choose Edit > Undo. Then select the text you want to delete or replace (but not the paragraph symbol), and try again.

To delete a page of text:

❖ Do one of the following:

• To delete both the page and its text, choose Special > Delete Pages. If the page contains the beginning of a table that continues on another page, the entire table is deleted.

• To delete just the text on a page, select the text and press Delete.

For information on deleting empty pages at the end of a document, see "Adding and deleting empty pages" on page 375.

Entering rubi text for Japanese

Rubi text—small characters that appear above other characters—is used in Japanese-language documents to indicate pronunciation. Rubi text can also be used with English language documents.
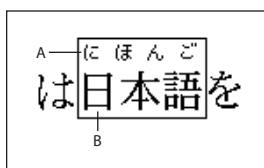
A. Rubi text B. Oyamoji text

If either Japanese or English fonts are installed on your system, FrameMaker provides commands for entering rubi and for specifying how you want the rubi to appear. For information on adjusting the size, location, and spacing of rubi text, see "Adjusting spacing in Japanese documents" on page 116.

To type rubi:

1 Select the characters above which you want to type rubi. The selected text cannot contain a paragraph symbol ¶ or a forced return symbol ⟨.

2 Choose Special > Rubi and type the text. (If the Rubi command doesn't appear on the Special menu, press *Esc s r* instead of choosing Special > Rubi.) The rubi appears above the selected characters. If the selected characters span two lines, the characters will all appear on the same line.

Note: If the rubi collides with the preceding line of text, either set the line spacing large enough to accommodate the rubi (at least 150% of the font size) or turn off fixed line spacing (see "Adjusting vertical spacing" on page 114).

3 To return to the regular text when you finish typing the rubi, click in it or choose Special > Rubi again.

About searching

In addition to text, you can search for any of the following items:

Text formats and tags Character format properties, or specific paragraph or character tags. In structured FrameMaker, Element appears right after text, so you can search for element tag, attribute name, attribute value, or simultaneously for all three.

For information on how to find and then replace text formats, see "Globally applying formats to text" on page 105.

Markers Any markers regardless of their marker types, markers of a specific type, or markers that contain specified text.

Cross-references Any cross-references regardless of their formats, cross-references that use a specific format, or unresolved cross-references—cross-references that FrameMaker is unable to update. When an unresolved cross-reference is found, the marker text of the cross-reference appears in the Find text box.

Text insets Any text imported by reference. You can also search for unresolved text insets—insets that cannot be updated from their sources. However, you can't search for graphics subscribers or OLE linked objects. (To list OLE links in Windows, choose Edit > Links.)

Variables Any variables regardless of their variable names, or specific variables.

Rubi Any rubi text, when Japanese fonts are installed on your system.

Anchored frames You can find graphics by searching for the anchored frames that contain them. Graphics placed in non-anchored frames will not be found.

Footnotes Any text or table footnotes.

Tables Any tables regardless of their table format tags, or tables with a specific tag.

Conditional text Any conditional text regardless of its condition tags, text with specific condition tags, or unconditional text. FrameMaker cannot find conditional table rows or hidden conditional text.

Automatic hyphen Words that are hyphenated automatically.

Text and character format on the Clipboard Text that matches the Clipboard's text, capitalization, and character formatting.

Searching through a document

If you are searching in a document, FrameMaker begins searching at the insertion point and continues through the document. It searches only pages of the type the insertion point is on—for example, only body pages or only master pages. When FrameMaker reaches the end of the document, it continues the search at the beginning. After searching the main text flow, it searches other text in the document. Because FrameMaker searches flow by flow rather than page by page, it may appear to jump around within the document while searching.

Searching throughout a book

If you are searching throughout a book, FrameMaker begins searching from the active document (or from the first document of the book if the book window is active) and continues searching until all documents in the book have been searched. If a document cannot be opened, the document is skipped and a message appears in the Book Error Log.

Note: When you are searching through a book, you cannot search the master or reference pages.

For more information on working with book-wide features, see "Using book-wide commands" on page 466.

Searching for any item

When you search for an item, you can customize the search by considering case, matching whole words only, or using wildcards. Wildcards let you search for character patterns and for text that appears at the beginning or end of a line.

When FrameMaker finds an item, you can replace the item or continue searching for other occurrences of the item.

You can search for an item in the selection, in the document, or throughout the entire book. For more information on searching throughout a book, see "Searching throughout a book" on page 77.

FrameMaker 8 uses the UTF-8 encoding format. Therefore, every character in a .fm or XML document containing Unicode encoded text uses multiple bytes. As a result, only the string entered in the Find field is used to perform the search operation.

You can specify a search string which includes a range of characters. For example, you can specify a string such as "[d-w]" to locate text containing characters between "d" and "w". However, searching in a range is applicable only to Unicode characters, and users can search for any character that belongs to the Basic Multilingual Plane (BMP). Unicode code points can also be used for performing search and replace operations. For example, you can provide \uXXXX as the input to locate a character that has code point XXXX. Thus, to search for letter "A" whose code point is u+0041 you can specify \u0041 in the Find/Change dialog box.

You can also use wild card characters while searching for Unicode text.

To search for any item:

1 Do one of the following:

• To search in a document, click where you want to begin the search.

• To search within a selection, select the text.

• To search throughout the entire book, open the book or a document that belongs to the book.

• To search through one or more documents in the book, select the documents in the book window.

2 Choose Edit > Find/Change.

3 Specify whether you want to search through the book, document, or selection. The Selection option lets you search through selected text if text is selected in a document, or it lets you search selected files if one or more book files are selected.

4 Choose the item you want to find from the Find pop-up menu (see "About searching" on page 76).

5 Do one of the following:

• If you chose Text, Paragraph Tag, Character Tag, Marker of Type, Marker Text, Cross-Reference of Format, Variable of Name, or Table Tag from the Find pop-up menu, enter the particular item you want to find in the Find text box.

• If you chose Character Format or Conditional Text from the Find pop-up menu, enter additional information in the dialog box that appears. For information, see "Searching for character format properties" on page 80 and "Searching for conditional text" on page 82.

• If you chose any other item from the Find pop-up menu, skip step 6 and proceed to step 7.

6 If you entered text in the Find text box, customize the search by doing the following:

• To find or ignore an item with specific capitalization, select or turn off Consider Case. For example, if you enter **MAIN** in the Find text box and Consider Case is selected, you won't find *Main*. If Consider Case is turned off, you'll find *MAIN, Main,* and *main*.

• To match only a complete word, enter the word in the Find text box and select Whole Word. For example, if you enter **phone** in the Find text box and select Whole Word, you won't find *telephone*.

• To find a set of characters that may be part of a longer word or part of more than one word, turn off Whole Word. For example, if you enter **old** in the Find text box and turn off Whole Word, you'll find words such as *bold* and *oldest* as well as *old*.

- To find an item by using wildcards, enter the text and wildcards in the Find text box and select Use Wildcards. For example, if you enter **Number[1-9]** in the Find text box and select Use Wildcards, you'll find all occurrences of the word *Number* followed by any number between 1 and 9. For information, see "Using wildcards in a search" on page 79.

Note: In Asian documents with multibyte characters, the bracket characters [ ] do not work as wildcards.

7 Click Find. If FrameMaker finds an exact match, it displays the page that contains the item and selects the item.

For information on how FrameMaker searches in a document or book, see "Searching through a document" on page 77 or "Searching throughout a book" on page 77.

To find the next occurrence of an item:

❖ Click Find in the Find/Change dialog box or choose Edit > Find Next.

To reverse the search direction:

❖ Select Find Backward in the Find/Change dialog box and click Find.

To cancel a search:

❖ Do one of the following:

- (Windows) Press Esc.
- (UNIX) Press Control+c.

Entering text in the Find text box

You can enter any characters in the Find text box. However, the following characters require special treatment:

- To find a single backslash (\), enter two backslashes (\\) in the Find text box. A single backslash usually indicates a special character.
- To search for a wildcard character as an ordinary character when the Use Wildcards option is selected, precede the wildcard character with a backslash. For example, to find an asterisk, enter * in the Find text box.

Searching for special characters and nonprinting symbols

You can search for any text, including single characters, phrases, and special characters that aren't on your keyboard. When you enter special characters in a dialog box on UNIX systems, the characters may be represented as a sequence of characters beginning with a backslash (\). In Windows, you'll need to type the backslash sequence—see "About typing in dialog boxes" on page 670.

Using wildcards in a search

When Use Wildcards is selected in the Find/Change dialog box, you can use the following wildcards to find character patterns.

To find	Do this	Example
Zero or more characters, excluding spaces and punctuation	Enter an asterisk (*).	*f*t* finds words such as *fit* and *feet*.
Any single character, excluding spaces and punctuation	Enter a question mark (?).	*f??t* finds four-letter words that begin with *f* and end with *t*—for example, *foot* and *feet*.

To find	Do this	Example
One or more spaces and punctuation characters	Enter a vertical bar (|).	*any*| finds words such as *any.* and *many?.* If Whole Word is turned off, it also finds *Tiffany,* but not *anything.*
Any one of several characters	Type the characters within brackets ([and]).	[*rml*]*ate* finds *rate, mate,* and *late.* If Whole Word is turned off, it also finds *berate, isolate,* and *material.*
Any one character not in a specified group of characters	Precede the characters in brackets with a caret (^).	[^*rml*]*ate* finds *fate, gate,* and *date,* but not *rate, mate,* or *late.*
The beginning of a line	Enter a caret (^).	^*f* finds any word that starts with *f* at the beginning of a line. You cannot combine this wildcard with the Whole Word option.
The end of a line	Enter a dollar sign ($).	*f$* finds any word that ends with *f* at the end of a line. You cannot combine this wildcard with the Whole Word option.

To find nonprinting symbols (such as tab, paragraph, and end-of-flow symbols) and positions (such as the start of a paragraph or word), use the following character sequences.

To find	Enter this sequence
Tab	\t
Forced return	\r
End of paragraph	\p (lowercase)
Start of paragraph	\P (uppercase)
End of flow or end of table cell	\f
Start of word	\<
End of word	\>

For example, you could find empty paragraphs by searching for \P\p (beginning of paragraph followed by end of paragraph).

You can use most of these sequences for both searching and replacing—for example, replacing a forced return symbol with an end-of-paragraph symbol. However, you cannot replace with the end-of-flow, start-of-paragraph, start-of-word, or end-of-word sequence.

Searching for character format properties

You can search for any character format property—for example, any text in italics. Or you can search for text with several properties—for example, 12-point Helvetica bold.

You can also search for text with specific properties and capitalization—for example, the word *London* in 10-point italic text. With these specifications, FrameMaker won't find *London* if it's a different size, isn't italic, or is capitalized differently.

To search for text with a specific paragraph or character tag, use the Paragraph Tag or Character Tag find options.

To search for character format properties:

1 Click in text with properties similar to (or the same as) the properties you want to find.

2 In the Find/Change dialog box, choose Character Format from the Find pop-up menu.

3 Do one of the following:

• To search for the properties of the current text, leave the properties as they are.

• To search for text with different properties, change the properties to match that format.

• To search for text with some properties specified and some overlooked, set the properties you want to overlook to As Is. You set a property to As Is by clicking a check box until it is gray (Windows), or dim (UNIX), by choosing As Is from a pop-up menu, by selecting As Is in a scroll list, or by deleting the text in a text box. For example, if you don't care what color is assigned to the text, choose As Is from the Color pop-up menu.

• To find text with only a few properties, set all properties to As Is by pressing Ctrl+Shift+F8 (Windows), or Shift+F8 (UNIX). Then specify only the properties you want to find.

4 Click Set, and then click Find.

After making some changes in the Find Character Format dialog box, you can reset the dialog box to match the format of the current text. To do this, press Ctrl+Shift+F9 (Windows), or Shift+F9 (UNIX).

To search for specific text and character format properties:

1 Copy the text with the character format you want to find. You can copy as much text as you like, but FrameMaker uses only the first 126 characters on the Clipboard.

2 In the Find/Change dialog box, choose Text & Character Formats on Clipboard from the Find pop-up menu. Don't type the text you want to find in the Find text box.

3 Click Find.

Searching for markers

FrameMaker uses markers for cross-references, indexes, and other purposes. It can find any type of marker or just the marker type you specify. When text symbols are visible, a symbol T indicates a marker.

FrameMaker can also find markers with specific marker text.

To search for a marker:

1 In the Find/Change dialog box, do one of the following:

• To find any marker in the document, choose Any Marker from the Find pop-up menu, and leave the Find text box blank.

• To find a specific type of marker, choose Marker of Type from the Find pop-up menu, and enter the marker type in the Find text box.

• To find a marker with specific text, choose Marker Text from the Find pop-up menu, and enter the marker text in the Find text box.

2 Click Find. If the Marker dialog box is open (Special > Marker), the marker text for the found marker appears there.

Important: If you want to replace the text in a found marker, use the Marker dialog box to edit the marker text. If you use the Find/Change dialog box, you'll replace the marker rather than the marker text.

Searching for conditional text

You can search for visible text that has specific condition tags. When FrameMaker finds visible conditional text, it selects all adjacent text that uses these condition tags.

FrameMaker cannot find conditional table rows.

To search for conditional text:

1 Make sure that the text with the condition tags you want to find is visible (see "Changing the view of conditional documents" on page 303).

2 In the Find/Change dialog box, choose Conditional Text from the Find pop-up menu. The Find Conditional Text dialog box appears.

3 Do the following:

• To find text with a particular condition tag, move the condition tag to the In list.

• To find text that doesn't have a particular condition tag, move the tag to the Not In scroll list.

• If you don't care whether found text has a particular tag, move the tag to the As Is scroll list.

• To find all conditional text, move all tags to the As Is scroll list.

• To find unconditional text, select Unconditional.

Note: To move a condition tag between scroll lists, select the tag and click an arrow, or double-click the tag. To move all tags from one scroll list to another, select a tag in the list and Shift-click an arrow.

4 Click Set, and then click Find.

Using the Find/Change command from the keyboard

You can search for items without using the mouse. You use keyboard shortcuts to open the Set Find/Change Parameters dialog box (which contains the same options as the Find/Change dialog box), to move the insertion point between the options, and to start a search. These keyboard shortcuts are useful in macros that automate finding and changing. In Windows, you can use a third-party macro application to create macros that work with FrameMaker. On UNIX systems, you can use File > Utilities > Keyboard Macros (see "Using UNIX keyboard macros" on page 618).

To use the Find/Change command from the keyboard:

1 In a document window, press Esc f i s.

2 Fill in the Set Find/Change Parameters dialog box as you would the Find/Change dialog box, and then press Return.

Use keyboard shortcuts to move from setting to setting and to choose items from pop-up menus. For a list of keyboard shortcuts, see online Help.

3 To start the search, do one of the following:

• (Windows) Press Control+Shift+f.

• (UNIX) Press Esc f i n.

4 To search again, repeat step 3.

Searching for Unicode characters

You can search a FrameMaker document for any character that belongs to the Basic Multilingual Plane (BMP) Unicode character set by using Unicode code points.

To search for a character with the code point *XXXX*, you must specify the search string in the format *uXXXX*. For example, to search for the letter A with a code point of u+0041, input the string \u0041.

You can also search for a range of Unicode characters. For example, the search string [d-w] searches for all characters from 'd' to 'w'. Unicode characters can also be used to define ranges, which translate to Unicode code points. The specified code points must fall within the BMP Unicode character set. For example, when you specify the string '[α-γ]', FrameMaker searches for all characters between code point 03B1 (which is small letter ALPHA) and code point 03B3 (which is small letter GAMMA).

Note: A code point is any value in the Unicode codespace, which is a range of integers from 0 to 10FFFF16. This particular range is defined for the codespace in the Unicode Standard only. Other character encoding standards may use other codespaces.

Troubleshooting a search

If you don't find the item even though you're sure it's there, check the Find/Change dialog box for the following possible problems:

• Did you spell the text in the Find text box correctly?

• Did you include too many or too few spaces? Are they the right type of spaces? When you enter text that includes spaces in the Find text box, FrameMaker searches for the text with the same number of spaces in the same places. You can find special spaces, such as em spaces and thin spaces, as well as regular spaces.

• Are you using the appropriate options? For example, is Whole Word selected when it should be turned off?

• If your document uses conditional text, is the text for which you're searching hidden?

• If you're searching for an item on a master page, is the insertion point on a master page?

• If you want to search throughout the entire book, make sure the Book option is selected in the Find/Change dialog box.

Changing items you find

After you find an item, you can change it in several ways. Generally, you find text and replace it with other text, but you can also change the character format of the found item or apply the contents of the Clipboard to the item. For example, you can copy a variable to the Clipboard and replace a word with the variable. Or you can replace a word with a graphic in an anchored frame.

You can change each occurrence of the item as it is found, or have FrameMaker automatically make the change throughout the document, book, or selection.

To change any item:

1 Specify the item you want to find in the way described in "Searching for any item" on page 77.

2 In the Find/Change dialog box, do one of the following:

• To replace the found item with text, choose To Text and type the text in the Change text box. For information, see "Replacing found items with text" on page 84.

• To change character format properties of the found text, choose Character Format and then specify the properties in the dialog box that appears. For information, see "Changing character format properties" on page 84.

• To apply the contents of the Clipboard to the found item, choose By Pasting. Then select the item you want to paste and copy it to the Clipboard.

3 Click Find to find the first match.

4 Do one of the following:

• To change the found occurrence but not continue searching for the item, click Change.

• To continue searching but not change the found occurrence, click Find.

• To change the found occurrence and continue searching for the item, click Change & Find.

• To change all occurrences of the item, specify the scope of the change (all occurrences in the document, book, or selection) and click Change All. A message will indicate the number of changes made.

Important: When you change all occurrences, FrameMaker may make changes you didn't intend—for example, changing occurrences of a word when it is part of a longer word (if you don't select Whole Word). Also, you can't undo the changes. For these reasons, consider saving your document and then clicking Find and then Change to replace several found occurrences. When you're confident that FrameMaker will replace only the items you want, click Change All.

If you click Change or Change & Find when no text is selected in the document, FrameMaker inserts or applies the replacement item at the insertion point.

To delete a found item:

❖ In the Find/Change dialog box, choose To Text from the Change pop-up menu, leave the Change text box empty, and click Change. You can also simply press Delete.

Replacing found items with text

You can replace anything that FrameMaker finds with text. For example, you can replace a word with another word or replace a marker with a phrase.

If capitalization is important, you can have FrameMaker use the same capitalization that is used in the original text by selecting the Clone Case option in the Find/Change dialog box. For example, if you select Clone Case and type **tea** in the Find text box and **coffee** in the Change text box, FrameMaker replaces *tea* with *coffee* and *Tea* with *Coffee.*

You can type any text, including special characters not found on the keyboard—for example, em spaces and paragraph symbols. For information on these characters, see "Typing special characters" on page 72 and "Typing special spaces" on page 72. For a list of special characters, see "About typing in dialog boxes" on page 670. To include a backslash (\) in replacement text, type two backslashes (\\) in the Change text box.

You can't change marker text (such as an index entry) by using the Find/Change dialog box. If FrameMaker finds the marker text you specify, and if you type different text in the Change text box and click Change, FrameMaker replaces the marker—not the marker text—with the text in the Change text box. To change marker text, use the Special > Marker command (see "Editing and deleting list entries" on page 417).

Changing character format properties

You can change the character format properties of any text that FrameMaker finds. For example, you can search for the name of a product and change the text to italic small caps. Or you can search for all text with particular properties and then change the properties.

To specify the character format properties you want to change:

1 Do one of the following:

• If you're changing several character format properties, click in text that has a character format similar to the one you want to apply to the found text.

• If you're changing one or two character format properties, click in any text.

2 In the Find/Change dialog box, choose To Character Format from the Change pop-up menu, specify the character format you want to use, and then click Set.

To prevent FrameMaker from applying a property to found text, set the property to As Is. You set a property to As Is by clicking a check box until it is gray (Windows), or dim (UNIX); by choosing As Is from a pop-up menu; by selecting As Is in a scroll list; or by deleting the text in a text box. For example, if you don't care what color is assigned to the text, choose As Is from the Color pop-up menu. If you want to change all properties to As Is, press Ctrl+Shift+F8 (Windows), or Shift+F8 (UNIX).

After making some changes in the Change to Character Format dialog box, you can reset the dialog box to match the format of the current text. To do this, press Ctrl+Shift+F9 (Windows), or Shift+F9 (UNIX).

Checking spelling

The FrameMaker Spelling Checker uses several dictionaries to check text for spelling errors. When the Spelling Checker finds a questionable word, it suggests the most likely correction along with some other possibilities. You can select a correction, type your own correction, or leave the word unchanged.

The Spelling Checker helps correct your typing as well as your spelling. For example, you can check for repeated words, unusual hyphenation or capitalization, straight quotation marks (when curved should be used), and extra spaces.

You can spell-check the current page, the open document, the entire book, or selected files within the book, however, the spell check will only check on pages of the type you are viewing, for example, master pages or body pages.

Spell-checking throughout a book

If you are spell-checking throughout a book, FrameMaker begins spell-checking from the active document (or from the first document of the book if the book window is active) and continues spell-checking until all documents in the book have been checked. If a document cannot be opened, the document will be skipped and a message will appear in the Book Error Log. When spell-checking throughout a book, you cannot spell-check master or reference pages.

For more information on working with book-wide features, see "Using book-wide commands" on page 466.

About FrameMaker dictionaries

When you spell-check a document, FrameMaker compares each word in it with the words in the following dictionaries:

- The *main dictionary* contains words found in a standard dictionary. You can't add words to or delete words from this dictionary.

- The default *site dictionary* contains some technical terms. You can add words common to your site or workgroup—for example, the company name and product names. In Windows, the site dictionary is normally in the site.dict file in the FrameMaker dict folder. On UNIX systems, it's in $FMHOME/fminit/site.dict.

- Your *personal dictionary* contains words you use often. Because FrameMaker uses this dictionary whenever you spell-check any document, use this dictionary for words that are neither document-specific nor site-specific (for example, your name). You can add or delete words. You can also create several personal dictionaries and switch between them.

- The *document dictionary* contains words that are acceptable in a particular document. FrameMaker uses this dictionary regardless of who is editing the document. You can add words to or delete words from it. Unlike the other dictionaries, the document dictionary is part of the document rather than a separate file.

When you are spell-checking throughout a book, words that are added to your personal dictionary will be applied to all documents in a book. Words that are added to the document dictionary will be used only in the current document, not in all the documents in the book. For information on merging your document dictionaries, see "Managing personal and document dictionaries" on page 91.

In Adobe FrameMaker 8, the dictionaries, hyphenation, and Thesaurus are Unicode-enabled.

New dictionaries have been added for Greek, Russian, Czech, Polish, Hungarian, Turkish, Slovak, Slovenian, Bulgarian, Croatian, Estonian, Latvian, Lithuanian, and Romanian languages. However, the Thesaurus is not available for these languages.

Existing dictionaries for the following languages have been updated to Proximity® version 11.0: US English, British English, German, Swiss-German, French, Canadian-French, Spanish, Catalan (Thesaurus not available), Italian, Portuguese (Thesaurus not available), Brazilian (Thesaurus not available), Danish, Dutch, Norwegian, Nynorsk (Thesaurus not available), Finnish (Thesaurus not available), Swedish, New German, New Swiss German, and New Dutch.

Checking for spelling and typing errors

When you spell-check a document, FrameMaker questions any words that aren't in one of its dictionaries. If a questioned word is spelled correctly, you can confirm its spelling by adding the word to your personal dictionary or to the document dictionary. If a questioned word is misspelled, you can correct it. FrameMaker usually provides suggestions for the correct spelling.

To check and correct spelling:

1 Choose Edit > Spelling Checker.

2 Do one of the following:

- To check all text in a document, click in the document and then click Document in the Spelling Checker dialog box.

- To check all text on a page, click on the page and then click Current Page in the Spelling Checker dialog box.

- To search throughout the entire book, open the book or a document that belongs to the open book and then click Book in the Spelling Checker dialog box. For more information, see "Using book-wide commands" on page 466.

- To check specific text, select the text.

- To check a word, place an insertion point in the word.

In most cases, you'll want to spell-check the text on the body pages. If a body page isn't displayed, choose View > Body Pages.

3 Click Start Checking. If you're checking a selection of text or a single word, Shift-click Start Checking.

FrameMaker begins spell-checking at the insertion point. When it finds a questionable word, the word appears at the top of the Spelling Checker dialog box. The message to the left of the text box—for example, *Misspelling* — explains why the word has been questioned.

Note: FrameMaker does not spell-check superscript and subscript text or manually micropositioned text (for example, text with a manual baseline shift).

4 Correct or confirm the spelling in one of the following ways:

- To correct a misspelling, make sure the correctly spelled word is in the Correction text box and click Correct. If the suggested word is not the word you want, you can select a different word in the Correction scroll list or enter the word in the Correction text box. You can also move the insertion point to the document window and type the word correctly there.

- To correct a typing error (for example, repeated words such as *and and*), make sure the correctly typed text is in the Correction text box and click Correct. FrameMaker lists only one suggestion for mistyped text. If the suggestion is not correct, you can enter the correct text in the Correction text box, or type it directly in the document window.

If FrameMaker questions something that you don't consider to be a typing error, you can turn off the option to find that type of potential error. For example, you can stop FrameMaker from questioning the use of straight quotation marks. For information, see "Changing Spelling Checker options" on page 88.

- To add a word to a personal dictionary, make sure the intended word appears next to "Misspelling" at the top of the Spelling Checker dialog box and click Learn.

- To add a word to a document dictionary, make sure the intended word appears next to "Misspelling" at the top of the Spelling Checker dialog box and click Allow in Document.

Note: If FrameMaker adds a word that contains uppercase letters to a personal or document dictionary, when Unusual Capitalization is selected in the Spelling Checker Options dialog box, it considers any other capitalization of the word a spelling mistake. For example, if FrameMaker learns Trinidad, *it questions the spelling of* TRINIDAD *and* trinidad. *However, if it learns* trinidad, *in all lowercase letters, it does not question any type of capitalization of the word.*

5 If necessary, click Start Checking to find the next questionable word.

When spell-checking a book, an alert message prompts you to save the document before continuing with the next document. When the last document in the book has been checked, a *Spelling OK* or *Finished checking spelling* message appears.

To check spelling in text insets:
❖ Open the inset's source file and check the spelling there.

To cancel the Spelling Checker:
❖ Do one of the following:
- (Windows) Press Esc.
- (UNIX) Press Control+c.

Correcting spelling errors automatically
You can have FrameMaker automatically correct future occurrences of a misspelled word or typing error. The error won't be questioned in any document you open, and you won't have to provide the correction. FrameMaker keeps track of the errors to correct automatically until you exit or until you instruct FrameMaker to stop making the corrections.

Before you decide to change a particular misspelling or typing error automatically, make sure you know what other changes will be made. For example, if you use the Automatic Correction option when correcting a repeated word, FrameMaker will correct every repeated word even though some may be correct (such as *had had*). Similarly, if *thst* is a misspelling of both *test* and *that,* you won't want to change it automatically to either word.

To correct spelling errors automatically:

1 Choose Edit > Spelling Checker and click Start Checking.

2 When FrameMaker questions a word or typing error, select Automatic Correction and click Correct.

To stop making automatic corrections before exiting:

1 Choose Edit > Spelling Checker and click Dictionaries.

2 In the Dictionary Functions dialog box, click Clear Automatic Corrections, and then click OK.

Changing Spelling Checker options

When you spell-check a document, FrameMaker also checks for errors that don't involve spelling—for example, repeated words, extra or misplaced spaces, or unusual capitalization. You can specify the kinds of typing errors for which you want to look.

You can also limit the spell-check so that FrameMaker overlooks certain types of words. For example, you may want to overlook words that contain numbers.

To change Spelling Checker options:

1 Choose Edit > Spelling Checker and click Options.

2 Do the following:

• In the Find area, specify the kinds of typing errors you want to find. For example, select Unusual Capitalization if you want to find words with uppercase letters in inappropriate locations (for example, *GReen*).

• In the Ignore area, specify the kinds of words you want to overlook. For example, select Words with Digits if you want to ignore words that contain numbers.

Keep in mind that the more words FrameMaker overlooks, the greater the possibility that your document will contain misspelled words. For example, if you choose to ignore words containing a period, you'll also skip over a sentence that begins without a space after the preceding period.

• If you change the Spelling Checker options and then want to reset the default options, click Get Defaults. If you change the Spelling Checker options in Windows, and then exit FrameMaker without resetting the default options, your current settings become the default options.

3 Click Set.

Rechecking after changing dictionary options

FrameMaker ordinarily rechecks only paragraphs that have been edited since the prior check. If you change options after spell-checking a document, you may want to run the Spelling Checker again after instructing FrameMaker to mark all paragraphs for rechecking.

For more information on changing dictionary functions, see "Managing dictionaries" on page 90.

To mark all paragraphs for rechecking:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Choose Edit > Spelling Checker. If a book window is active, choose Selection to affect only the selected files or Book to affect the entire book.

3 Click Dictionaries.

4 Select Mark All Paragraphs for Rechecking and click OK.

Assigning text to be ignored by spell-checker

If you don't want FrameMaker to spell-check certain text, change its Language property to None (see "Checking spelling in different languages" on page 89). For example, you may not want to spell-check paragraphs of computer code.

When you set the language of text to None, FrameMaker no longer provides hyphenation for it.

Checking spelling in different languages

All text is assigned a language. When you spell-check, FrameMaker uses the main dictionary of the language assigned to the text. You can change the language used to spell-check text by changing the language assigned to the text. You can also add Unicode (UTF-8) encoded words to user and personal dictionaries in FrameMaker.

The FrameMaker CD contains dictionaries for all supported languages. However, the default Windows installation contains only one dictionary in a single language.

When spell-checking a document with different languages, note the following:

• In an Asian-language document, some special characters may not be displayed in the Spelling Checker as they are in a Western-language document. For example, a backslash will be displayed as a yen symbol, and a nonbreaking hyphen will be displayed as a blank.

• In an Asian-language document that contains Roman text, make sure you turn off the Straight Quotes option in the Spelling Checker dialog box so that the Spelling Checker does not stop on properly spelled words.

Changing the language of text in a document

• To change the language of a single paragraph, or of all the paragraphs in a document, use the Language property in the Default Font properties of the Paragraph Designer (see "Using a designer to change font properties" on page 107).

• To change the language of a range of text within a paragraph, or the language of a text line, use the Language property in the Character Designer (see "Using a designer to change font properties" on page 107).

Controlling hyphenation

When you add a word to a personal dictionary, FrameMaker calculates the points at which it can hyphenate the word. If the suggested hyphenation points aren't appropriate, you can change them before adding the word. You can also specify that a word is always or never hyphenated. For example, you can hyphenate *heavy-duty* wherever it appears but never hyphenate your company's name.

After you make hyphenation changes, you should rehyphenate the document. For additional information on hyphenation, see "Changing hyphenation and line breaks" on page 118.

When you want strict control over hyphenation (for example, before printing the final draft of a book), you may want to search your document for all hyphens that FrameMaker has inserted automatically. To do this, choose Automatic Hyphen from the Find pop-up menu in the Find/Change dialog box.

To show a word's hyphenation points:

❖ Choose Edit > Spelling Checker, type the word in the Word text box, and click Show Hyphenation. If the word is in the main dictionary or your personal dictionary, FrameMaker uses the dictionary to determine the hyphenation points. If the word isn't in one of these dictionaries, FrameMaker calculates the hyphenation points.

To change the hyphenation of a word:

1 Show the word's hyphenation points as described in the previous procedure.

2 Adjust the hyphenation and click Learn. You can add and delete hyphens as necessary.
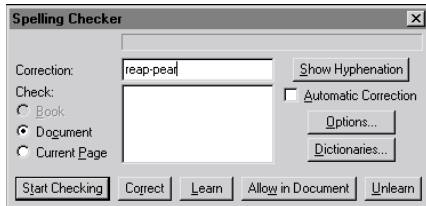
Reappear cannot be hyphenated as re-appear.

To prevent FrameMaker from ever hyphenating a word:

1 Enter the word in the Correction text box.

2 Click Show Hyphenation.

3 Remove all hyphens from the word.

4 Insert a hyphen at the beginning of the word.

5 Click Learn.

The word "intro" cannot be hyphenated.

To rehyphenate an entire document:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Choose Edit > Spelling Checker. If a book window is active, choose Selection to affect only the selected files or Book to affect the entire book.

3 Click Dictionaries.

4 Select Rehyphenate Document, Rehyphenate Selected Files in Book, or Rehyphenate All Files in Book, and then click OK.

Managing dictionaries

You have editorial control over your document, personal, and site dictionaries. For example, you can add and delete words and change the hyphenation of words. You can also choose different dictionaries, merge one dictionary into another, and delete dictionaries.

Managing personal and document dictionaries

FrameMaker automatically creates a personal dictionary for you and a document dictionary for each of your documents. You can use the Spelling Checker to add or delete words in these dictionaries, or you can manage the dictionaries directly. When you work with a dictionary directly, you can examine and edit its contents or merge it with another dictionary. You can create multiple personal dictionaries and then use them one at a time.

If you make changes to either a personal or document dictionary, mark all paragraphs for rechecking before you spell-check the document again. For instructions, see "Rechecking after changing dictionary options" on page 88.

To delete a word from the personal or document dictionary:

❖ Choose Edit > Spelling Checker, enter the word in the Correction text box, and click Unlearn.

To delete the contents of the document dictionary:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Choose Edit > Spelling Checker. If a book window is active, choose Selection to affect only the selected files or Book to affect the entire book.

3 Click Dictionaries.

4 Choose Clear from the Document Dictionary (or Document Dictionaries) pop-up menu and click OK.

To delete a personal dictionary:

❖ Delete the file that contains the dictionary. (To find the name of the personal dictionary, choose Edit > Spelling Checker, and then click Dictionaries. The name of your personal dictionary appears in the Dictionary Functions dialog box.)

To create another personal dictionary:

1 Place words (with a hyphen at each hyphenation point) in a document. Type as the first line in the document: **<MakerDictionary 2.0>**

2 When you save the file, choose Text Only format and click Save. Then click Only between Paragraphs and click Save.

To use a different personal dictionary:

1 Choose Edit > Spelling Checker and click Dictionaries. The name of your personal dictionary appears in the Dictionary Functions dialog box.

2 Choose Change Dictionary from the Personal Dictionary pop-up menu and click OK.

3 Specify the name of the file that contains the personal dictionary you want to use.

To check the spelling of a document without using the personal dictionary:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Choose Edit > Spelling Checker. If a book window is active, choose Selection to affect only the selected files or Book to affect the entire book.

3 Click Dictionaries.

4 Choose Set to None from the Personal Dictionary pop-up menu and click OK.

To copy the contents of a dictionary to a file:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Choose Edit > Spelling Checker. If a book window is active, choose Selection to affect only the selected files or Book to affect the entire book.

3 Click Dictionaries.

4 Choose Write to File from the Personal Dictionary or Document Dictionary pop-up menu and click OK.

5 Specify the file to which you want to copy the dictionary's contents. You can edit this file and then use it as a new dictionary.

If a book window is active when you choose this command, the document dictionaries are copied to a single file.

To merge the contents of a dictionary with the current personal or document dictionary:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Choose Edit > Spelling Checker. If a book window is active, choose Selection to affect only the selected files or Book to affect the entire book.

3 Click Dictionaries.

4 Choose Merge from File from the Personal Dictionary or Document Dictionary pop-up menu and click OK.

5 Specify the file you want to merge with the current dictionary.

You can use the Merge from File command to merge a single dictionary into multiple book files so that all the files in your book will share the same dictionary.

Managing site dictionaries

You can specify a different site dictionary for each of several projects, among other purposes. You can also edit your site dictionary directly.

If FrameMaker is used across a network at your site, a system administrator probably manages the site dictionary.

To specify a different site dictionary:

❖ Do one of the following:

• (Windows) Specify the dictionary in the maker.ini file. For information, see the online manual *Customizing FrameMaker* on the Adobe website: www.adobe.com/devnet/framemaker/pdfs/ Customizing_Frame_Products.pdf.

• (UNIX) Edit the Maker.siteDict resource. For information, see the online manual *Customizing FrameMaker* on the Adobe website: www.adobe.com/devnet/framemaker/pdfs/Customizing_Frame_Products.pdf.

Editing dictionary files

You can change the contents of your personal or document dictionary by clicking Learn, Allow in Document, or Unlearn in the Spelling Checker dialog box as you spell-check. You can also edit your personal, document, and site dictionaries directly.

To edit a dictionary file directly:

1 If you're editing a personal or document dictionary, use FrameMaker to write the dictionary's contents to a file. For instructions, see "Managing personal and document dictionaries" on page 91.

2 Edit the file. If you use FrameMaker to edit a dictionary, be sure to do the following:

• When you open the file, select Treat Each Line as a Paragraph in the Reading Text File dialog box and click Read.

• When you save the file, choose Text Only format. Make sure the file is named correctly and click Save. Then click Only between Paragraphs and click Save.

3 Merge the dictionary file with another dictionary. For instructions, see "Managing personal and document dictionaries" on page 91. If you removed words from the dictionary, delete the original dictionary before merging the file. Otherwise, the deleted words remain in the dictionary.

Adding unknown words to a dictionary

If your document contains many correctly spelled words that FrameMaker will question, you can expedite spell-checking by adding these words to a dictionary in a separate operation before you begin to spell-check.

To add all unknown words to a dictionary:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Choose Edit > Spelling Checker. If a book window is active, choose Selection to affect only the selected files or Book to affect the entire book.

3 Click Dictionaries.

4 Click Write All Unknown Words to File and click OK.

5 Specify a filename for the dictionary file, and click OK or Save. FrameMaker creates a dictionary file that contains all the unknown words in the document. The dictionary file doesn't include typing errors such as repeated words, capitalization errors, or extra spaces.

6 Edit the dictionary file with a text editor or with FrameMaker (see "Editing dictionary files" on page 92). Delete any words you don't want to add to your dictionary, such as misspelled words.

7 In the Spelling Checker dialog box, click Dictionaries.

8 Choose Merge from File from the Personal Dictionary or Document Dictionary pop-up menu, and click OK. If you expect the words to appear in several documents, you should merge the words with a personal dictionary, or you can merge them into all the files in a book.

9 Name and save the dictionary file.

Adding hyphenated compound words to your personal dictionary

Your document may contain a hyphenated compound word—a word or phrase made up of multiple words connected by hyphens. By default, FrameMaker spell-checks each word in a hyphenated compound word rather than checking the hyphenated compound word as a whole. For example, when spell-checking the word *heavy-duty,* FrameMaker checks *heavy* and then checks *duty.* By changing the default settings, you can spell-check hyphenated compound words as single words, and you can add hyphenated compound words to your personal dictionary.

To add a hyphenated compound word to your personal dictionary:

1 Choose Edit > Spelling Checker and click Options.

2 Select Unusual Hyphenation and click Set. FrameMaker will spell-check hyphenated compound words as single words, rather than checking the individual words.

3 In the Word text box in the Spelling Checker dialog box, enter the hyphenated compound word to be added to your personal dictionary. Include a hyphen at the beginning of the compound word, and type a backslash (\) before each hyphen that connects words.

For example, to add the word *heavy-duty,* type **-heavy\-duty**. For information on specifying hyphenation points, see "Controlling hyphenation" on page 89.

4 Click Learn.

Using the Thesaurus

You use the Thesaurus to look up synonyms, related words, and antonyms for words you specify. For example, if you specify *figment,* the FrameMaker Thesaurus provides synonyms such as *fiction* and *fable,* related words such as *concoction* and *fantasy,* and antonyms such as *fact.* The Thesaurus lets you improve on a word already in a document or search for the right word to insert. For example, you can replace *figment* with any of its synonyms, related words, or antonyms.

The search for a word doesn't need to end with the first set of synonyms, related words, and antonyms you find. You can look up any one of these words and display its synonyms, related words, and antonyms. You can quickly go back to any of the last 10 words you looked up.

Looking up words

When you look up a word, information about the word appears in the Thesaurus dialog box.

If more information is available than fits, you can use the arrow buttons at the bottom of the dialog box to view the additional information. FrameMaker displays the synonyms, antonyms, and related words with capitalization that matches the capitalization of the word you looked up.

To look up a word visible in the document window:
❖ Select the word and choose Edit > Thesaurus.

To look up a word not visible in the document window:
1 Make sure that no text is selected, then choose Edit > Thesaurus.

2 Enter the word and click Look Up.

To look up a phrase:
1 Make sure that no text is selected and choose Edit > Thesaurus.

2 Enter the phrase, including any hyphens, in the Thesaurus Look Up dialog box, and click Look Up.

Note: If you try to specify a phrase by selecting it in the document window, FrameMaker looks up only the first selected word.

To look up a synonym, a related word, or an antonym displayed in the Thesaurus dialog box:
❖ Click the word. Synonyms, related words, and antonyms are shown in bold.

To look up a word again:
❖ Choose the word from the Word pop-up menu in the Thesaurus dialog box. This menu lists the last 10 words you looked up.

Choosing a language to use

FrameMaker uses the language of the current text. If a word isn't selected or the insertion point isn't in a paragraph, FrameMaker uses the language of the interface you chose when you installed FrameMaker. You can override the default language in new documents by creating your own template for custom new documents. For information, see "Changing templates for blank paper and text files" on page 407.

The Thesaurus for a language is installed along with the dictionary for that language. For information, see "Checking spelling in different languages" on page 89.

To specify a different language when looking up a word:

1 Click Look Up in the Thesaurus dialog box.

2 Enter the word you want to look up, choose a language, and click Look Up.

Using words from the Thesaurus

You can add or replace a word in your document from the Thesaurus dialog box. The addition or replacement can be either the word looked up or one of the words in bold.

When replacing a selected word in your document with a word from the Thesaurus dialog box, you replace only the selected word—not all occurrences of the word. To replace all occurrences, use Edit > Find/Change (see "Changing items you find" on page 83).

To insert a word looked up in the Thesaurus dialog box:

1 Do one of the following:

• To add the word, place an insertion point in the document.

• To replace a word in the document, select the word.

2 Click Replace.

To insert a word that appears in bold in the Thesaurus dialog box:

1 Do one of the following:

• To add the word, place an insertion point in the document.

• To replace a word in the document, select the word.

2 Control-click the word in the Thesaurus dialog box and click Replace.

Working with text in structured documents

Many of the procedures for selecting and editing text in a structured document differ from the procedures for working with unstructured documents.

Placing an insertion point in a structured document window

You can place the insertion point anywhere inside a text frame in a document window. An insertion point also appears at the corresponding place in the Structure View.

If you're placing the insertion point in the middle of text, you must use the document window rather than the Structure View. But in some other cases, particularly when placing the insertion point at the beginning or end of an element, or between elements, you'll probably find it easier to click in the Structure View.

💡 *Work with element boundaries showing so that you can see the beginning and end of each element (see "Showing and hiding element boundaries" on page 16). After clicking, check the status bar for the tag of the current element; this will help you verify that you clicked in the element you want. Be aware that because FrameMaker treats element boundaries as actual characters, FrameMaker reformats the document whenever you turn element boundaries on or off.*
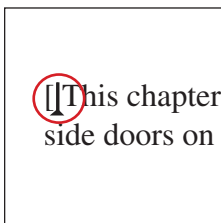
To place the insertion point inside an element's text:

❖ Click in the text.

If you click at the beginning of the text, the triangle insertion point in the Structure View has a line to its left ▐▶. If you click at the end of the text, the triangle has a line to its right ▶▐. If you click in the middle of the text, the triangle is hollow ▷.

To place the insertion point at the beginning of an element's text:

❖ Click just inside the element's opening boundary.

Insertion point at the beginning of text

To place the insertion point at the end of an element's text:

❖ Click just inside the element's closing boundary.
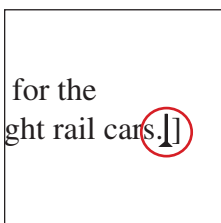
Insertion point at the end of text

To place the insertion point between two elements:

❖ Click between the closing boundary of one element and the opening boundary of the other.
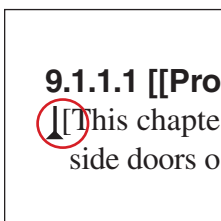
Insertion point between two elements

Placing an insertion point in the Structure View

In the Structure View, you can place the insertion point at the beginning or end of text in an element or between two elements. An insertion point also appears at the corresponding place in the document window.

To place the insertion point at the beginning of an element's text:

❖ Click to the left or in the first half of the text snippet. After you click, a line on the left side of the triangle insertion point indicates that the point is at the beginning of text.
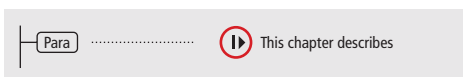
Insertion point at the beginning of text

To place the insertion point at the end of an element's text:

❖ Click to the right or in the second half of the text snippet. After you click, a line on the right side of the insertion point indicates that the point is at the end of text.
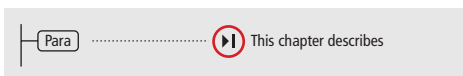
Insertion point at the end of text

To place the insertion point between two elements:

❖ Click to the right of the vertical line connecting the elements, between the two bubbles.
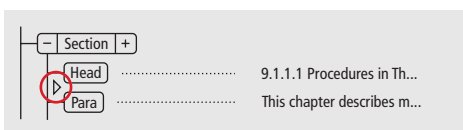
Insertion point between two elements

Selecting in a structured document window

You can select entire elements and any part of a document's contents in a document window. A corresponding selection also appears in the Structure View.

If an element has contents, you can select all or part of the contents without selecting the element itself. If an element consists of a single object, such as a graphic or a cross-reference, you must select the entire element.

When you select an entire element, its contents are selected along with it.

🔆 *Work with element boundaries showing so that you can see the beginning and end of each element (see "Showing and hiding element boundaries" on page 16). After selecting, check the status bar for the tag name of the selection's parent element. The tag name appears following the "E:" text. The tag name helps you verify that you selected the element you want.*

To select text in an element but not the element itself:

❖ Drag through the range of text. Be careful not to drag across an element boundary. If you do, you will select the entire element.

Selected text

To select one element:

❖ Drag from anywhere inside the element to outside one of its element boundaries.

9.1.1.1 [[**Procedures in this chapter**]]¶

Selected element

To select more than one element:

❖ Drag through the elements. FrameMaker selects each element as you drag across one of its boundaries.

Selecting in the Structure View

You can select entire elements or an element's contents in the Structure View. A corresponding selection also appears in the document window.

If an element has contents, you can select all of the contents without selecting the element itself. If an element is a single object, such as a graphic or a cross-reference, you select the entire element. (Elements that may have contents have round-cornered bubbles; elements that are a single object have square-cornered bubbles.)

When you select an entire element, its contents are selected along with it.

To select one element:

❖ Click the middle of its bubble.
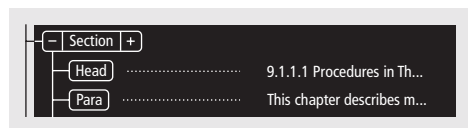
Selected Section element and contents

To select more than one element:

❖ Click the first bubble and then Shift-click the other bubbles.

You can also drag to the right of the vertical line connecting the elements. Start above the first element you want to select, and drag down to the last element you want to select.

To select the contents of an element that has no descendants but not select the element itself:

❖ Double-click the text snippet.
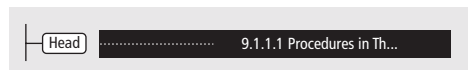
Selected contents of Head

To select the contents of an element that has descendants but not select the element itself:

❖ Double-click to the right of the vertical line connecting the first level of descendants.
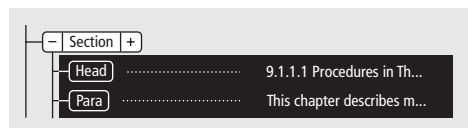
Selected contents of Section, including descendants

Entering text in a structured document

The Element Catalog describes what the current element can contain. You can enter text whenever <TEXT> appears in the catalog.
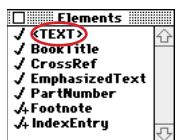
You can enter text at the current location.

As you type text, the text flows to another line or column, and FrameMaker automatically creates new pages as you need them.

FrameMaker may also add some text if your elements were defined that way. For example, the Item elements in a List might have numbers that FrameMaker generates automatically, a Section might begin with boilerplate text that FrameMaker inserts automatically, or you may have specified that FrameMaker automatically adds child elements to an element.

To enter text:

1 Place the insertion point where you want to enter the text.

2 Begin typing. Don't press Return unless you want to insert a new element (or begin a new paragraph in an unstructured flow).

To continue typing in another element, either move the insertion point to the other element or insert a new element. In some cases, pressing Return inserts an element (it depends on how the elements are defined). For more information, see "Pressing Return to insert elements" on page 37.

Entering rubi text for Japanese in a structured document

If Japanese or English fonts are installed on your system, FrameMaker provides commands for entering rubi and for specifying how you want the rubi to appear (see "Entering rubi text for Japanese" on page 76).
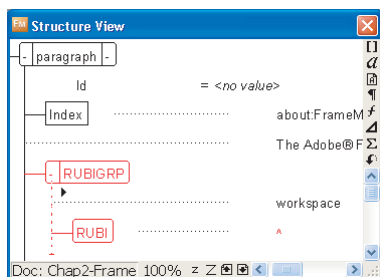
Structure of a rubi group

Your application will probably also have elements defined for containing the rubi text—a child element for the rubi and a rubi group element for the rubi element and the oyamoji text together.

For information on entering rubi text without using elements (which you normally do only in an unstructured flow), see "Entering rubi text for Japanese" on page 76.

To enter rubi text using elements:

1 Click where you want the rubi text to appear.

2 Select a rubi group element in the Element Catalog and click Insert. Bubbles for the rubi structure appear in the Structure View.

3 If the Attributes for New Element dialog box appears, enter attribute values for the element and click Insert Element (see "Inserting elements" on page 36).

4 Type the oyamoji text. Do not press Return in this text. If the text breaks into two lines, the characters will all appear on the same line.

5 Move the insertion point to the rubi child element and type the rubi text.

To wrap a rubi structure around text that will become oyamoji text:

1 Select the text you want to become oyamoji. The text cannot contain a paragraph symbol ¶ or a forced return symbol ⟨. If the text breaks into two lines, it will be moved to one line.

2 Select a rubi group element in the Element Catalog and click Wrap. Bubbles for the rubi structure appear in the Structure View.

You can also use Special > Rubi to wrap a rubi group. If more than one rubi group element is available, choose one from the Element Tag pop-up menu in the dialog box that appears.

3 If the Attributes for New Element dialog box appears, enter attribute values for the element and click Insert Element (see"Inserting elements" on page 36).

4 Type the rubi text.

To wrap an invalid rubi structure around text:

❖ Do one of the following:

• To wrap a rubi group element that is valid in another part of the document, use the All Elements setting to make the element available everywhere (see "Changing the scope of elements available in a structured document" on page 18). Then select the text and wrap the rubi group around it.

• To wrap an invalid rubi group element with the default tag RUBIGRP, select the text and choose Special > Rubi. (A default rubi group is created if no defined rubi group elements are available.)

You might use an invalid rubi structure if no rubi group element is available at the location you want. After inserting the element, talk to your developer about making the element valid at this location.

Text formatting

You can change the look of text either by applying predefined formats—which usually make several changes at once—or by changing one property at a time.

Each format is made up of many properties. When you use a paragraph format, you apply settings for indentation, alignment, font properties, automatic numbering, tab stops, hyphenation, word spacing, and so on. When you use a character format to change selected text within a paragraph, you can change a number of font properties of the text without changing the rest of the paragraph.
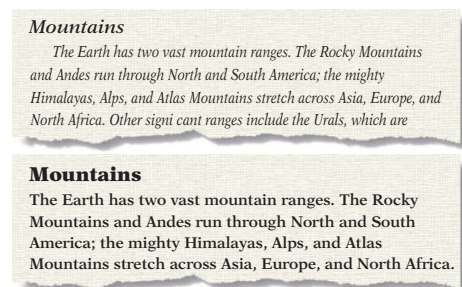
Each paragraph has properties that determine its appearance and position on the page.

Text format properties also include those used to create page breaks, numbered and bulleted lists, and straddle, side, and run-in heads.

About paragraph and character formats

Each document contains two text-related *catalogs:* a Paragraph Catalog and a Character Catalog. These catalogs, which appear in floating palettes, contain predefined *formats*.
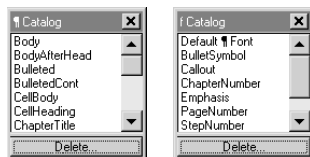
Paragraph Catalog and Character Catalog

Applying formats from catalogs is the easiest way to change the look of text and to ensure that your documents are formatted consistently. This consistency simplifies making changes later as well as converting documents to other formats such as HTML.

The name of a format is its *tag*. You or a template designer defines the properties of a format, including its tag, in special dialog boxes called designers.

The formats in the Paragraph Catalog affect whole paragraphs; the formats in the Character Catalog affect any amount of selected text—usually just portions of paragraphs.

Applying predefined formats to text

Applying a predefined format from the Paragraph Catalog or the Character Catalog changes text to match the format's properties.

On looking towards the upper portion of the glacier, at the spot where it precipitates itself into the passage which conducts it to the valley like a furiously boiling cascade with wild

Body paragraph format applied

On looking towards the upper portion of the glacier, at the spot where it precipitates itself into the passage which conducts it to the

Same text, different format

An easy way to access predefined formats is to open a floating palette of formats, called a catalog, and leave it open to the side of your documents. Then, you only need to click a format's name (its tag) to apply it.

A special entry in the Character Catalog lets you restore the default font to text. The *default font* is the font (and point size, style, and so on) used for a paragraph unless you explicitly change it.

You can also redefine a catalog format and then apply it to all the text in the document that's tagged with that format; see "Redefining (updating) formats" on page 132.

To display a catalog:

❖ Do one of the following:

• To display the Paragraph Catalog, click ¶ in the upper right corner of the document window.

• To display the Character Catalog, click *f* in the upper right corner of the document window.

To apply a paragraph or character format:

1 Select the text you want to change by doing one of the following:

• To apply changes at the paragraph level, click in a paragraph or select several paragraphs.

• To apply changes at the character level (typically, to portions of a paragraph), select any amount of text. (Avoid selecting an entire paragraph. If you do, the character format you apply is considered a change to the paragraph's default font.)

• To apply changes only to the characters you are about to type, click in the paragraph without selecting any text.

2 Click a format in a catalog to apply that format to the selection. The Tag area on the left side of the status bar changes to show the new tag. For example, the selection might have a Body paragraph format and an Emphasis character format.

Flow: A ¶:Body f: Emphasis   1 of 1   100
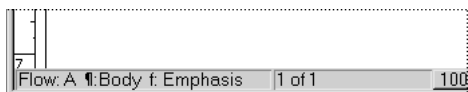
The screen tag area displays character and paragraph formats.

To apply a format from the keyboard, press Control+9 (for paragraph formats) or Control+8 (for character formats). At the status bar prompt, start typing the format's tag until the name appears. (Lowercase letters search forward; uppercase letters search backward.) You can also use the up arrow and down arrow keys to scroll through formats. Press Return to apply the format. To cancel, click in the document without pressing Return.

To restore the paragraph's default font and default properties:

❖ Select the text and click Default ¶ Font in the Character Catalog. For example, if you apply the Emphasis format to a word and then decide you don't want it to have this format, select the word and apply Default ¶ Font from the Character Catalog.

Changing text without using the catalogs

You usually format text by applying predefined formats from the Paragraph or Character Catalog. However, you can also change individual properties of a paragraph or a portion of a paragraph. If the resulting format doesn't match the corresponding predefined format in the catalog for that text, the format change is considered an *override* of that catalog format. For information, see "About format overrides" on page 106.

You can change individual properties in the following ways:

• You can use the Paragraph Designer to change or override any format properties for paragraphs (see "About format overrides" on page 106).

• You can use the Character Designer or commands on the Format menu—Font, Size, and Style—to change or override the character format of selected text or at the insertion point (see "Changing font properties" on page 106). You can also use the QuickAccess Bar to change many font properties (see "Using the QuickAccess bar" on page 11).

• You can copy a format, including any overrides, by choosing Edit > Copy Special > Paragraph Format or Character Format, and paste it elsewhere.

• You can use the formatting bar to change or override several paragraph properties.

The formatting bar contains pop-up menus and tab wells that you can use to set alignment, spacing, and tab stops. Any changes you make take effect immediately, changing the appearance of the text to reflect the new settings. Changes made using the formatting bar are often overrides to the format properties.
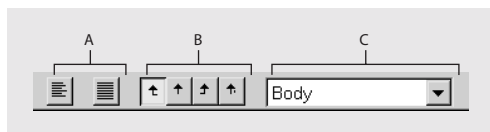
A. Alignment and spacing B. Tab wells C. Paragraph format pop-up menu

To display or hide the formatting bar:

❖ Do one of the following:

• (Windows) Choose View > Formatting Bar.

• (UNIX) If the rulers aren't already visible, display them by choosing View > Rulers and then clicking the formatting bar toggle. Click the toggle again to hide the formatting bar.

Using the designers

There are two special dialog boxes for formatting text: the Paragraph Designer and the Character Designer. You can use these designers to change and create formats.

The Paragraph and Character Designers

The designers include several areas and commands for creating, changing, and overriding formats. The Paragraph Designer contains several groups of properties, displayed one at a time (it's shown here displaying the Basic group of properties). The Character Designer contains only one group.
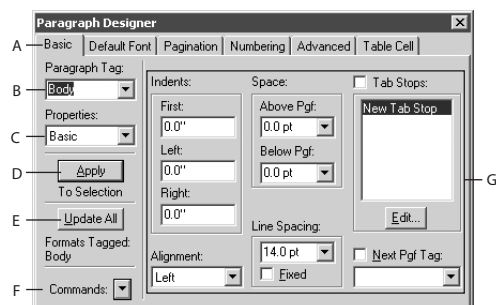
Paragraph Designer
A. (Windows) Click a tab to display a group of properties.
B. Choose from the Paragraph Tag pop-up menu to display the stored properties for that format.
C. Choose from the Properties pop-up menu to display a group of properties.
D. Apply all properties in all property groups (including the tag) to the current paragraph's format.
E. Update all paragraph formats that have the same tag, including the format stored in the Paragraph Catalog.
F. Choose commands for updating specific properties of selected paragraph formats.
G. View or change the group's properties.

Note: Paragraph and Character tags support the Unicode text encoding standard.

To display a designer:

❖ Do the following:

• To display the Paragraph Designer, choose Format > Paragraphs > Designer.

• To display the Character Designer, choose Format > Characters > Designer.

To use a designer:

1 Display a group of formatting properties in the Paragraph Designer by choosing the group from the Properties pop-up menu or, in Windows, by clicking a tab.

2 Make the changes to properties that you want. For an overview of the changes you can make, see "About format overrides" on page 106.

3 Click Apply To Selection.

Note: Click Apply To Selection when you want to override the format for the current paragraph. Click Update All only when you want to globally change (update) the format, as described in "Redefining (updating) formats" on page 132.

To reset properties after making some changes in a designer:

❖ Do one of the following:

• To reset the properties to match the current selection, including any format overrides, click in text or choose Reset Window from Selection from the Commands pop-up menu.

• To reset the properties to match the stored format, choose the format from the Tag pop-up menu. Do this even if its tag is already displayed in the Tag text box.

Using As Is

The As Is setting can appear in the Paragraph, Character, or Table Designer, as well as in dialog boxes throughout FrameMaker. When properties are set to As Is in a designer, text boxes are blank, As Is appears in pop-up menus, and check boxes appear as in the following illustration.

	Selected	As Is	Deselected
Windows	☑	☑	☐
Unix	☐	☐	☐

Check boxes can be selected (on), As Is, or off. You may have to click a check box twice to set it to the state you want.

As Is has the following uses:

• As Is can indicate that selected items have different properties. For example, if you select a right-aligned paragraph and a left-aligned paragraph, the Alignment pop-up menu displays As Is.

• As Is lets you change some, but not all, of the properties when working in a designer. For example, if you want to change all headings from centered to left-aligned but want to leave the rest of their properties intact, you can set the rest to As Is, and then update all heading formats. For information, see "Redefining (updating) formats" on page 132.

• As Is lets you create character formats that specify the properties that won't be changed when you apply the format to text. In this case, the As Is property is stored as part of the character format. For information, see "Redefining (updating) formats" on page 132.

Globally applying formats to text

You may occasionally need to apply a format globally to multiple paragraphs of your choosing. For example, you could retag all paragraphs currently tagged Head2 as Head1.

To globally apply a format to text:

1 To apply a format to text that has several different tags, select consecutive paragraphs or text items that have those tags. Otherwise, skip this step (that is, it makes no difference what is selected).

2 Display the Paragraph or Character designer, and then choose the format you want to apply from the Paragraph Tag or the Character Tag pop-up menu.

3 Choose Global Update Options from the Commands pop-up menu.

4 Do one of the following:

• To update all text and formats in the document, click All Paragraphs and Catalog Entries, or All Characters and Catalog Entries.

• To update all text in the selection and all paragraphs or text items that have the same tags as the selected paragraphs, click All Matching Tags in Selection.

• To update formats with a specific tag, choose a tag from the All Tagged pop-up menu.

5 If you're retagging paragraphs, click All Properties in the Use Properties area.

6 Click Update.

About format overrides

When you make a text formatting change that doesn't match the text's predefined format, it is usually a format *override*.

FrameMaker indicates text format overrides by displaying an asterisk (*) next to the tag in the Tag area and in the Paragraph Format pop-up menu on the formatting bar.
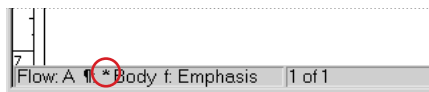
An asterisk indicates a format override.

If you use the catalog formats to maintain consistency in a document, you'll probably want to avoid overrides. You can do this by applying formats from the catalogs or by redefining (updating) the catalog format to match the current text. For details, see "Applying predefined formats to text" on page 102 and "Redefining (updating) formats" on page 132.

If you're formatting quick, one-time-only documents, these format overrides pose no problem. For example, you may want a particular Body paragraph to function as a title of a memo without having to define and apply a new Title format. In such a case, you simply change the paragraph's format without updating the catalog format.

If you later update the catalog format, you can choose whether you want to retain format overrides. If you decide you want to create separate formats instead of using overrides, you can use File > Utilities > Create & Apply Formats (see "Changing format overrides to new formats" on page 551).

You can override many format properties, including font properties, indent and alignment properties, tab stops, spacing properties, line breaks and hyphenation, page breaks, graphics as part of a paragraph format, headings, and autonumbering.

Note: When you apply font formatting to parts of a paragraph, that formatting is not considered an override to the paragraph format unless you apply it to the entire paragraph.

Changing font properties

You can use either the Format menu or the Character Designer to change the font family, size, or style of selected text. You use the Paragraph Designer to change the default font properties of an entire paragraph. The font families and styles available depend on which fonts are installed.

If you change the font properties of selected text, those properties are retained when you later update the properties of the entire paragraph.

You can change the font properties of text created with the Text Line tool as well as paragraph text.

Note: (Windows) Do not use the Courier font when Adobe Type Manager® is turned off or not installed. If you do use Courier without ATM, FrameMaker products will not accurately display the Courier font.

Using font commands on the Format menu

Format changes you make using the Format menu commands take effect immediately. They are considered overrides when they don't match the font properties in the predefined formats.

To change font properties with Format menu commands:

❖ Do the following:

• To change a font family, choose Format > Font and choose a font family from the list.

- To change a point size, choose Format > Size and choose a point size from the list. Choose Other to enter a point size not on the list.

- To change font style, choose Format > Style and choose a font style from the list. Many but not all of the choices that appear in the designers also appear here. To remove other style properties, choose Plain Text.

Note: Even if a font has more than one weight—for example, Helvetica Condensed Bold and Helvetica Condensed Black—the Format > Style submenu will list only Bold. To choose other weights, use the Default Font properties of the Paragraph Designer or use the Character Designer instead.

Using a designer to change font properties

Use the Paragraph Designer to change the default font properties of an entire paragraph. Use the Character Designer to change the font properties of specific text within a paragraph.

To change a font property using a designer:

1 Do one of the following:

- To change the default font properties of an entire paragraph, click in the paragraph, choose Format > Paragraphs > Designer, and then choose Default Font from the Properties pop-up menu in the Paragraph Designer.

- To change the font properties of specific text within a paragraph, select the text and choose Format > Characters > Designer.

- To change the font properties of text you will enter within a paragraph, click in the text and choose Format > Characters > Designer.

2 Change the settings in the designer. For information, see "Using the designers" on page 103.

3 Click Apply To Selection.

Using a designer to apply a capitalization style to text changes only the appearance of the text (for example, makes lowercase text appear in uppercase letters). To permanently change the text itself, use the Capitalization dialog box to replace selected text with text that is all uppercase, all lowercase, or initial caps. To display the dialog box, press Esc e Shift+c.

Font changes you can make in the designers

You've probably seen many of the settings in other word processors, but a few may be new to you. The following list explains those that you may not be familiar with:

Numeric Underlining To use a single offset and thickness for an underline regardless of the character's font or size, choose Numeric Underlining. Neither regular nor numeric underlining affects tab characters. If you want the tab space to be underlined, format that tab stop so that it uses a nonbreaking space as a leader.


Numeric and regular underlining

Change Bar To display a change bar next to text, select Change Bar.

Color To display the text in a different color, choose a color from the Color pop-up menu. If you defined your own colors, they appear in the pop-up menu.

Spread To add or subtract space between characters, enter a percentage for Spread. Spread (also called tracking) is expressed as a percentage of an em space. Normal spread is 0%.
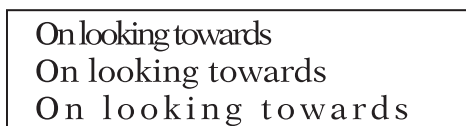
-10% spread (top), 0% spread (center), 10% spread (bottom)

Stretch To set the width of the character shapes, enter a percentage for Stretch.

Capitalization To display all characters in uppercase but use slightly smaller capital letters for text that was in lowercase, choose Small Caps. For example, *Note* appears as *NOTE*.

Language To change the language associated with the text, choose from the Language pop-up menu. The language you choose affects the text in system variables as well as both spell-checking and hyphenation. Also, changing the language to None prevents the selected text from being spell-checked.

Pair Kern To adjust the space between two characters in the same word, select Pair Kern. Pair kerning also turns on ligatures, such as *fi* and *fl*, in printed documents (except in Windows, which does not support these ligatures). The kerning pairs and the ligatures that have been defined depend on the font. In UNIX, you can customize kerning pairs (see the online manual *Customizing FrameMaker Products* on the Adobe website: www.adobe.com/devnet/frame-maker/pdfs/Customizing_Frame_Products.pdf).

Kerning pairs turned on and off

Tsume To move a Japanese character closer to the characters next to it, select Tsume. (This option is available only when you can type Japanese text in documents and dialog boxes.) The amount of space a variable-width character (such as a parenthesis) can move is determined by the metrics for that character.

Adjusting superscripted, subscripted, and small cap text properties
Adjustments to the properties of subscript, superscript (including footnote references), and small cap text apply to all such text in the document.

To specify the size and shape of small caps or the size, shape, and placement of super- or subscripted text:
1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Choose Format > Document > Text Options.

3 Specify a size, offset, and stretch percentage.

When calculating the size and offset, FrameMaker multiplies the percentage you enter by the point size of the affected characters. For example, a 40% superscript offset value will raise a 10-point character 4 points.

The stretch percentage is the amount that characters are condensed or expanded. For information, see "Condensing and expanding characters" on page 109.

4 Click Apply.

You can manually fine-tune the placement of superscripted or subscripted text by selecting it and then pressing Alt+arrow key (Windows), or Control+arrow key (UNIX).

Condensing and expanding characters

You can achieve some effects by stretching characters.

On looking towards the

On looking towards the
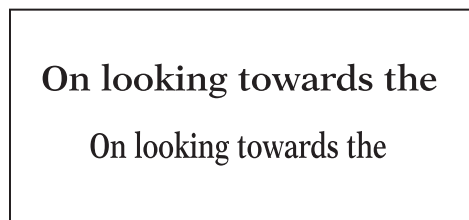
Text unchanged (top) and condensed 75% (bottom)

To change the width of text precisely:

1 Do one of the following:

• To change the width of an entire paragraph, click in the paragraph, choose Format > Paragraphs > Designer, and then choose Default Font from the Properties pop-up menu.

• To change the width of specific text within a paragraph, select the text and choose Format > Characters > Designer.

2 Enter a percentage in the Stretch text box. A value of 100% means the width of characters is as defined for the font. A value less than 100% condenses the width; a value greater than 100% expands the width.

3 Click Apply To Selection.

In Japanese documents, use a stretch value greater than 100 to simulate heitai (horizontally stretched characters). Use a stretch value less than 100 and increase the point size of text to simulate chotai (vertically stretched characters).

To change the width of a text line by dragging:

1 Select the text line you want to change. You can also select a grouped object that includes a text line. (Be sure you select a text line and not a text frame. For information on text lines, see "Using text with graphics" on page 320.)

2 Drag one of its handles until the text is stretched to the shape you want. Dragging a corner handle changes the point size as well as the character width.

Working with combined fonts of Japanese and Western characters

In addition to containing the full Japanese syllabary, Japanese fonts include a set of Western characters to facilitate entering non-Japanese characters and numbers. You can define your own *combined font*—a font that uses a specified Western font with a specified Japanese font. For example, you can create a font that uses Mincho for Japanese characters but switches to Palatino for Western characters.

If you're working on a system that supports Japanese text and if combined fonts are included as part of a template, they will be available to you automatically as long as the specified fonts are installed. If your system supports the typing of Japanese text in documents and dialog boxes, combined fonts appear at the top of the font lists along with regular Western and Japanese ones.

FrameMaker supports Japanese single-byte, half-width katakana characters in combined fonts.

For information on working with Korean and Chinese characters, see the online manual *Chinese and Korean Features*.

To create or change a combined font:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Choose Format > Document > Combined Fonts. (This command will appear only if your system supports the typing of Japanese text in documents and dialog boxes.)

3 Do one of the following:

• To create a new combined font, enter a name in the Combined Font Name text box.

• To change a combined font, select its name from the Combined Fonts list.

4 Do the following:

• To specify the Japanese font, choose from the pop-up menu of font families in the Asian Text area.

• To specify the Western font, choose from the pop-up menu of font families in the Western Text area.

• To adjust the relative size and baseline offset of the Western text, enter values for Size and Offset. The size and offset of the Western text are percentages of the Asian point size. Use a negative offset to move the text below the baseline.

5 Do one of the following:

• To create a new combined font, click Add.

• To finish editing a combined font, click Change.

6 Click Done.

Note: (Windows) You can turn off the Allow Bolded and Obliqued Styles setting in the Asian Text area of the Edit Combined fonts dialog box so that bolding or italicizing the Western font will not automatically enbold or italicize the Asian text.

To copy a set of combined fonts:

❖ Choose File > Import > Formats and select Combined Fonts. For details on importing formats from one document to another, see "Importing and updating formats" on page 408.

Changing indents and alignment

The left and right indents of a paragraph determine where the paragraph's left and right edges are positioned. Text lines up against both these edges when it's justified, and against one when it's left or right aligned.

You can specify different indents for the first line of a paragraph and for all lines after the first to achieve special effects, such as a hanging indent.
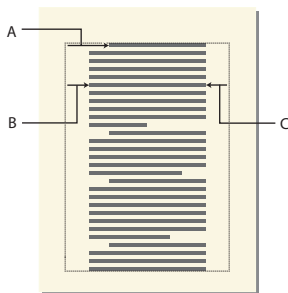
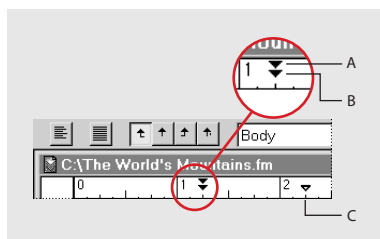*A. First indent B. Left indent C. Right indent*

The alignment property of a paragraph determines how the paragraph is positioned between the left and right indents (not between the edges of the text column).
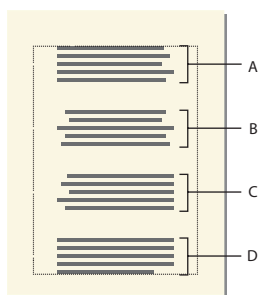
A. Left aligned B. Centered C. Right aligned D. Justified

To indent a paragraph using the ruler:

1 Click in the paragraph—or select the paragraphs—you want to indent.

2 Drag the indent symbol to a new location on the ruler.

A. First indent B. Left indent C. Right indent

To align an indent with a ruler marking, turn the snap grid on (use Graphics > Snap). When you drag an indent symbol, it snaps to locations corresponding to the snap grid.

To indent a paragraph using an indent value:

1 Click in the paragraph—or select the multiple paragraphs—you want to indent.

2 Display the Basic properties of the Paragraph Designer. Enter the indents you want in the First, Left, and Right text boxes, and then click Apply To Selection. (A hanging indent uses a smaller value in the First text box than in the Left text box.)

To set a paragraph's alignment:

1 Click in the paragraph—or select the multiple paragraphs—whose alignment you want to set.

2 Do one of the following:

• Display the formatting bar and choose an alignment from the Alignment pop-up menu.

• Display the Basic properties of the Paragraph Designer, choose from the Alignment pop-up menu, and click Apply To Selection.

Note: If you use Shift+Enter or Shift+Return to insert a forced return within a fully justified paragraph, the line that ends with the forced return will not be justified.

Changing tab stops

You can use tab stops to align text at specific places.

Changing or creating a tab stop is a two-step process. First, you need to define a tab stop. Then, you press the Tab key in a document to move the insertion point to the defined tab stop. If you press Tab and the insertion point doesn't move, a tab stop needs to be defined.

Tab stops will already be defined for many paragraph formats. To change the predefined tab stops, you can change the format by using the formatting bar or the Paragraph Designer.

You can choose from four types of tab stops—left, center, right, and decimal.

```
    A             B             C             D
    |             |             |             |
Everest       Everest       Everest        2.6794
Lhotse        Lhotse        Lhotse         293.1
K2            K2                K2           18.36
```

A. *Left tab stop* *B.* *Center tab stop* *C.* *Right tab stop*
D. *Decimal tab stop*

You can also specify a pattern of characters—a leader—to fill the space between a tab and the character following it. Typically, a leader is a series of periods, but you can use any character or any series of characters. Tab leaders are useful in tables of contents that have a wide gap between columns.

Contents   **Page**
Everest... 69
Lhotse... 76
K2... 83

Tab leaders

Note: Unlike word processors, FrameMaker uses tab stops that are absolute rather than relative. With relative tab stops, each time you press Tab, the insertion point moves to the next available tab stop. With absolute tab stops, the nth tab on a line moves the insertion point to the nth stop. If no corresponding tab stop is defined, FrameMaker's tab does nothing (the tab symbol overlays the current character).
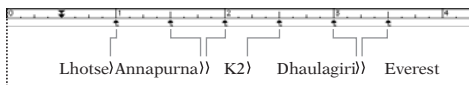

With FrameMaker's absolute tabs, you insert three tabs to move text (K2) to the third tab stop.
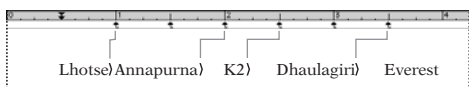
With relative tabs, one or two tabs can move text to the third tab stop.

To add, move, edit, or delete a tab stop using the formatting bar:

1 Click in a paragraph or select multiple paragraphs, and display the formatting bar. If you selected several paragraphs, only the tab stops common to all the selected paragraphs appear in the formatting bar.

2 Do one of the following:

• To add a tab stop, drag a tab stop symbol from the appropriate tab well on the formatting bar to the desired position below the top ruler.
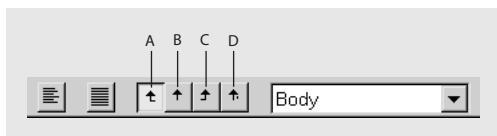
A. Left B. Center C. Right D. Decimal

• To move a tab stop, drag it to a new position. FrameMaker moves tabbed text in the paragraph from the existing tab stop to the new position.

To align tab stops with ruler markings, turn the snap grid on (use Graphics > Snap). When you drag a tab symbol, it snaps to locations corresponding to the snap grid.

• To add multiple tab stops at regular intervals, double-click the existing tab stop (on the top ruler) that you want to duplicate at regular intervals. Enter the interval between tabs in the Repeat Every text box and click Edit.

• To change a tab stop, double-click it, enter a new tab position in the New Position text box, and choose a different alignment. (The position is the distance from the left edge of the column to the tab stop.) Then click Edit. You can also drag a new tab stop on top of an existing one on the ruler to replace it.

• To delete a tab stop, drag it off the bottom of the top ruler.

• To delete all tab stops, double-click a tab stop and click Delete All.

To add, edit, or delete a tab stop using the Paragraph Designer:

1 Click in the paragraph—or select the multiple paragraphs—you want to change.

2 Display the Basic properties of the Paragraph Designer.

3 In the Tab Stops area, do one of the following:

• To add a new tab stop, double-click New Tab, make the desired settings, and click Continue.

- To edit a tab stop, double-click it, change the settings, and click Continue.

- To delete a tab stop, double-click it and click Delete.

- To delete all tab stops, double-click any tab stop and click Delete All.

4 Click Apply To Selection.

To define a leader for a tab:

1 Double-click the tab stop on the ruler.

2 In the Leader area of the dialog box, click one of the predefined tab leaders or enter your own custom leader.

3 Click Edit.

To specify a decimal tab character:

1 Double-click the tab stop on the ruler.

2 Enter the decimal character in the Align On text box in the Alignment area and click Edit. For example, you can use a comma when you're working with European decimals.

Changing spacing

You can control the space between paragraphs and lines (vertical spacing) and the space between words and characters (horizontal spacing). Spacing properties go by different names in different contexts. For example, the space between characters is often called *pair kerning;* adjusting the letterspacing in a line is *spread* or *tracking;* and the *line spacing* of a paragraph (measured from the baseline of one line to the baseline of the next) includes its *leading*.

Adjusting vertical spacing

Several properties affect the vertical spacing of a paragraph, as the following illustration shows.
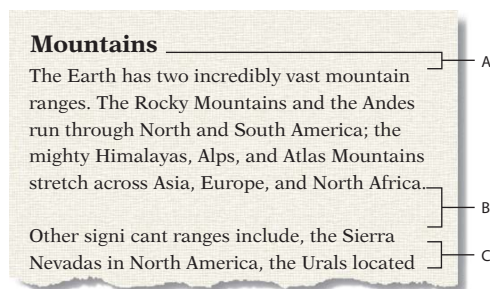
A. Space above paragraph B. Space below paragraph
C. Line spacing

In a multicolumn layout, you can also adjust vertical spacing in columns by feathering (vertically justifying) the text in them. For information, see "Feathering text to the bottom of text frames" on page 388.

To change the space above and below a paragraph:

1 Click in a paragraph or select several paragraphs whose spacing you want to change.

2 Display the Basic properties of the Paragraph Designer and enter a value in the Space Above and Space Below text boxes, or choose values from the pop-up menus. (The space between paragraphs is determined by the Space Below setting of the first paragraph or the Space Above setting of the second paragraph, whichever is larger.)

If a paragraph falls at the top of a column, FrameMaker ignores the Space Above setting. If the paragraph falls at the bottom of a column, FrameMaker ignores the Space Below setting.
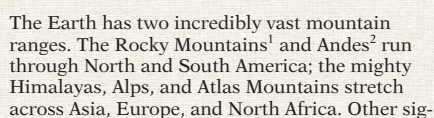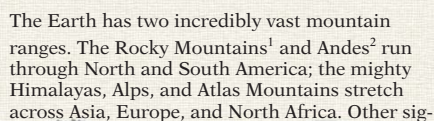
Note: When an anchored frame is positioned below the current line and its anchor symbol appears in the last line of a paragraph, the space below the paragraph usually appears between the frame and the next paragraph. However, if the frame is anchored in a straddle paragraph, the space below is discarded. And if the frame is a straddle frame but is not anchored in a straddle paragraph, the space below appears between the anchor symbol and the frame.

If you know the space you want between paragraphs but don't want to use the Paragraph Designer, select the paragraphs and choose Space Between from the Spacing pop-up menu on the formatting bar.

To change the space between lines of a paragraph:

1 Click a paragraph or select several paragraphs whose spacing you want to change.

2 Display the Basic properties of the Paragraph Designer and choose a type of line spacing from the Line Spacing pop-up menu, or enter a value in the text box. (You can also choose from the Spacing pop-up menu on the formatting bar.)

3 To allow extra space between lines to accommodate superscripts, subscripts, rubi text, and larger font sizes that may appear in the paragraph, turn off Fixed.

The Earth has two incredibly vast mountain ranges. The Rocky Mountains[1] and Andes[2] run through North and South America; the mighty Himalayas, Alps, and Atlas Mountains stretch across Asia, Europe, and North Africa. Other sig-

Fixed line spacing

The Earth has two incredibly vast mountain ranges. The Rocky Mountains[1] and Andes[2] run through North and South America; the mighty Himalayas, Alps, and Atlas Mountains stretch across Asia, Europe, and North Africa. Other sig-

Line spacing not fixed

4 Click Apply To Selection.

Adjusting horizontal spacing

As FrameMaker fills a line of text, it adjusts the space between characters according to kerning and tracking properties. The spacing between words is based on the following values, which are stored as part of the paragraph format:

• The *minimum* spacing is the smallest space allowed between words.

• The *maximum* spacing is the largest space allowed between words before FrameMaker tries to hyphenate words or add space between letters in justified paragraphs.

• The *optimum* spacing is what FrameMaker tries to achieve.

These values are expressed as a percentage of the standard space character for the paragraph's default font. Values below 100% create tighter word spacing; values above 100% create looser spacing.

The Rocky Mountains and Andes run through North and South America; the mighty Alps, Atlas, and Himalaya Mountains stretch across Asia, North Africa and Europe. Other significant

Tight word spacing has a more justified look.

The Rocky Mountains and Andes run through North and South America; the mighty Alps, Atlas, and Himalaya Mountains stretch across Asia, North Africa

Looser word spacing has a more ragged right edge.

To adjust the space between words:

1 Click a paragraph or select several paragraphs whose spacing you want to change.

2 Display the Advanced properties of the Paragraph Designer and specify the minimum, optimum, and maximum space to allow between words.

3 Click Apply To Selection.

Note: Lines of text in a justified paragraph can have more than the maximum space between words if FrameMaker can't fit a word on a line and can't hyphenate it. To avoid this, add extra space between characters in justified text by choosing Allow Automatic Letter Spacing in the Word Spacing area.

To apply character spacing (pair kerning):

❖ Select the Pair Kern option. For information, see "Font changes you can make in the designers" on page 107.

To apply spread (tracking):

❖ Change the Spread. For information, see "Font changes you can make in the designers" on page 107.

Adjusting spacing in Japanese documents

If your system supports the typing of Japanese text in documents and dialog boxes, you can adjust the following spacing properties:

• You can use a special group of properties in the Paragraph Designer to control some aspects of Japanese character spacing.

• You can also change the size, spacing, and alignment of rubi text throughout a document.

• You can affect the spacing of variable-width Japanese characters by selecting the Tsume font property (see "Adjusting rubi text size, placement, and spacing" on page 117).

These properties can be part of a predefined format, but you can change that format for particular paragraphs if you need to.

For information on working with Korean and Chinese characters, see the online manual *Chinese and Korean Features*.

**Adjusting the space around characters and punctuation**

You can change the space between Japanese and Western characters, and also the spacing between Japanese characters.

To adjust the space between Japanese characters:

1 Click a paragraph or select several paragraphs whose spacing you want to change.

2 In the Paragraph Designer, display the Asian properties. This group of properties is available only if your system supports the typing of Japanese text in documents and dialog boxes.

3 Do the following:

- To adjust the space between Japanese characters and Western ones, enter minimum, maximum, and optimum percentages in the upper group of text boxes.

- To adjust the space between Japanese characters, enter minimum, maximum, and optimum percentages in the lower group of text boxes.

- To determine the space between characters and special punctuation characters (yakumono), choose from the Punctuation pop-up menu. Squeeze as Necessary means space around punctuation is reduced only when special punctuation handling (kinsoku shori) occurs. Never Squeeze means no space adjustment is made around punctuation. Always Squeeze means space is always reduced around punctuation.

- To achieve a monospaced look in Japanese text, choose Never Squeeze from the Punctuation pop-up menu and turn off Tsume (see "Font changes you can make in the designers" on page 107).

Adjusting rubi text size, placement, and spacing

Rubi text is made up of small characters (usually kana) appearing above other text, called oyamoji. You can control the size of the rubi text as well as how it is spaced and aligned with respect to its underlying oyamoji text. Your settings affect rubi text throughout a document.
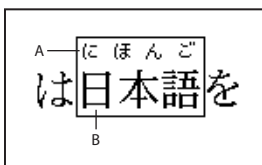
A. Rubi text   B. Oyamoji text

To adjust the size, placement, and spacing of rubi text:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Choose Format > Document > Rubi Properties. This command is available only if your system supports the typing of Japanese text in documents and dialog boxes.

3 Choose a value from the Size pop-up menu or enter a value in the text box. The value you enter can be a percentage of the point size of the underlying oyamoji (such as 50%), a point size (such as 8pt), or any other unit of measurement, including Q units.

4 Do the following:

- To let rubi text overhang non-oyamoji text if it needs to, click Let Rubi Overhang Surrounding Hiragana.

- To remove preceding or trailing space when rubi text appears at the start or end of a line, click Align All Characters at Line Boundaries.

5 Click an option in the Rubi Alignment for Japanese Oyamoji area. The illustrations in the dialog box show how rubi text will be spaced and aligned when it's above Japanese characters and when its length is less than or greater than the underlying Japanese text.

6 Click an option in the Rubi Alignment for Other Oyamoji area. The illustrations in the dialog box show how rubi text will be spaced and aligned when it's above non-Japanese text, and when its length is less than or greater than the underlying text.

7 Click Set.

Changing hyphenation and line breaks

When FrameMaker hyphenates text, it breaks words at the ends of lines so that the lines are approximately the same length. Hyphenation can be part of the paragraph format, but you can change that format for particular paragraphs if you need to.

In addition to automatic hyphenation, you can hyphenate words and adjust line breaks manually.

Note: Line break settings apply to Western text only. You can modify how lines break in Japanese text by modifying a MIF template (see the online manual MIF Reference*).*

To change automatic hyphenation in paragraphs:

1 Click in a paragraph or select several paragraphs whose hyphenation you want to change.

2 Display the Advanced properties of the Paragraph Designer, and do the following in the Automatic Hyphenation area:

• To let FrameMaker hyphenate the paragraph, select Hyphenate.

• To specify the maximum number of consecutive lines that can end with a hyphen, enter a value in the Max. # Adjacent text box.

• To specify the minimum length of a hyphenated word, enter a value in the Shortest Word text box.

• To specify the minimum number of letters that can precede and follow a hyphen, enter values in the Shortest Prefix and Shortest Suffix text boxes, respectively.

3 Click Apply To Selection.

To prevent the last word in a paragraph from hyphenating, set the maximum number of adjacent hyphens to 0 or choose None for the language for that word in the Character Designer. (However, setting Language to None prevents the word from being spell-checked.)

To change the hyphenation of a word:

1 Click in the word you want to change.

2 Do the following:

• To add a discretionary hyphen—an allowed hyphenation point—at the insertion point, press Control+hyphen. A discretionary hyphen symbol ⊤ appears above the word when text symbols are visible.

• To specify that the current word not be hyphenated, press Esc n s. A suppress hyphenation symbol (▬) appears under the word when text symbols are visible. (In dialog boxes, you may need to enter a special code for the suppress hyphenation symbol; see "About typing in dialog boxes" on page 670.)

• To enter a hyphen that will not be allowed to fall at the end of a line (a nonbreaking hyphen), press Esc hyphen h. (In dialog boxes, you may need to enter a special code for the nonbreaking hyphen; see "About typing in dialog boxes" on page 670.)

To add or remove hyphenation points in a word anywhere in a document:

❖ Use the Spelling Checker. For details, see "Checking spelling" on page 85.

To force a line break:

❖ Click where you want to break the line and press Shift+Return. A forced return symbol ⟨ appears at the end of the line when text symbols are visible.

To keep two words together on the same line:

❖ Select the space between the two words and press Control+space. FrameMaker places a nonbreaking space symbol ⊔ between the words.

To specify the characters that can precede a line break:

❖ Choose Format > Document > Text Options, enter the characters in the Allow Line Breaks After text box, and click Set. For example, you might want to remove the slash character from the list if you use terms such as *and/or*.

Changing page and column breaks

FrameMaker breaks text across pages according to the settings stored in the document's paragraph formats, but you can change that format for particular paragraphs if you need to. The page-break controls in the paragraph formats make up a document's page-breaking rules—for example, that a heading must be followed by at least three lines of text on the same page.

To control where a paragraph starts:

1 Click in the paragraph you want to change.

2 Display the Pagination properties of the Paragraph Designer and do the following:

• To start a paragraph at the top of the next column, next page, next left page, or next right page, choose from the Start pop-up menu.

• To let a paragraph start anywhere, removing any special page break, choose Anywhere from the Start pop-up menu.

• To keep the paragraph in the same column as the next or previous paragraph, select Next Pgf or Previous Pgf, or both. These properties keep the end of one paragraph together with the beginning of another; however, not all lines of the paragraphs necessarily stay together. The Widow/Orphan Lines property of each paragraph controls how many lines of the paragraphs must stay together.

• To set the minimum number of widow lines and orphan lines—lines isolated at the top or bottom of a column— enter a value in the Widow/Orphan Lines text box. (To keep all lines of a paragraph in the same column, specify a large number, up to 100, for the Widow/Orphan Lines setting.)

3 Click Apply To Selection.

You can also set the Start property using the Special > Page Break command. Settings you make using this command appear as changes to the paragraph format just as if you had used the Paragraph Designer.

Adding graphics to paragraph formats

A paragraph format can include a line or other graphic that appears above or below a paragraph, but you can change that format for particular paragraphs if you need to. For example, all top-level headings in a document might rest on a long thin line.
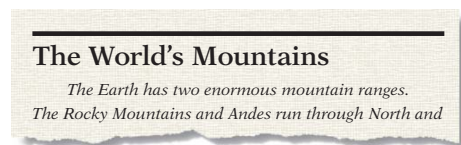
Graphic above
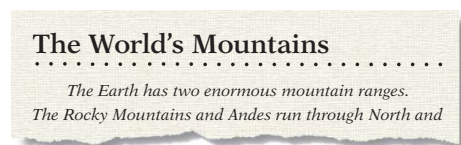
Graphic below

To put a graphic above or below a paragraph:

1 On a reference page, draw or import the graphic in a reference frame, or locate one already there that you want to use. For information on creating reference frames, see "Using reference frames on reference pages" on page 399.

2 Click in the paragraph you want to change. To put a line above or below several adjacent paragraphs, select all the paragraphs.

3 Display the Advanced properties of the Paragraph Designer, and choose the name of a reference frame from the Frame Above Pgf or from the Frame Below Pgf pop-up menu. All reference frames appear in the pop-up menus.

4 Click Apply To Selection.

Because the Frame Above Pgf and the Frame Below Pgf settings can't place graphics to the right or left of a paragraph, you can't use these settings to put boxes around text. However, you can box text by using a single-cell table with outside ruling.

Specifying formats for the paragraphs that follow

Well-designed templates often connect formats so that FrameMaker automatically applies a format to the paragraph that follows the current one—that is, to the new paragraph created when you press Return. For example, you can specify that a Body format follow a Head1 format, so that the next paragraph will be tagged Body when you press Return in a Head1 paragraph. If you press Return with this setting blank, FrameMaker applies the current paragraph's format to the new paragraph.

To specify a format for the paragraph that follows:

1 Click in the paragraph.

2 Display the Basic properties of the Paragraph Designer, and choose a tag from the Next Pgf Tag pop-up menu. FrameMaker applies this tag when you press Return to create a new paragraph.

3 Click Apply To Selection.

Formatting text as headings

Paragraph formats include properties for creating the following types of special headings.

Side heads Heads that stand to the side of the normal body text, so that they are prominent and easy to scan. You can use them to create marginal notes or other types of text that you want to display outside of the normal body text.
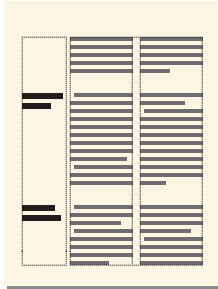
Side heads

Straddle heads Heads that span columns in a multicolumn layout. They are also good for scanning purposes.
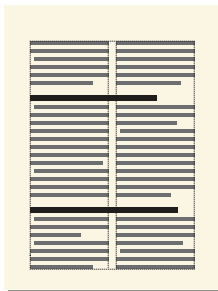
Straddle heads

Run-in heads Although run-in heads are on the same line as normal body text, they're separate paragraphs. Therefore, you can include them in tables of contents, create cross-references to them, include them in headers and footers, and so on.

Run-in heads

Heading styles are part of a document's paragraph formats, but you can change that format for particular paragraphs if you need to.

Creating side heads

If you want a document to use side heads, you start by defining a side-head area in its layout. A side-head area is set up for an entire flow at a time, but you can change the size and placement of the area in specific text frames in the flow. When you set up a side-head area in a flow, FrameMaker immediately moves all paragraphs not designated as side heads to the body-text area.

When a side head appears in a multicolumn text frame, the preceding text is balanced across the columns. If a page contains several text frames, each text frame contains its own side-head area.

Side heads in a single, multicolumn text frame (left) and in separate, single-column text frames (right)

To set up or change a side-head area:

1 Click in the text flow that you want to change to have a side-head area, or click in the text frame that has a side-head area you want to change.

2 Do one of the following:

• To create or change the side-head area for the entire document, choose Format > Page Layout > Column Layout.

Note: The header/footer will change positions once you complete the above procedure.

• To change the side-head area for a single text frame, click in the text frame and choose Format > Customize Layout > Customize Text Frame.

3 Select or turn off Room for Side Heads. This setting always applies to the entire flow, even if you are changing side-head settings for a single text frame.

4 Specify the width of the side-head area and the gap between the side-head and body-text areas. (The space above the side head and the preceding paragraph is determined by the Space Below setting of the previous paragraph or the Space Above setting of the side head, whichever is greater.)

5 Choose an option from the Side pop-up menu to determine where you want side heads to appear.

To create a side head:

1 Click in the paragraph you want to make a side head.

2 Display the Pagination properties of the Paragraph Designer, click Side Head, and choose an option from the Side Head Alignment pop-up menu.
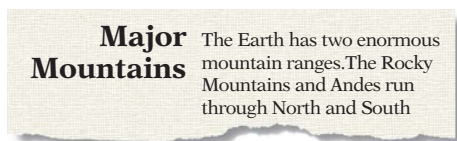
First baseline alignment

Top edge alignment

Last baseline alignment

3 Click Apply To Selection.

Creating straddle heads

Straddle heads span columns in a multicolumn text frame. When a heading paragraph straddles columns, the text above the heading is balanced across the columns.

To create a straddle head:

1 Click in the paragraph you want to change.

2 Display the Pagination properties of the Paragraph Designer and click Across All Columns or Across All Columns and Side Heads.

Across All Columns (left) and Across All Columns and Side Heads (right)

3 Click Apply To Selection.

Creating run-in heads

Because run-in heads have the same margins and are on the same line as normal body text, they typically have a different font or weight for contrast. They may also use a punctuation mark to set them off from the text that follows. If you find that the default punctuation is not suitable, you can easily override it with a new one on a case-by-case basis.

All of this is defined in the paragraph format, but you can change that format for particular paragraphs if you need to.

Note: The space between the run-in head and the preceding paragraph is determined by the Space Below setting of the previous paragraph or the Space Above setting of the run-in head, whichever is greater.

To create or change a run-in head:

1 Click in the paragraph you want to change. If the paragraph is already a run-in head, it will be on the same line as the paragraph following it; for this reason, be sure to click carefully.

2 Display the Pagination properties of the Paragraph Designer and click Run-In Head and, if necessary, enter the punctuation, space, or combination of punctuation and space that you want to use.

3 Click Apply To Selection.

4 Display the Default Font properties and change the run-in head's font so that it stands out from the surrounding text, if you want.

5 Click Apply To Selection.

To override the punctuation for a run-in head:

❖ Enter the punctuation you want after you've typed the run-in head. FrameMaker ignores the punctuation specified in the Default Punctuation text box but retains any special characters that are part of the default, including em and en spaces. For example, if the default punctuation is a period, you can override this by typing a colon at the end of the run-in head.

About numbered and bulleted lists

You create numbered and bulleted lists by using paragraph formats that have an autonumber format defined. As you add autonumbered paragraphs to your document, FrameMaker numbers them appropriately and renumbers existing autonumbered paragraphs if necessary.

Autonumbered paragraphs are numbered consecutively in a text flow. If your document contains several text flows, autonumbered paragraphs in each flow will be independent of the others.

You define autonumbering in the Numbering properties of the Paragraph Designer. An autonumber format can include a series label, a counter, tabs, and any additional text you need.

Note: An autonumber format does not have to specify paragraph numbering. When used without building blocks, the "autonumber" format is a handy way to insert automatic text or symbols. For example, it can autoinsert a bullet symbol or the word Note.

Series label Series labels identify different types of autonumber series within the same text flow. For example, if you want to number figures independently of tables or headings, you would specify a different series for each. (But each set of steps, for example, would *not* be a different series.)

On the other hand, table and figure numbers must all be in the same series to be based on section numbers.

Counter A counter is a placeholder (*building block*) that FrameMaker replaces with a number or letter in the autonumber. For example, the counter <n+> increments the paragraph's number by 1; if the paragraph is the second in a series, FrameMaker replaces <n+> with the number 2. You can use multiple counters in a format. For details on counters, see "Using counters in autonumber formats" on page 127.

You can also add chapter <$chapnum> and volume <$volnum> building blocks in a format. For more information, see "Basing autonumbering on volume and chapter numbers" on page 128.

Tabs, text, and punctuation An autonumber format can also include tabs, text, bullets, spaces, or punctuation.
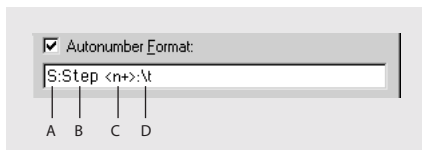
Autonumber format
A. Series label B. Text C. Counter D. Tab

Numbered list

You can change the autonumber format for particular paragraphs if you need to, or you can create your own format.

Formatting text as numbered lists

You create a numbered list by using paragraph formats that include numbering—in the form of special building blocks, called counters—in their autonumber formats.

Creating a numbered list sometimes involves formatting the first item in the list with a paragraph format that resets the counter to 1, and then formatting the remaining items with a different format that increments the counter. For example, you might apply a Step1 format to the first item in a list and then StepNext to the rest. Formats can also be defined in a way that lets you apply a single format to all items in a numbered list. The choice lies with the template designer. (For information, see "Resetting a series" on page 131.)

To create a numbered list:

1 Select adjacent paragraphs that you want to autonumber. To change a single paragraph to be part of a numbered list, click in the paragraph.

2 Display the Numbering properties of the Paragraph Designer and enter a series label in the Autonumber Format text box if you need more than one autonumber series in the document.

A series label consists of any single printable character followed by a colon (for example, *S:*). If you use a series label, it must appear at the beginning of the format.

3 Specify the rest of the autonumber format. Enter any text you want to have appear automatically with the autonumber format. You can enter tabs or counters from the Building Blocks scroll list. When you select an item, it appears at the insertion point in the Autonumber Format text box. For information on counters, see "Using counters in autonumber formats" on page 127.

Note: You may have to use special codes to enter characters such as nonbreaking spaces, em spaces, and curved quotation marks. For information, see "Appendix A: Typing in dialog boxes" on page 670.

4 Select a Character Format for the autonumber in the Character Format scroll list. If you don't specify a format, the autonumber appears in the paragraph's default font.

5 Choose a position for the autonumber from the Position pop-up menu. Autonumbers at the end of paragraphs are rare except in equation formats.

6 Click Apply To Selection.

7 If you inserted a tab (\t) in step 3, set a corresponding tab stop for the paragraph format. For details, see "Changing tab stops" on page 112.

To remove autonumbering from a paragraph:

1 Click in a numbered list, and then turn off Autonumber Format in the Numbering properties of the Paragraph Designer. You must click the check box twice to turn off the setting; clicking it only once changes it to As Is.

2 Click Apply To Selection.

Formatting text as bulleted lists

You create a bulleted list by using paragraph formats that include a bullet symbol in their autonumber format.

In addition to the regular bullet symbol (•) found in all text fonts, you can use any character in any installed font, including a dingbat font such as Zapf Dingbats. For example, you could define a Zapf Dingbats square (■) as a bullet symbol.

To create a bulleted list:

1 Select adjacent paragraphs that you want to make into a bulleted list. To change a single paragraph to be part of a bulleted list, click in the paragraph.

2 Display the Numbering properties of the Paragraph Designer and click the bullet and tab symbols (\b and \t) in the Building Blocks scroll list.

3 Click Apply To Selection.

4 If you inserted a tab (\t) in step 2, set a corresponding tab stop for the paragraph format. For details, see "Changing tab stops" on page 112.

To remove a bullet from a paragraph:

1 Click in a bulleted list, and then turn off Autonumber Format in the Numbering properties of the Paragraph Designer. You must click the check box twice to turn off the setting; clicking it only once changes it to As Is.

2 Click Apply To Selection.

To use a special bullet symbol:

1 Create a character format that uses the font of the bullet symbol you want to use. For example, to use 9-point Zapf Dingbats, create a character format using that font. Give the format a descriptive name such as BulletFont.

For information on creating character formats, see "Using a designer to change font properties" on page 107.

2 Display the Numbering properties of the Paragraph Designer and enter the character corresponding to the bullet symbol you want in the Autonumber Format text box (rather than select the symbol in the Building Blocks scroll list).

For example, if you want a Zapf Dingbats square bullet, enter a lowercase *n*, which appears as ■ in that font. To find the character that corresponds to the bullet symbol you want, see the character set for that font (see the online manual *FrameMaker Character Sets* for the character sets for the Symbol and Zapf Dingbats fonts).

3 Click the tab symbol (\t) in the Building Blocks scroll list or enter spaces.

Note: You may have to use special codes to enter characters such as nonbreaking spaces or em spaces. For information, see "Appendix A: Typing in dialog boxes" on page 670."

4 In the Character Format scroll list, click the bullet character format that you created.

5 Click Apply To Selection.

Using counters in autonumber formats

A counter consists of angle brackets (< >) that surround a display style and an increment value.
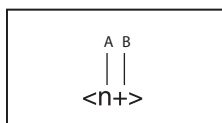
A. *Display style* **B.** *Increment value*

Note: The Custom Autonumbering feature supports the Unicode text encoding standard.

To indicate the display style, use a counter with one of the following letters.

For this numbering style	Use
Numeric (1, 2, 3, …)	n
Lowercase Roman (i, ii, iii, iv, …)	r
Uppercase Roman (I, II, III, IV, …)	R
Lowercase alphabetic (a, b, c, …, aa)	a
Uppercase alphabetic (A, B, C, …, AA)	A

To indicate how an autonumber is incremented, use a counter with an increment value, as shown in the following examples.

To	Use
Keep the value the same	<n>
Set the value to 1 or to any other number you enter after the equal sign	<n=1>
Increase the value of the counter by 1	<n+>
Keep the value the same but not display it	< >
Reset to zero (or any other number) but not display it	< =0>

By default, each counter is initially set to zero, but you can specify a different initial value. Thereafter, the counter can maintain its current value, be incremented by 1, or be reset to a different value. For example, use <n=1> in the format that resets numbering to 1 at the beginning of a new set of numbered steps.

To keep the value the same but not display it, put a blank space between the angle brackets. If you leave out the blank space, the angle brackets appear as part of the autonumber format.

Basing autonumbering on volume and chapter numbers

You can insert <$volnum> and <$chapnum> building blocks in paragraph formats. The volume and chapter numbers are determined by the settings in the Numbering Properties dialog box (see "Determining how documents and pages are numbered" on page 461).

Example	Autonumber format
Volume 3	Volume <$volnum>
Chapter 3	Chapter <$chapnum>

The following table illustrates how you can combine the chapter building block with other building blocks:

Example	Autonumber format
Section 1.1	S:Section <$chapnum>.<n+><=0>
Section 1.1.1	S:Section <$chapnum>.<n>.<n+>
Figure 1-1	F:Figure <$chapnum>-<n+>
Table 1-1	T:Table <$chapnum>-<n+>

Basing autonumbering on section numbers

You can create a different series for each type of numbering scheme in a document. For example, headings, figures, and tables could each have a different series label. But suppose you want numbering to be based on section numbers such as the numbering shown in the following table.

Section number	Figure number	Table number
Section 1	Figure 1-1	Table 1-1
1.1	Figure 1-2	Table 1-2
1.2		
Section 2	Figure 2-1	Table 2-1
2.1	Figure 2-2	Table 2-2
2.2		

If you set up different series for sections, figures, and tables, FrameMaker wouldn't be able to base the figure and table numbers on the section numbers. To achieve this type of numbering, construct autonumber formats in a single series (using the same series label for each format). The following table shows the autonumber formats you could create. The formats are presented in a table so that you can clearly see each counter's position in the string.

The counter's position determines how the counter is incremented.

Paragraph format	Autonumber format				
SectionTitle	H:Section	<$chapnum>	< =0>	< =0>	< =0>
Head1	H:	<$chapnum>	.<n+>	< >	< >
FigureTitle	H:Figure	<$chapnum>	< >	-<n+>	< >
TableTitle	H:Table	<$chapnum>	< >	< >	-<n+>

Whenever a paragraph tagged SectionTitle occurs, the section number is incremented by 1, and the remaining counter values are reset to zero. Each <n+> counter in the remaining formats refer to a different type of item (headings, figures, and tables), so they're incremented independently.

The < > counters keep FrameMaker from resetting values back to zero.

Using multiple counters in an autonumber format

An autonumber format can contain more than one counter. For example, autonumbers for a series of section and subsection titles might each contain two counters.

These counters	In this format	Would appear as
<$chapnum>.<n=0>	Head1	1.0
<$chapnum>.<n+>	Head2	1.1
<$chapnum>.<n+>	Head2	1.2
<$chapnum>.<n=0>	Head1	2.0

The counters in each format are independent of each other. A counter's position in the string determines how it's displayed and incremented. When incrementing a counter, FrameMaker bases its value on the corresponding counter in the previous autonumber paragraph in the same flow.

The following example shows multiple counters in section titles and subtitles. The counter before the period is incremented independently from the counter after the period.

Example	Autonumber format	Tag
1.0 Getting started	<n+>.<n=0>\t	Head1
1.1 Installing	<n>.<n+>\t	Head2
1.2 Backing up	<n>.<n+>\t	Head2
2.0 Entering data	<n+>.<n=0>\t	Head1

The following example uses as many as three counters in a single format.

Example	Autonumber format	Tag
1.0 Getting started	<n+>.<n=0>\t	Head1
1.1 Installing	<n>.<n+>\t	Head2
1.2 Backing up	<n>.<n+>\t	Head2
1.2.1 Errors	<n>.<n>.<n+>\t	Head3
1.3 Entering data	<n>.<n+>\t	Head2

The following example demonstrates outline style autonumber formats.

Example	Autonumber format	Tag
I Getting started	<R+>< =0>\t	Head1
A Installing	< ><A+>\t	Head2
B Backing up	< ><A+>\t	Head2
II Entering data	<R+>< =0>\t	Head1
A Opening a file	< ><A+>\t	Head2
B Saving a file	< ><A+>\t	Head2

The autonumber in the heading *Opening a file* is reset to A; the second counter in the previous paragraph's format resets the numbering to zero (without displaying it), so <A+> increments the counter to 1 (or A, the first letter of the alphabet).

The < > counter in the Head2 format keeps the value of the first counter the same but doesn't display it. If the < > counter were not in that position, the <A+> in the Head2 format would refer to the first counter (not the second), and FrameMaker would produce the following result.

Outline style autonumber format

Resetting a series

Some numbering series—such as a list of numbered steps—start at 1 every time they are used. You can reset such a series in two ways, as illustrated in the next two examples.

The first example shows how to restart series numbering by using the <n=1> building block for the first step in the series, and then using <n+> for subsequent steps.

Example	Autonumber format	Tag
Step 1. Unpack it.	S:Step <n=1>.\t	Step1
Step 2. Back it up.	S:Step <n+>.\t	StepNext
Step 3. Run setup.	S:Step <n+>.\t	StepNext
Step 1. Save your file.	S:Step <n=1>.\t	Step1

The second example shows another way to reset the counter so that you don't have to use a unique format to start a numbered list. Instead, a paragraph that introduces the list uses a format that resets the counter.

Example	Autonumber format	Tag
To install the software:	S:< =0>	StepIntro
Step 1. Unpack it.	S:Step <n+>.\t	Step
Step 2. Back it up.	S:Step <n+>.\t	Step
Step 3. Run setup.	S:Step <n+>.\t	Step

The < =0> counter in the StepIntro format resets the *S* series to zero but doesn't display the number.

If a counter is incremented, any omitted counters in the series to the right of it are reset to zero. For example, the following autonumber formats are equivalent:
S:<n+>< =0>\t
S:<n+>\t

Using Japanese numbering options

If your system supports the typing of Japanese text in documents and dialog boxes, you can use the following additional counters in autonumber formats.

Be sure you use these numbering options only with Japanese text and with Japanese fonts.

Building block	Meaning	Characters, in this order
<zenkaku a>	Fixed-width lowercase Roman alphabet	a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z
<zenkaku A>	Fixed-width uppercase Roman alphabet	A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z
<zenkaku n>	Fixed-width Arabic numbers	0, 1, 2, 3, 4, 5, 6, 7, 8, 9

Building block	Meaning	Characters, in this order
<kanji kazu>	Standard kanji numbering, where double-digit numbers are made up from the traditional kanji characters for ten, one hundred, and so on	〇、一、二、三、四、五、六、七、八、九、十、十一…
<kanji n>	Numbers used for street addresses, phone numbers, postal codes, and so on, where double-digit numbers are made up from the kanji characters for zero through nine	〇、一、二、三、四、五、六、七、八、九、一〇、一一…
<daiji>	Numbers used in financial or banking contexts made up of old-style kanji numerals	〇，壱，弐，参，四，伍，六，七，八、九，壱拾，壱拾壱…
<hira gojuon>	Hiragana characters in the standard order	あ、い、う、え、お、か、き、く、け、こ、さ、し、す、せ、そ、た、ち、つ、て、と、な、に、ぬ、ね、の、は、ひ、ふ、へ、ほ、ま、み、む、め、も、や、ゆ、よ、ら、り、る、れ、ろ、わ、を、ん
<kata gojuon>	Katakana characters in the standard order	ア、イ、ウ、エ、オ、カ、キ、ク、ケ、コ、サ、シ、ス、セ、ソ、タ、チ、ツ、テ、ト、ナ、ニ、ヌ、ネ、ノ、ハ、ヒ、フ、ヘ、ホ、マ、ミ、ム、メ、モ、ヤ、ユ、ヨ、ラ、リ、ル、レ、ロ、ワ、ヲ、ン
<hira iroha>	Hiragana characters in the literary order (rare)	い、ろ、は、に、ほ、へ、と、ち、り、ぬ、る、を、わ、か、よ、た、れ、そ、つ、ね、な、ら、む、う、ゐ、の、お、く、や、ま、け、ふ、こ、え、て、あ、さ、き、ゆ、め、み、し、ゑ、ひ、も、せ、す
<kata iroha>	Katakana characters in the literary order (rare)	イ、ロ、ハ、ニ、ホ、ヘ、ト、チ、リ、ヌ、ル、ヲ、ワ、カ、ヨ、タ、レ、ソ、ツ、ネ、ナ、ラ、ム、ウ、ヰ、ノ、オ、ク、ヤ、マ、ケ、フ、コ、エ、テ、ア、サ、キ、ユ、メ、ミ、シ、ヱ、ヒ、モ、セ、ス

Redefining (updating) formats

You can change the format properties of specific passages of text from the predefined properties of the formats they are tagged with—that is, the properties stored in the Paragraph or Character Catalog. Alternatively, you can make the same changes to properties but then use them to redefine, or *update,* the stored formats and all the text in the document tagged with them. For example, you can update all Head1 paragraphs in a document to use a different font and to be side heads.

When you update a format, you can update all properties or just one group of properties. For example, you could change the default font family for all formats in a document without changing any other properties.

If you change properties in a designer and then decide you don't want to update the format, you can cancel the operation and reset the properties by simply clicking in text. You can also choose Reset Window from Selection from the Commands pop-up menu in the designer.

To update a paragraph format:

1 Do one of the following:

• To display the properties of a paragraph (including any overrides), choose Format > Paragraphs > Designer and click in a paragraph that has the format you want to update.

• To display the properties of a paragraph format stored in the catalog (that is, without overrides), choose Format > Paragraphs > Designer and then choose the format from the Paragraph Tag pop-up menu.

2 Change any of the paragraph's properties.

3 Click Update All.

If the paragraphs being updated have format overrides (that is, if their formats don't match the formats stored in the catalog), an alert asks whether you want to remove them.

To update a paragraph format using the formatting bar:

❖ Click in the paragraph whose format you want to update and choose Update All from the Paragraph Format pop-up menu on the formatting bar.

To update specific properties of paragraph formats:

1 To update several formats, select consecutive paragraphs that have the formats you want to change. To update all paragraph formats or just one, skip this step.

2 Choose Format > Paragraphs > Designer, display the desired group of properties, and choose Set Window to As Is from the Commands pop-up menu. (FrameMaker won't change properties set to As Is.)

When set to As Is, text boxes are blank, check boxes are dim, and pop-up menus display As Is (see "Using As Is" on page 105).

3 Change only the properties you want to update.

4 Choose Global Update Options from the Commands pop-up menu.

5 Click the current property group in the Use Properties area.

6 Do one of the following:

• To update all formats in the document, click All Paragraphs and Catalog Entries.

• To update all paragraphs in the selection and all paragraphs with the same tags, click All Matching Tags in Selection.

• To update formats with a specific tag, click All Tagged and choose a tag from the pop-up menu.

7 Click Update.

To update a single property group of a paragraph format:

1 Indicate the scope of the changes you want to make by doing one of the following:

• To update one paragraph format or all paragraph formats in the document with a property group from a paragraph, click in that paragraph or select consecutive paragraphs.

• To update more than one paragraph format but not all paragraph formats, select consecutive paragraphs that use the formats you want to update.

2 Choose Format > Paragraphs > Designer, and delete the tag from the Paragraph Tag text box if the text box isn't empty. Deleting the tag sets the text box to As Is, which keeps FrameMaker from changing the tags of the formats you update.

3 Display the property group you want to update, and change the properties as needed.

4 Choose Global Update Options from the Commands pop-up menu.

5 Click the current property group in the Use Properties area.

6 Do one of the following:

• To update all formats in the document, click All Paragraphs and Catalog Entries.

• To update all paragraphs in the selection and all paragraphs with the same tags, click All Matching Tags in Selection.

• To update formats with a specific tag, click All Tagged and choose a tag from the pop-up menu.

7 Click Update.

To update a character format:

1 Choose Format > Characters > Designer, and choose the format you want to change from the Character Tag pop-up menu.

2 Change any of the properties. Many character formats have properties set to As Is; be careful not to change them unless you want the updated format to apply that property.

3 Click Update All.

If the paragraphs being updated have format overrides, an alert asks whether you want to remove them.

To update specific properties of character formats:

1 To update several formats, select text that includes the character formats you want to change. To update all character formats or just one, skip this step.

2 In the Character Designer, choose Set Window to As Is from the Commands pop-up menu.

When set to As Is, text boxes are blank, check boxes are dim, and pop-up menus display As Is (see "Using As Is" on page 105).

3 Change only the properties you want to update. (When it updates the other formats, FrameMaker won't change properties still set to As Is.)

4 Choose Global Update Options from the Commands pop-up menu.

5 Do one of the following:

• To update all characters in the document—including characters in text lines, the default font properties of all paragraph formats, and the properties of all character formats—click All Characters and Catalog Entries.

• To update all characters in the selection and all characters with the same tags, click All Matching Tags in Selection.

• To update formats with a specific tag, choose a tag from the pop-up menu.

6 Click Update.

To update several formats at once:

❖ Import paragraph or character formats from another document by using File > Import > Formats. If any formats have the same name in both files, the imported format overwrites the document's format. For details, see "Importing and updating formats" on page 408.

Renaming and deleting formats

You may need to rename or delete a format when designing a template. You may also need to rename a format if, for example, you want to import a catalog from a template and don't want a format to be overwritten.

Deleting a format from a catalog does not affect any paragraphs or characters that have the same tag—the paragraphs or characters simply have a tag that isn't in the catalog. If you want to change the format of these paragraphs or characters, you can then retag them (see "Applying predefined formats to text" on page 102).

To rename a catalog format:

1 Choose Format > Paragraphs > Designer or Format > Characters > Designer, and choose the format you want to rename from the Paragraph Tag or Character Tag pop-up menu.

Do this even if the format you want is already displayed to ensure that the properties do not include any format overrides or As Is settings.

2 Enter a new name in the Paragraph Tag or Character Tag text box and click Update All.

3 Click OK.

To delete a format from a catalog:

1 Display the Paragraph Catalog (click ¶ in the upper right corner of the document window) or the Character Catalog (click *f*).

2 Click Delete.

3 Select the format in the scroll list and click Delete. You can delete additional formats if you want to.

4 Click Done.

To delete all unused formats from a catalog:

1 Display the Paragraph Catalog (click ¶ in the upper right corner of the document window) or the Character Catalog (click *f*).

2 Click Delete.

3 Click Delete until all formats have been removed, and then click Done.

4 Choose File > Utilities > Create & Apply Formats, and then click Continue. Any paragraph or character format used in the document is added back to the catalog. Formats with overrides reappear as new and separate formats. For information, see "Changing format overrides to new formats" on page 551.

Note: In order to avoid creating paragraphs for every override in your document (for example, you may end up with 10 body paragraphs), import the formats from your template. Importing formats from a template overrides any changes to paragraph and character tags and does not create additional tags in your document. For more information on importing formats, see "Importing and updating formats" on page 408.

Creating new formats

When working from a stable template, you rarely need to create a new format. However, if you're designing a new template or if the template you're using is incomplete, you may need to create new formats.

The easiest way to create a format is to modify the properties of an existing format. For example, to create various heading levels, you can start with the first level and then change the font size and style to create the other levels.

When you're naming new formats, keep the following suggestions in mind:

• Use consistent naming conventions for similar kinds of paragraphs or text items within a paragraph. For example, if you use Head1 for first-level headings, use Head2 for second-level headings.

• If you want to apply formats by using the keyboard (by pressing Control+8 or Control+9), name the formats so that often-used ones are unique or alphabetically first in their letter group. For example, tag names such as "H1 Head2" or "H2 Head2" facilitate quick access when using the keyboard.

• Give each format a name that's easy for you and others to remember, recognize, and type. Also, if you assign a tag based on its use and not its appearance (for example, Emphasis rather than Italics), you'll be able to change the format properties without having to change the tag.

• Be aware of capitalization. Tags are case-sensitive: *Body* is not the same as *body*. Also, you may want related tags to appear together in the catalog. For example, Body and IndentedBody won't be next to each other but Body and BodyIndent will be.

• If you have many formats, you can avoid excessive scrolling in the catalogs by bringing often-used formats to the top of the catalog by preceding them with a period. Similarly, you can force rarely used formats to the bottom of the catalog by preceding them with a *z* or a tilde (~).

To create a paragraph format:

1 Click in a paragraph whose format is similar to the one you want to create. Be careful not to select multiple paragraphs so that no properties are set to As Is.

2 Choose New Format from the Commands pop-up menu in the Paragraph Designer and enter a name for the new format in the Tag text box.

3 To be able to update the new format or copy it to other documents by using the File > Import > Formats command, select Store in Catalog. Formats that aren't stored in the catalog can be applied to other paragraphs only by copying and pasting.

4 To apply the new format to the current paragraph, select Apply to Selection.

5 Click Create.

6 If you didn't select Apply to Selection in step 4, choose the new format name from the Paragraph Tag pop-up menu.

7 Modify any of the properties you want, including font properties, indent and alignment properties, tab stops, spacing properties, line breaks and hyphenation, page and column breaks, graphics as part of a paragraph format, connecting format, headings, and autonumbering.

Don't set any property to As Is. Paragraph formats must have all properties specified. (An alert message warns you if not all settings are specified, so you can go back and change any As Is properties.)

8 Click Update All.

To create a character format:

1 In the Character Designer, choose Set Window to As Is from the Commands pop-up menu. Properties set to As Is won't change when you apply the character format. When set to As Is, text boxes are blank, check boxes are dim, and pop-up menus display As Is (see "Using As Is" on page 105).

2 Change only the properties you want to include in the character format. For information on modifying font properties, see "Changing font properties" on page 106.

3 Choose New Format from the Commands pop-up menu in the Character Designer, and enter a name for the new format in the Tag text box.

4 Select Store in Catalog.

5 To apply the new format to the current selection, select Apply to Selection.

6 Click Create.

Formatting text in structured documents

When working with structured documents, you can add or delete text, copy or move it to another location, and change text in any other way you want. You can also identify revised text with change bars.

As you add text to elements, the text is formatted automatically. You do not ordinarily need to work with any text formatting tools in a structured flow.

Format rules and catalog formats in structured documents

A document's element definitions typically have *format rules*. For elements that allow text, these rules can describe every aspect of how the text is formatted—including the font, text size, and text style of characters; the line spacing, indentation, and alignment of paragraphs; and more subtle controls such as word spacing and how words break for hyphenation.

A document might also store predefined catalog formats called *paragraph formats* (for whole paragraphs) and *character formats* (for text ranges within paragraphs). Like the element definitions, these formats come from a template. The format rules often work hand in hand with the catalog formats—it depends on how the application developer has set this up for your document.
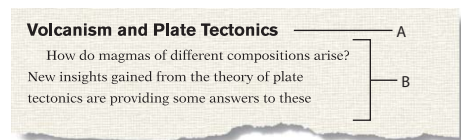
A. Formatted Head element B. Formatted Para element

In most cases, the format rules work with a few catalog formats and specify changes to the formats as needed. The rules may even allow elements to inherit at least some of their formatting from ancestors. For example, a Para element might use a catalog format called Body, and the descendants of Para might inherit Body from it, with some changes. An Emphasis child element would use Body but with italics added.

In general, you should not make formatting changes to text in an element (such as applying a font), because you may be overriding some format rules. You should also not modify the formats in catalogs—particularly if the format rules in your document use inheritance, because the change may ripple through elements that inherit their format.

Allow the elements to handle the formatting of text in documents. Talk to your developer if you want to change the formatting in any way.

In an unstructured document, you can format text by applying the catalog formats or by making changes manually.

Context-sensitive format rules in structured documents

Format rules are sometimes context-sensitive, specifying different formatting possibilities that are determined by location or attribute value. For example, a Head element might contain 14-point text in all caps if it occurs in a first-level Section, or 12-point text in a second-level Section.
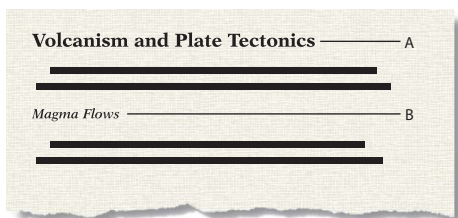
A. Head element in a first-level section
B. Head element in a second-level section

Item elements in a list might be displayed with numbers if the parent List element has a Type attribute set to Numbered, or with bullets if the Type attribute is set to Bulleted.

Context-sensitive formatting gives your elements modularity. You can insert the same type of element at several levels in the document's structure, with appropriate formatting applied at each level. And as you move these elements from one level to another, they are reformatted automatically.

Viewing the element hierarchy

To view the hierarchy of the elements in a document, use the Show Element Context window. This window shows the selected element and its ancestors all the way up to the root element as well as the format rules from the element catalog, which are applied to the element selected in the hierarchy. If the document is or has been part of a structured book, the hierarchy includes elements above the document's root element all the way up to the book root element, even if the book isn't currently open. Use the Show Element Context window to view the set of formatting rules that are in place for the element in the current context. Also, if there is a named character or paragraph format in use, you can open the Designer to inspect the details of the named format.

To open the Show Element Context window:

❖ Select StructureTools > Show Element Context.

Removing format rule overrides in structured documents

Text formatting information for a document can come from format rules in element definitions as well as from predefined formats stored in catalogs.

A *format rule override* is an override you make to a text element's format rules. For example, if you select a Para element and use the QuickAccess bar to make its text bold, you may be overriding the element's format rules. If your document has any format rule overrides, you can remove them.

When the current element has a format rule override, the Tag area of the status bar has an asterisk next to the element tag.
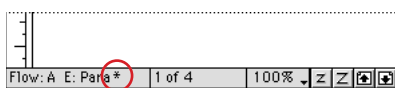
The Para element has a format rule override.

To remove format rule overrides throughout a document:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Choose File > Import > Element Definitions.

3 Choose Current from the Import from Document pop-up menu.

4 Select While Updating, Remove Format Rule Overrides, and click Import.

To remove format rule overrides in one element:

1 Select the element in the Structure View.

2 Select the same element in the Element Catalog and click Change. This removes overrides from the element and all its descendants.

To remove format rule overrides quickly throughout a document, remove them from the highest-level element.

Text with symbol fonts in structured documents

FrameMaker does not remove a format rule override that involves a stored character format using the Symbol or Zapf Dingbats font. For example, if there is text in your document with a character format called MathExample that uses the Symbol font, this formatting remains in place even after you remove format rule overrides.

This behavior prevents special characters and symbols from being lost. To manually remove the override, select the text and choose Format > Characters > Default Paragraph Font.

Object elements in structured documents

Elements that are a single object, such as a cross-reference or an equation, also may have format rules. In these cases, the rules provide a preselected setting, such as a cross-reference format or an equation size, for new instances of the element. You can change this setting for an element, but the change is not considered to be an override. Reapplying the format rules has no effect on these elements.

Multiple Undo/Redo

The undo capability is available for several commands, and you can undo and redo multiple operations.

Note: Undo is not supported for structured books.

Undo and Redo commands

A Redo icon has been added to the toolbar, next to the Undo icon. Click this button to redo the most recently undone action in the current document:

 — Redo

A Redo command also appears in the Edit menu and in context menus, under the Undo command, showing the most recent redoable command in the current document. For example:
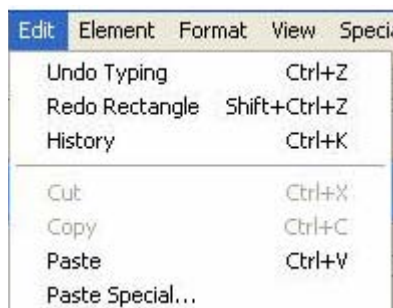
If there is no action available for Undo or Redo in the current document, the corresponding menu items and toolbar buttons are grayed.

When one or more actions are available for Undo or Redo in the current document, the new History item below Redo is also active. It brings up the command History palette, which allows you to undo or redo an action other than the most recent one, along with all of the subsequent actions; see "Command History palette" on page 140

Document-level command history

FrameMaker maintains a history of undoable commands, so that you can select one or more recent commands to undo or redo.

The command history is available through the Edit menu and context menus. The command history is kept separately for each document, so undoing or redoing an operation in one document does not change the undo capability of another open document.

Saving a document (with Save, Save As, or autosave) clears both the undo and redo history for that document. Generally, commands that do not change the content, such as copying text, cannot be undone and do not affect the command history.

Cursor movement and object selection actions are not undoable, but when a previous state is restored, it includes the original cursor location and object selection state.

Commands that affect an external file (such as Spell Checker commands that update the user dictionary) are not undoable.

For a complete list of commands that can and cannot be undone, and commands that clear the command history, see "Undo status of all commands" on page 142.

Command History palette

The Edit > Undo and Redo menus show the most recent command, but a complete command history is available in the new History palette, available from Edit > History or the keyboard shortcut Esc+e+h. This palette allows you to select a specific action to undo or redo. The command history is shown only for the active document.

In the command History palette, the most recent command is highlighted. Commands listed above the most recent are undoable. Commands listed below the most recent are redoable, and are marked with an asterisk (*).

You can undo and redo actions only in the order in which they were originally performed. When you select a command to undo, all later commands (which have been affected by the selected action) are also undone. FrameMaker also moves the selected command and all succeeding commands to the Redo list. Similarly, redoing a command moves it and later commands back to the Undo list.

For example, consider the following command history, where "Change font" is the most recent action:

Undo history	Redo history
Change font	
Insert Tab	
Paste	
Cut	
Typing	

If you choose to undo the Insert Tab operation, that action and all later actions are undone and moved to the Redo list:

Undo history	Redo history
Paste	Change font
Cut	Insert Tab
Typing	

Any new action that modifies the document clears the Redo history:

Undo history	Redo history
Draw line	
Paste	
Cut	
Typing	

Undo status of all commands

The following tables show actions that can be undone and redone, and operations that clear the Undo and Redo command histories for one or all documents.

Undoable commands

These commands are undoable and appear in the command History palette.

Commands are identified in this table by their `Command` name and `Label` in the command configuration files found in `$FMHOME/fminit/configui`, and by the string that appears in the command History palette when the command is executed.

The names of the command configuration files are:

- (Windows) `cmds.cfg, wincmds.cfg, mathcmds.cfg`
- (UNIX) `Commands, XCommands, MathCommands.`

UNDOABLE COMMANDS

Command	Label	Command History palette
ParaPlacementBodyStraddle	Set Para Placement Body Straddle	Set Para Placement Body Straddle
ParaPlacementFullStraddle	Set Para Placement Full Straddle	Set Para Placement Full Straddle
ParaPlacementRunIn	Set Para Placement Run-in	Set Para Placement Run-in
ParaPlacementSidehead	Set Para Placement Sidehead	Set Para Placement Sidehead
ParaPlacementNormal	Set Para Placement Normal	Set Para Placement Normal
ViewBodyPages	Body Pages	Body Pages
ViewMasterPages	Master Pages	Master Pages
ViewReferencePages	Reference Pages	Reference Pages
Footnote	Footnote	Footnote
FootnoteProperties	Footnote Properties	Footnote Properties
LineLayout	Line Layout	Line Layout
ToggleSideheadsOnOff	Toggle Room For Side Heads On/Off	Toggle Room For Side Heads On/Off
RotatePage	Rotate Page Counterclockwise	Rotate Page Counterclockwise
RotatePageClockwise	Rotate Page Clockwise	Rotate Page Clockwise
RotatePageNormal	Unrotate Page	Unrotate Page
SplitTextFrame	Split Text Frame	Split Text Frame
CustomizeTextFrame	Customize Text Frame	Customize Text Frame
CutHead	Disconnect Previous	Disconnect Previous
CutTail	Disconnect Next	Disconnect Next
TableInsert	Insert Table	Insert Table
TableResizeColumns	Resize Columns	Resize Column
TableRowFormat	Row Format	Row Format
TableStraddle	Straddle	Straddle
Unstraddle	Unstraddle	Unstraddle
TableConvert	Con&vert to Paragraphs	Convert to Paragraphs
TableConvert	Con&vert to Table	Convert to Table
TableAddRowsOrColumns	Add Rows or Columns	Add Rows or Columns
UnifyTableFormats	Unify Table Formats	Unify Table Formats
AddRowsAbove	Add Rows Above	Add Rows Above
AddRowsBelow	Add Rows Below	Add Rows Below
AddColumnsToLeft	Add Columns To Left	Add Columns To Left
AddColumnsToRight	Add Columns To Right	Add Columns To Right
ClearLeavingCellsEmpty	Clear Leaving Cells Empty	Change To Table
ClearRemovingCells	Clear Removing Cells	Change To Table
TablePasteReplaceSelection	Paste Replacing Selection	Paste Replacing Selection
TablePasteBefore	Paste Before	Paste Before
TablePasteAfter	Paste After	Paste After
TableShrinkWrapColWidth	Shrink Wrap Column Width	Shrink Wrap Column Width

UNDOABLE COMMANDS

Command	Label	Command History palette
CharTabForTableCell	Tab For Table Cell	Tab For Table Cell
TBL_DESIGNKIT_APPLY		Change To Table
TBL_DESIGNKIT_UPDATEOPTIONS		Change To Table
TBL_DESIGNKIT_UPDATEALL		Change To Table
TBL_DESIGNKIT_NEWFORMAT		New Table Format
KBD_TBLFMT_DELETE		Delete Table Format
InsertNewHypertext	Insert New Hypertext	Hypertext
CrossReference	Cross-Reference	CrossReference
InsertNewMarker	Insert New Marker	Marker
ConditionVisibility	Show/Hide Conditional Text	Show/Hide Conditional Text
ToggleCondUseFormatOverride	Conditional Text Format Overrides	Toggle conditional Indicators On/Off
QuickConditionalIn	Quick Conditional Text In	Conditional Text
QuickConditionalNotIn	Quick Conditional Text NotIn	Conditional Text
QuickConditionalUn	Quick Conditional Text Unconditional	Conditional Text
Apply Conditional Text		Conditional Text / Unconditional Text
KBD_CONDEDIT		Change to Conditional Tag
CenterPara		Center Paragraph/Objects
LeftPara		Left Justify Paragraph/Objects
RightPara		Right Justify Paragraph/Objects
FullyJustifyPara		Fully &Justify Paragraph/Objects
RepeatLastParaCommand		Repeat Last Paragraph Command
UnifyParas		Unify Paragraphs
DecLineLeading1pt		Decrement Line Leading 1 pt
IncLineLeading1pt		Increment Line Leading 1 pt
HyphenationOff		Hyphenation Off
HyphenationOn		Hyphenation On
SingleSpaceParas		Single Space Paragraphs
OneAndHalfSpaceParas		One And A Half Space Paragraphs
DoubleSpaceParas		Double Space Paragraphs
SpaceBetweenParas		Space Between Paragraphs
CustomLineSpacingParas		Custom Line Spacing For Paragraphs
ParaTopOfPage		Start Para At Top Of Page
ParaTopOfColumn		Start Para At Top Of Column
ParaTopOfLeftPage		Start Para At Top Of Left Page
ParaTopOfRightPage		Start Para At Top Of Right Page
ParaAnywhere		Start Para Anywhere
SetLineSpaceFixed		Set Line Spacing Fixed
SetLineSpaceFloating		Set Line Spacing Floating
ParaNewFormat		New Paragraph Format
ParaUpdateFormat		Update Paragraph Format
<other Paragraph Designer>		Apply Paragraph Format
TabLeft		Tab Left
TabCenter		Tab Center
TabRight		Tab Right
TabDecimal		Tab Decimal
UpperCaseText	Uppercase Selected Text	Uppercase Selected Text
LowerCaseText	Lowercase Selected Text	Lowercase Selected Text
InitialCapsText	Initial Caps On Selected Text	Initial Caps On Selected Text
SetToLowerCase		LowerCase
SetToInitialCap		Initial Capital
SetToUpperCase		UpperCase
Capitalization		Capitalization
YankKillBuffer	Yank Kill Buffer	Paste
AlignTop	Top Align	Top Align
AlignMiddle	Top/Bottom Align	Middle Align
AlignBottom	Bottom Align	Bottom Align

UNDOABLE COMMANDS

Command	Label	Command History palette
ToggleGraphicsDisplay	Graphics	Toggle Graphics On/Off
GraphicsFlipUpDown	Flip Up/Down	Flip Up/Down
GraphicsFlipLeftRight	Flip Left/Right	Flip Left/Right
RotateCounterclock90	Rotate 90 Degrees Counterclockwise	Rotate 90 Degrees Counterclockwise
GraphicsScale	Scale	Scale
GraphicsSmooth	Smooth	Smooth
GraphicsUnsmooth	UnSmooth	UnSmooth
GraphicsReshape	Reshape	Reshape
GraphicsJoinCurves	Join	Join
GraphicsSetNumSides	Set # Sides	Set # Sides
GraphicsBringToFront	Bring to Front	Bring to Front
GraphicsSendToBack	Send to Back	Send to Back
GraphicsGroup	Group	Group
GraphicsUngroup	Ungroup	Ungroup
GraphicsAlign	Align	Align
GraphicsDistribute	Distribute	Distribute
RotateClockwise90	Rotate 90 Degrees Clockwise	Rotate 90 Degrees Clockwise
GraphicsObjProps	Object &Properties	Object Properties
RotateGfxClockwise		Rotate Clockwise
RotateGfxCounterClock		Rotate Counterclockwise
GraphicsRotate	Rotate	Rotate
RotateAgain	Rotate Again	Rotate Again
RotateToNatural	Rotate to Natural Orientation	Rotate to Natural Orientation
RotateToPrevious	Rotate to Previous Orientation	Rotate to Previous Orientation
ResetNatural	Reset Natural Orientation	Reset Natural Orientation
SetThinLineWidth	Set to Thinnest Line Width	Set to Thinnest Line Width
SetThickLineWidth	Set to Thickest Line Width	Set to Thickest Line Width
IncrementLineWidth	Increment Line Width	Increment Line Width
DecrementLineWidth	Decrement Line Width	Decrement Line Width
SetFirstPenPattern	Set First Pen Pattern(black)	Set First Pen Pattern(black)
SetLastPenPattern	Set Last Pen Pattern(none)	Set Last Pen Pattern(none)
IncrementPenPattern	Increment Pen Pattern	Increment Pen Pattern
DecrementPenPattern	Decrement Pen Pattern	Decrement Pen Pattern
SetFirstFillPattern	Set to First Fill Pattern(black)	Set to First Fill Pattern(black)
SetLastFillPattern	Set to Last Fill Pattern(none)	Set to Last Fill Pattern(none)
IncrementFillPattern	Increment Fill Pattern	Increment Fill Pattern
DecrementFillPattern	Decrement Fill Pattern	Decrement Fill Pattern
SetPatternSolid	Set Pattern Solid	Set Pattern Solid
SetPatternDashed	Set Pattern Dashed	Set Pattern Dashed
SelectFirstDashedPattern	Set First Dashed Pattern	Set First Dashed Pattern
SelectLastDashedPattern	Set Last Dashed Pattern	Set Last Dashed Pattern
SelectPreviousDashedPattern	Select Previous Dashed Pattern	Select Previous Dashed Pattern
SelectNextDashedPattern	Select Next Dashed Pattern	Select Next Dashed Pattern
RunaroundProperties	Runaround Properties	Runaround Properties
RunAroundContour	Runaround Contour	Runaround Contour
RunAroundBoundingBox	Runaround Bounding Box	Runaround Bounding Box
RunaroundOff	Runaround Off	Runaround Off
DeleteBack1Char	Delete Back Character	Delete Text
DeleteForw1Char	Delete Forward Character	Delete Text
DeleteBackToPrevWordEnd	Delete Back To Prev Word End	Delete Back To Prev Word End
DeleteForwToNextWordStart	Delete Forward To Next Word Start	Delete Forward To Next Word Start
DeleteForwToEndOfLine	Delete Whole Line	Delete Whole Line
DeleteForwToNextSentenceEnd	Delete Forward To Next Sentence End	Delete Forward To Next Sentence End
DeleteBackToStartOfLine	Delete Back To Start Of Line	Delete Back To Start Of Line
Move1PtUp	Move 1 Point Up	Move 1 Point Up
Move1PtDown	Move 1 Point Down	Move 1 Point Down

UNDOABLE COMMANDS

Command	Label	Command History palette
Move1PtLeft	Move 1 Point Left	Move 1 Point Left
Move1PtRight	Move 1 Point Right	Move 1 Point Right
RemoveAllKerning	Remove All kerning	Remove All kerning
IncFontSize		Increment Text Size 1 pt
DecFontSize		Decrement Text Size 1 pt
Move6PtUp	Move 6 Point Up	Move 6 Point Up
Move6PtDown	Move 6 Point Down	Move 6 Point Down
Move6PtLeft	Move 6 Point Left	Move 6 Point Left
Move6PtRight	Move 6 Point Right	Move 6 Point Right
DeleteBackToPrevWordStart	Delete Back To Prev Word Start	Delete Back To Prev Word Start
DeleteForwToNextWordEnd	Delete Forward To Next Word End	Delete Forward To Next Word End
DeleteForwToNextSentenceStart	Delete Forward To Next Sentence Start	Delete Forward To Next Sentence Start
DeleteBackToPrevSentenceEnd	Delete Back To Prev Sentence End	Delete Back To Prev Sentence End
Tab	Tab	Tab
CharShiftSpace	Shift Space	Typing
CharTabForTableCell	Tab for table cell	Typing
TransposeChars	Transpose Characters	Transpose Characters
CharDiscretionaryHyphen	Discretionary Hyphen	Discretionary Hyphen
NoHyphenWord	No Hyphenation In Word	No Hyphenation In Word
StyleSmallCaps	SmallCaps	SmallCaps
StyleDoubleUnderline	Double Underline	Double Underline
CharacterNumericUnderline	Numeric Underline	Numeric Underline
SelBold		Bold
SelItalic		Italic
SelUnderline		Underline
SelPlain		Plain
PageBreak	PageBreak	PageBreak
CharQuickKey	Quick Character	Quick Character
CharacterNoStretch	Set Stretch to 100%	Set Stretch to 100%
CharacterLessStretch	Condense Stretch by 5%pts	Condense Stretch by 5%pts
CharacterMoreStretch	Expand Stretch by 5%pts	Expand Stretch by 5%pts
StyleBold	Bold	Bold
StyleItalic	Italic	Italic
StyleUnderline	Underline	Underline
StylePlain	Plain	Plain
StyleSuperscript	Superscript	Superscript
StyleSubscript	Subscript	Subscript
CharacterNormal	Set Characters To Normal	Set Characters To Normal
IncrementTextOnePt	Increment Text Size 1 pt	Increment Text Size 1 pt
DecrementTextOnePt	Decrement Text Size 1 pt	Decrement Text Size 1 pt
CharacterSqueezeSpace	Squeeze Spacing 20% of em	Squeeze Spacing 20% of em
CharacterSpreadSpace	Spread Spacing 20% of em	Spread Spacing 20% of em
CharacterRepeatLast	Repeat Last Font Command	Repeat Last Font Command
StyleStrikethrough	Strikethrough	Strikethrough
StyleOverline	Overline	Overline
StyleChangeBar	Change Bar	Change Bar
CharacterKerned	Pair Kern	Pair Kern
AnchoredFrame	Anchored Frame	Anchored Frame
ParaQuickKey	Quick Paragraph	Quick Paragraph
CharacterDefaultPgfFont		Default Paragraph Font
ShowParagraphTags		Update Paragraph Format
ShowCharacterTags		Update Character Format
<other Character Designer>		Apply Character Format
		New Character Format
Variable	Variable	Variable
HeaderFooterInsertPageNum	Insert Page #	Insert Page #

UNDOABLE COMMANDS

Command	Label	Command History palette
HeaderFooterInsertPageCount	Insert Page Count	Insert Page Count
HeaderFooterInsertCurrentDate	Insert Current Date	Insert Current Date
HeaderFooterInsertOther	Insert Other...>	Insert Other Variable
QuickVariables	Quick Variable	Quick Variable
ShowFontChoices		Change Font
Size7	7	FontSize Change
Size9	9	FontSize Change
Size10	10	FontSize Change
Size12	12	FontSize Change
Size14	14	FontSize Change
Size18	18	FontSize Change
Size24	24	FontSize Change
SizeOther	36	FontSize Change
SizeChoose	Other…	FontSize Change
ImportFile	File	Import File
ImportObject	Object	Import Object
ViewBordersOn	Show Borders	Show Borders
ViewTextSymbolsOn	Show Text Symbols	Show Text Symbols
ViewRulersOn	Show Rulers	Show Rulers
ViewGridLinesOn	Show Grid Lines	Show Grid Lines
ViewElementBoundariesOn	Show Element Boundaries	Show Element Boundaries
ViewElementTagsOn	Show Element Boundaries (as Tags)	Show Element Boundaries (as Tags)
ViewGraphicsOn	Show Graphics	Show Graphics
ViewBordersOff	Hide Borders	Hide Borders
ViewTextSymbolsOff	Hide TextSymbols	Hide TextSymbols
ViewGraphicsOff	Hide Graphics	Hide Graphics
ViewOptions	Options	View Options
ViewBorders	Borders	Toggle Borders On/Off
ViewTextSymbols	Text Symbols	Toggle Text Symbols On/Off
ViewRulers	Rulers	Toggle Rulers On/Off
ViewGridLines	Grid Lines	Toggle Grid Lines On/Off
CharNonBreakHyphen	Non Breaking Hyphen	Non Breaking Hyphen
CharHardSpace	Hard Space	Hard Space
CharHardReturn	Hard Return	Hard Return
CharNumberSpace	Number Space	Number Space
CharThinSpace	Thin Space	Thin Space
CharEmSpace	Em Space	Em Space
CharEnSpace	En Space	En Space
Return	Return	Typing
Nudge1ptUp		Move 1 Point Up
Nudge1ptDown		Move 1 Point Down
Nudge1ptLeft		Move 1 Point Left
Nudge1ptRight		Move 1 Point Right
AlignGfxTop		Top Align
AlignGfxTBCenter		Top-Bottom Center Align
AlignGfxBottom		Bottom Align
AlignGfxLRCenter		Left-Right Center Align
AlignGfxLeft		Left Align
AlignGfxRight		Right Align
ChangeBars	Change Bars	Change Bar
TextOptions	Text Options	Text Options
SmartSingleQuote	Smart Single Quote	Typing
SmartDoubleQuote	Smart Double Quote	Typing
ReplaceOnce	Replace	Replace
ReplaceAll	ReplaceAll	ReplaceAll
ReplaceAndFindAgain	Replace And Find Again	Replace And Find Again

UNDOABLE COMMANDS

Command	Label	Command History palette
Cut	Cut	Cut
Paste	Paste	Paste
Paste Special	Paste Special	Paste
Clear	Clear	Clear
ThesaurusReplace	Replace active selection with word from thesaurus	Replace
CorrectWord	Correct Word	Correct Word
CheckDocument	Spell Check Document	Correct Word
KBD_RUBIPROPS	Rubi Properties...	Rubi Properties
KBD_HIDE_RULERS	Hide Rulers	Hide Rulers
KBD_HIDE_GRID	Hide Grid Lines	Hide Grid Lines
KBD_HIDE_ELEM_BORDER	Hide Element Boundaries	Hide Element Boundaries
KBD_HIDE_COND_IND	Hide Conditional Text Indicators	Hide Conditional Text Indicators
KBD_ZOOMIN	<ReservedLabel Short &In> <ReservedLabel Long Zoom &In>	Zoom In
KBD_ZOOMOUT	<ReservedLabel Short &Out> <ReservedLabel Long Zoom &Out>	Zoom Out
KBD_ZOOM_FIT_PAGE	Fit Page in Window	Fit Page in Window
KBD_ZOOM100	<ReservedLabel Short &100%> <ReservedLabel Long Zoom to &100%>	Zoom to 100%
KBD_ELEM_BORDER	Element Boundaries	Toggle Element Boundaries On/Off
KBD_BOOKADDFILE	<ReservedLabel Short &Files...> <ReservedLabel Long Add &Files to Book...>	Add File(s) to Book
KBD_BOOKDELETEFILE	<ReservedLabel LongMultiple &Delete Files from Book> <ReservedLabel LongSingle &Delete File from Book> <ReservedLabel Short &Delete from Book>	Delete File(s) from Book
KBD_PASTE	Paste	Paste
KBD_CLEAR	Cl&ear	Delete File(s) from Book
ELEM_INS_CAT_AT_SEL		Insert Element
ELEM_INSERT_CUSTOM_1		
ELEM_INSERT_CUSTOM_2		
ELEM_INSERT_CUSTOM_3		
ELEM_INSERT_CUSTOM_4		
ELEM_INSERT_CUSTOM_5		
ELEM_INSERT_CUSTOM_6		
ELEM_INSERT_CUSTOM_7		
ELEM_INSERT_CUSTOM_8		
ELEM_INSERT_CUSTOM_9		
ELEM_INSERT_CUSTOM_10		
KBD_INSERTQUICK	Insert Element	Insert Element
ELEM_WRAP_CAT_AT_SEL		Wrap Element
KBD_WRAPQUICK	Wrap Element	Wrap Element
ELEM_CHANGE_CAT_AT_SEL		Change Element
KBD_CHANGEQUICK	Change Element	Change Element
KBD_ATTREDITQUICK	Quick Attr Edit	Change Element Attributes
KBD_ELEM_MERGE_1ST	Merge	Merge Element(s) into First
KBD_ELEM_MERGE_LAST	Merge Into Last	Merge Element(s) into Last
KBD_ELEM_SPLIT	Split	Split Element
KBD_ELEM_UNWRAP	Unwrap	Unwrap Element
ELEM_BAM	Repeat Last Element Command	Repeat Last Element Command
KBD_ELEM_TAGS	Element Boundaries (as Tags)	Show Element Boundaries as Tags
KBD_TOGGLE_COLLAPSE	Toggle Element Collapse	Toggle Element Collapse
KBD_TOGGLE_COLLAPSE_ALL	Toggle Element Collapse All Siblings	Toggle Element Collapse (all siblings)
KBD_ELEM_TRANSPOSE_NEXT	Transpose With Previous	Transpose with Previous Element
KBD_ELEM_TRANSPOSE_PREV	Transpose With Next	Transpose with Next Element

UNDOABLE COMMANDS

Command	Label	Command History palette
KBD_ELEM_PROMOTE	Promote Element	Promote Element
KBD_ELEM_DEMOTE	Demote Element	Demote Element
KBD_SMEQN	Small Equation	New Small Equation
KBD_MEDEQN	Medium Equation	New Medium Equation
KBD_LGEQN	Large Equation	New Large Equation
KBD_PUTINLINE	Shrinkwrap Equation	Shrinkwrap Equation
KBD_ANTIPUTINLINE	Unwrap Equation	Expand to Column Width
KBD_EQUATION	Equation Sizes…	Equation Size Properties
KBD_MATH_FONTS	Equation Fonts…	Change Equation Fonts
KBD_MATH_UPDATE_ELEM	Update Definition	Update Math Element Definition
KBD_MATH_NEW_ELEM	Add Definition to Catalog	Add Math Element Definition
MathAlignSetManual	Align Set Manual	Align Set Manual
MathAlignClearManual	Align Clear Manual	Align Clear Manual
MathSetManualLineBreak	Set Manual Line Breaks	Set Manual Line Breaks
MathClearManualLineBreaks	Clear Manual Line Breaks	Clear Manual Line Breaks
MathAddFractions	Add Fractions	Add Fractions
MathOrderinSum	Order Sum	Order in Sum
MathOrderinSumotherway	Order Sum Reverse	Order in Sum other way
MathFactor	Factor	Factor
MathFactorSome	Factor Some	Factor Some
MathMultiplyOut	Multiply Out	Multiply Out
MathMultiplyOutOnce	Multiply Out Once	Multiply Out Once
MathDistribute	Distribute	Distribute
MathDistributeOver	Distribute Over =	Distribute Over Equality
MathLongDivision	Long Division	Long Division
MathRemoveDivision	Remove Division	Remove Division
MathRemoveDivisionOnce	Remove Division 1 Level	Remove Division Once
MathRemoveNegPowers	Remove Negative Powers	Remove Negative Powers
MathRemoveNegPowersOnce	Remove Negative Powers 1 Level	Remove Negative Powers Once
MathNumberCrunch	Number Crunch	Number Crunch
MathShowAllDigits	Show All Digits	Show All Digits
MathEvaluate	Evaluate	Evaluate
MathEvalSubstitutions	Evaluate Substitution	Eval Substitutions
MathIntegrate	Evaluate Integrals	Integrate
MathDifferentiate	Evaluate Derivatives	Differentiate
MathDifferentiateOnce	Evaluate Derivatives 1 Level	Differentiate Once
MathEnterDefinition	Enter Rule	Enter Definition
MathApplyDefinition	Apply Rule	Apply Definition
MathDesignateDummy	Designate Dummy	Designate Dummy
MathSimplify	Simplify	Simplify
MathSimplifySome	Simplify Some	Simplify Some
MathIsolateTerm	Isolate Term	Isolate Term
MathPulloutoneterm	Expand First Term	Pull Out One Term
MathPullOutAllTerms	Expand All Terms	Pull out all terms
MathCreate1x1matrix	Create 1 x 1 Matrix	Create 1 x 1 Matrix
MathTransposeMatrix	Matrix Transpose	Matrix Transpose
MathMatrixAlgebra	Matrix Algebra	Matrix Algebra
MathAlignMatrixRowToggle	Toggle fixed/proportional	Align Matrix Row Toggle
MathAlignMatrixColToggle	Toggle fixed/proportional	Align Matrix Column Toggle
BookSetupFile	Set Up Generated File	Set Up Generated File
TableOfContents	Table of Contents	Table of Contents
ListOfFigures	List of Figures	List of Figures
ListOfTables	List of Tables	List of Tables
ListOfParagraphs	List of Paragraphs	List of Paragraphs
ListOfParagraphsAlphabetical	List of Paragraphs (Alphabetical)	List of Paragraphs (Alphabetical)
ListOfMarkers	List Of Markers	List Of Markers

UNDOABLE COMMANDS

Command	Label	Command History palette
ListOfMarkersAlphabetical	List of Markers (Alphabetical)	List of Markers (Alphabetical)
ListOfReferences	List of Reference	List of Reference
StandardIndex	Standard Index	Standard Index
IndexOfAuthors	Index of Authors	Index of Authors
IndexOfSubjects	Index of Subjects	Index of Subjects
IndexOfMarkers	Index of Markers	Index of Markers
IndexOfReferences	Index of References	Index of References
ShowImportFiles	—	Import File
Accept TrackText Edit	Accept Edit	Accept edit
Reject TrackText Edit	Reject Edit	Reject edit
Accept All TrackTextEdit	Accept All	Accept all
Reject All TrackTextEdit	Reject All	Reject all

Commands that clear the command history

These commands clear the Undo/Redo history and cause all entries to be removed from the command History palette.

Commands are identified in this table by their `Command` name and `Label` in the command configuration files, found in `$FMHOME/fminit/configui`).

The names of the command configuration files are:

- (Windows) `cmds.cfg, wincmds.cfg, mathcmds.cfg`
- (UNIX) `Commands, XCommands, MathCommands.`

Chapter 3: Unicode support

About Unicode support

Adobe FrameMaker supports the Unicode text encoding standard. You can author content in multiple languages and create multilingual documents. To author content in a language other than English, you must do the following:

1 Start your computer in the UTF-8 locale.

2 To enable the dictionaries or open the thesaurus, select the desired language from the Input Method Editor (IME) Language bar.

3 Start typing the content in the selected language.

Certain features support Unicode, such as find and change, markers, hypertext, and catalog entries. You can export to PDF with Unicode bookmarks, tags, comments, and so on. You can import or export Unicode content from other applications. There are additional dictionaries to help you author content in more languages.

Unicode support on Solaris

The Solaris® operating system uses locales to separate language and cultural-specific information from the application code. A locale is the language and cultural data set by the user and dynamically loaded into memory at run time. These locale settings are applied to any applications that are launched within the operating system. To take complete advantage of Unicode support, ensure that you log on to a session running the UTF-8 locale and open FrameMaker in the same locale.

Note: On Solaris, you must have access to fonts containing the glyphs (characters) used in Unicode- encoded text in order for the text to be appear correctly.

Solaris versions and locales supported

UTF-8 support for internal text encoding is supported on Solaris versions 2.8 and later.

On Solaris, you can work in the following UTF-8 locales:

- en_US.UTF-8 (US English)
- fr_FR.UTF-8 (French)
- de_DE.UTF-8 (German)
- it_IT.UTF-8 (Italian)
- ko_KR.UTF-8 (Korean)
- zh_CN.UTF-8 (Simplified Chinese)
- zh_TW.UTF-8 (Traditional Chinese)

The following language and code maps are supported on Solaris:

- Cyrillic - cc
- Greek - gg
- Unicode Hex - uh
- Unicode Octal - uo

- Lookup - ll

- Japanese - ja

- Korean - ko

- Simplified Chinese - sc

- Traditional Chinese - tc

- English/European - Control + Space

Note: Locale-specific features, such as date and time formats for different locales are not supported in FrameMaker. You can't type Unicode characters in non-Unicode locales.

FrameMaker features supporting Unicode content

Support for Unicode-encoded content in FrameMaker lets you to do the following tasks:

- Create, open, and edit FM and MIF files containing Unicode content.

- Create XML files containing Unicode content by converting them to the UTF-8 encoding.

- Work with documents containing Unicode content.

- Author documents containing multilingual paragraphs and words. For example, you can have a set of Greek characters followed by Russian characters, and then by French text in the same paragraph. Full authoring support (without dictionaries and hyphenation) is extended for Japanese, Korean, Traditional Chinese and Simplified Chinese. In addition, full authoring support (including language rules, dictionary, hyphenation) is extended for US English, French, German, Swiss German, Canadian French, and British English.

- Save Unicode content in PDF, HTML, and XML.

- Import from text files containing the UTF8, UTF16, UTF16 BE, UTF16 LE, UTF32, UTF32 BE, and UTF32 LE encodings.

- Export to text files with UTF8, UTF16, UTF16 BE, UTF16 LE, UTF32, UTF32 BE, and UTF32 LE Unicode encodings.

- Convert and import text of non-Unicode encodings such as FrameRoman, JISX0208.ShiftJIS, BIG5, GB2312-80.EUC, and KSC5601-1992, which were supported in earlier versions of FrameMaker.

- Use the relevant language Spelling Checker to check Unicode content.

- Use the relevant language dictionary and thesaurus for Unicode content. By default, dictionaries of all languages supported in FrameMaker are installed. Dictionary and hyphenation support are extended for the following languages in: Spanish, Italian, Portuguese, Danish, Dutch, Swedish, Norwegian, Nynorsk, Finnish, Catalan, Greek, Russian, Czech, Polish, Hungarian, Turkish, Slovak, Slovenian, Bulgarian, Croatian, Estonian, Latvian, Lithuanian, and Romanian. All language dictionaries have been updated to use Proximity version 11.0. The dictionary, hyphenation, and thesaurus features have been enhanced to handle Unicode characters.

- Provide Unicode-encoded input and viewing Unicode content in fields, dialog boxes, wizards, and forms.

- Perform document comparisons on Unicode content.

- Generate conversion tables, TOCs, lists, indexes, and document reports using Unicode content.

- Create templates for different languages based on Unicode content.

- Use Unicode characters in features such as master page names, paragraph and character tags, table tags, variables and variable names, user-defined menu item names, color definition names, math equations, file paths, hypertext, footnotes, cross-references, custom autonumbering, FrameVector, file info, conditional text tag, object attributes, element names, and attribute names.

- Roundtrip Unicode content encoded in UTF-8. Unicode content using UTF-8 encoding is roundtripped correctly when you save a FrameMaker document in XML, HTML, MIF, or FM formats. FrameMaker 8 lets you to save either FrameMaker 8 (Unicode) or FrameMaker 7.0 documents. Files containing Unicode characters must be saved in either the FrameMaker 8 (Frame Binary) or MIF 8 (MIF-Unicode) formats. When you save a FrameMaker document to XML, UTF-8 encoding standard is used.

- Generate MIF files by saving MIF documents in the MIF 8 (MIF-Unicode) or MIF 7 (MIF Classic) formats. The MIF-Unicode format generates a file that preserves all Unicode content. The MIF-Classic format generates a file that is compatible with earlier versions of FrameMaker and is also forward-compatible. All the Unicode content that can't be represented in the earlier format is replaced with characters that can be configured in the configuration file (maker.ini on Windows).

- Type special characters. On UNIX, a language/UTF range selection dialog box appears to the left of the document window. You can use this interface to select different ranges, such as math characters and currency characters, and input them directly with Unicode content into FrameMaker documents. This feature is not available on Windows.

- Use keyboard shortcuts for characters in the Equation palette only.

- FrameMaker continues to support automatic language detection by the Spell-check functionality with many more languages - When you run the Spell-check functionality, FrameMaker uses the dictionary of the language selected for a Paragraph tag in the Paragraph Designer. For example, if the language associated with the Body Paragraph tag is Bulgarian, FrameMaker uses the Bulgarian dictionary to check the spelling of all text to which the Body tag has been applied. Alternatively, if the language associated with the Code Paragraph tag is US English, FrameMaker uses the US English dictionary to check the spelling of all text to which the Code tag is applied.

- Use the Find/Change feature for Unicode content. Because FrameMaker uses the UTF-8 encoding standard, every character uses multiple bytes. Find/Change lets you search for a range of Unicode characters that belong to the Basic Multilingual Plane (BMP) only. You can search for Unicode characters, a combination of text and Unicode characters, or for a combination of characters in different languages. The search using Hexcode (\x) must specify UTF-8 values. You can include wild cards when searching for Unicode characters.

- Use code points of the Unicode code set, in the dialog boxes.

- Sort tables in which cells contain Unicode content. FrameMaker sorts strings in tables, based on the locale of the computer where FrameMaker is installed. You must change the locale of your computer to apply the sorting method relevant to the desired locale.

- Sort indexes with symbols in multilingual FrameMaker documents, based on the Unicode Collation Algorithm (UCA) of the Unicode text-encoding standard.

- Copy content from other Unicode-compliant applications. FrameMaker supports copying and pasting content across FrameMaker documents and from other Unicode-compliant applications, such as Microsoft Word. In Windows, the copy and paste operation assumes that the clipboard text is in the UTF-16 format. For example, if you use the "Paste Special" command, the "Unicode Text" option pastes the content as Unicode text. On the Solaris platform, this functionality is limited by your locale setting. You must have the UTF-8 locale set in order to copy Unicode content. As the Paste Special functionality is not available on Solaris, use the Paste command to convert the copied text to Unicode text.

- Automatically update the date, time, currency, and numeral formats in variables based on language. When you change the language of a paragraph containing variables, the formats of date, time, currency, and numerals change.

Setting up your computer and keyboard to work with multiple languages

Selecting fonts to work with multilingual documents

To enter characters for a selected language in a document, you must select language-specific fonts.

Note: The MinionPro and MyriadPro fonts have been updated with new language ranges.

Viewing and editing multilingual FrameMaker documents

Before you input and display multilingual text in your document, configure the regional language or locale settings on your computer to add the required languages for keyboard input.

• **Windows**: The Microsoft Windows XP Service Pack 2 (SP2), Microsoft Windows 2000, and Windows Vista™ operating systems have Regional and Language settings, which can be used to add additional languages for keyboard input. These languages and speech settings appear in the Language bar on the desktop. After you select a language and set up a localized keyboard, you can start typing the required text in the document. The keyboard layouts are defined by Microsoft.

• **Solaris**: The Solaris operating system has UTF and non-UTF locale settings. FrameMaker honors the default locale that has been specified. However, if you want use Unicode characters on Solaris, you must select a UTF-8 locale and an on-screen keyboard or a localized keyboard. For example, if FrameMaker is running on the Turkish UTF-8 locale, you can enter Unicode characters in FrameMaker documents.

You can type words in the selected language or input appropriate Unicode characters.

Setting up input languages on Windows

1 On your computer, open the Control Panel and double-click the Regional and Language Options icon. The Regional and Language Options dialog box appears.

2 Click the Languages tab.

3 Click the Details button. The Text Services and Input Languages dialog box appears.

4 In the Settings tab, click the Add button. The Add Input Language dialog box appears.

5 Select a language from the Input language list.

6 Click OK. The selected language is included in the Installed services list.

7 Select the desired language in the Default input language list.

8 Click Apply and click OK to save the settings and close the Text Services and Input Languages dialog box.

9 Click the Regional Options tab, and then choose the language you selected in the Default input language list.

10 Click Apply and then click OK to save the settings and close the Regional and Language Options dialog box. The Language bar or the Input Method Editor (IME) appears in the system tray of your computer.

11 Open FrameMaker, and then type the content. The text appears in the selected language.

Note: If you change the language in the Default input language list and the Regional Options tab, the language selected in the Language bar is also updated automatically.

Launching the soft keyboard on Windows

1 From the Start menu, select Programs > Accessories > Accessibility > On-Screen Keyboard.

2 Click OK. You can then start using the on-screen keyboard.

Using third-party keyboard layout software on the Windows operating system

There are several third-party keyboard layout software applications available for different languages in the Windows operating system. When these layouts are activated, FrameMaker starts receiving input according to the keyboard mappings set by the third-party software. FrameMaker does not alter any of the key definitions.

Setting up input languages on Solaris

Complete one of the following steps to set up input languages on the Solaris operating system:

• Press the Compose key and enter the two-letter language code. For example, to input text in the Thai language, press the Compose key and the code "tt". Press Control+Space as a shortcut to select the default English/European input mode.

• Click the Status bar and select an input mode.

Next, open the on-screen keyboard to enter UTF-8 characters in the FrameMaker document. A range of international keyboards are available through the Solaris Function Keys utility. This feature appears an on-screen keyboard with keys that correspond to those on the physical keyboard. When you display one of the international keyboards through a DeskSet or other XView application, the keys you type on your physical keyboard remap to the international characters. The international characters appear in the text region of the XView application window.

To display a keyboard in the language of your choice:

1 Select Workspace > Utilities > Function Keys.

2 Pin the Function Keys window to the workspace.

3 Click SELECT in an XView application window, such as a Command Tool, in which you want to use a set of international characters.

4 Press the Language key on your keyboard, and then continue to press it until instructed to release it. This key is labeled PrSC, or Print Screen. Each of the function keys labels displays one of the international languages that the virtual keyboard supports.

5 Click SELECT on More To Cycle Through The Available Character Sets.

6 Click SELECT on the button for the language you want to use.

7 Click SELECT on the Show button. The virtual keyboard for that language appears on the workspace.

8 Pin the keyboard window.

9 Click SELECT on the Set button in the Function Keys window.

10 Release the language button.

11 Begin typing in the XView application window from which you opened the keyboard. The characters you type appear in the chosen character set.

Chapter 4: FrameMaker tables

About tables

When you insert a table in a document, it already has rows and columns with cells that you can fill in. It also has a particular format that helps to define its look.

You can insert a table and fill it with text and graphics, or convert existing text to a table. You can also rearrange and resize columns and rows, rotate tables and cells, adjust cell margins and alignment, change ruling and shading, and remove or add titles. You can use the Table Designer to create table formats or change them globally across a document.

A table typically has heading and body rows and a title. Occasionally, it may have footing rows as well.

A. *Table title* B. *Table heading* C. *Table body* D. *Table footing*

The look of a table is determined by its format, which includes the following types of properties:

• Properties set in the Table Designer, such as a table's position, cell margins, regular ruling and shading, and whether it has a title.

• Three types of *default properties:* the number of body, heading, and footing rows; the number of columns; and paragraph formats for the title, heading, footing, and body cells of each column. All three are supplied when you first insert a table. Changing the default properties of a format does not change the appearance of tables that use that format, but it changes how a new, empty table looks when you insert it.

After you insert a table, you can perform extensive *custom formatting,* such as straddling or rotating cells, or applying special ruling or shading to selected cells. Custom formatting is not stored as part of the table format. For this reason, custom formatting is retained when you change or reapply a table format.

Right-click a table to display a context menu for tables. Or use the QuickAccess bar to perform common tasks for tables. See "Using the QuickAccess bar" on page 11 and online Help.

When you insert a table, it's anchored at the insertion point. A table anchor symbol ⊥ appears there when text symbols are visible.

Inserting tables

When you insert a new, empty table, you select a format for the table. Table formats are stored in a catalog, as are paragraph and character formats. However, the Table Catalog appears in the Insert Table dialog box, rather than in a floating palette.

To insert a new, empty table:

1 Click in the line of text to which you want to anchor the table. You can insert a table anywhere except in a footnote. For information on inserting a table within another table, see "Inserting a table within a table" on page 159.

2 Choose Table > Insert Table.

3 Select a format for the table. If the format you need is not in the list, you can import the format from another document (see "Importing and updating formats" on page 408), or create your own format (see "Creating table formats" on page 183).

4 If necessary, enter a different number of rows or columns in the text boxes.

5 Click Insert. An anchor symbol ⊥ appears at the insertion point when text symbols are visible. (Deleting the symbol deletes the table.)

Note: In multicolumn page layouts, the table may straddle columns, and its position may be affected by straddle paragraphs. For information, see "Making tables straddle" on page 167.

Filling in tables with text and graphics

Each intersection of a column and row is a table *cell,* and each cell can contain text and anchored frames. (Anchored frames, in turn, can contain graphics or other tables.) As you type text or insert an anchored frame in a cell, the cell's height expands as needed.

You can copy, cut, and paste the contents of cells just as you do text and graphics in any other part of a document. Special system variables let you specify continuation text in the titles or heading rows of multipage tables.

Typing and selecting text in tables

In addition to typing text in a table, you can also insert cross-references, table footnotes, variables, and markers. The tab character is the only character you have to enter in a special way in a table cell.

You select text in a table cell in the usual way or with one of several shortcuts. Note that selecting the text in a cell is different from selecting the cell itself. When you select the cell itself, a selection handle is visible (see "Selecting table cells" on page 157).

To insert a tab in a table cell:

❖ Press Esc Tab.

To select the contents of the next or previous cell:

❖ Press Tab or Shift+Tab.

To select the contents of the cell below or above:

❖ Do one of the following:

• (Windows) Press Control+Alt+Tab or Control+Alt+Shift+Tab.

• (UNIX) Press Meta+n or Meta+p.

To select the contents of the current cell:

❖ Press Esc t h a. If the cell contains just one paragraph, you can also triple-click the text to select the paragraph.

Selecting table cells

When you work in a table, you may need to select cells, rows, columns, or the entire table. When you select a cell itself rather than the text in a cell, a selection handle is visible.

Height in cm.	Colors
60-150	White, Yellow, Pink, Red, Violet
30-75	Pink, Violet
30-95	Yellow, Orange, Pink, Red, Rust, Blue
45-135	Pink, Blue

When you select a cell, you see its selection handle.

For information on selecting text in cells, see "Typing and selecting text in tables" on page 156.

To select a single cell:

❖ Control-click the cell.

To select multiple cells:

❖ Drag across all the cells you want to select, or do one of the following:

• To select an entire row, press Esc t h r.

• To select an entire column, press Esc t h c. You can also select a column quickly by dragging from a heading cell into the first body cell.

• To select the entire table, press Esc t h t.

To extend a selection:

❖ Click in the first cell you want to include in the selection, and then hold down Shift and double-click the last cell you want to include.

Copying or moving the contents of cells

You can paste a cell's contents from the Clipboard to other cells in the same table or in a different table. You can duplicate just the cell's contents or both its contents and format (such as any custom ruling and shading).

To copy or move both a cell's contents and its format:

❖ Select the entire cell by dragging across the border and then dragging back. The selection handle is visible when the cell is selected. Copy or cut the cell, and then paste. You can select multiple cells to copy or cut.

Formatting text in tables

You format text in a table cell just as you format paragraphs in a regular column of text—for example, with paragraph or character formats.

When you insert a new, empty table, the title and the heading, footing, and body cells for each column are assigned the default paragraph formats stored as part of the table format. You can apply a different format to any paragraph in any cell, and you can modify the format of any paragraph.

Adding or removing table titles

A table title appears above or below a table and is repeated on all pages of a multipage table. You can format title text just as you would any other paragraph in a document. For example, you can center the title, set its default font, and include an autonumber format.

Whether a table has a title and how it's formatted is defined in the table format. You change the format by using the Table Designer.

When you insert a table with a title, an empty text frame appears for the title. If the title format has been defined to include an autonumber, the autonumber text appears. In either case, you type the text of the title yourself.

To add or remove a table title:

1 Click in the table you want to change and choose Table > Table Designer.

2 In the Basic properties of the Table Designer, choose Above Table, Below Table, As Is, or No Title from the Title Position pop-up menu.

3 Specify the amount of space between the table and the title.

4 Click Apply to Selection.

💡 *To display the title only on the first page of a multipage table, set the title position to No Title and use a body paragraph as the title. To prevent the title from becoming separated from the table, make sure the anchor symbol is in the title text and that the table's Start property is set to Anywhere.*

Adding "continuation" text

In a multipage table, you may want to display special "continuation" text in the title or in heading or footing rows. Two system variables include text for this purpose: Table Continuation and Table Sheet.

A. and C. Table Sheet variable   B. Table Continuation variable

You can change the default definitions of these variables, just as you do for other system variables. For details, see "Changing variable definitions" on page 230.

To add continuation text:

1 On the first page of the table, click in the title or in the heading or footing where you want to insert the variable.

2 Choose Special > Variable.

3 Select either the Table Continuation variable or the Table Sheet variable, and click Insert.

On the first page of a table, the variable appears as a nonbreaking space ⊔. On subsequent pages, it displays the text in its definition—for example, *(Continued)* if you use the Table Continuation variable.

Placing graphics in table cells

To draw or import a graphic in a cell, you use an anchored frame placed inside the cell. The following steps provide general instructions on inserting a graphic in a cell. You can adapt the instructions to position the anchored frame differently or to insert a graphic in a cell that also contains text.

Note: Avoid using cropped anchored frames in heading or footing cells of a table. Such frames might not be cropped when that cell repeats on subsequent pages.

To place a graphic in a cell:

1 Click in a paragraph in the cell where you want to place the graphic.

2 Do one of the following:

• To create an anchored frame where you can draw, use Special > Anchored Frame to create an anchored frame that's anchored at the insertion point—see "About Anchored Frames" on page 342.

• To create an anchored frame for an imported graphic, use File > Import > File to import the graphic.

3 If the anchored frame is wider than the cell, resize the column (see "Resizing columns" on page 169).

A quick way to resize a column to match a cell's contents is to place the insertion point in the cell that has the desired length of text and press Esc t w.

4 If necessary, use Graphics > Align to center the graphic in the frame.

Inserting a table within a table

Before you can insert a table in a cell, you need to create an anchored frame in the cell and draw a text frame in the anchored frame. Then you insert a table in the text frame and format it just as you would any other table.

To place a table in a cell:

1 Click in the cell in which you want to insert a table.

2 Use Special > Anchored Frame to create an anchored frame that's anchored below the current line—see "About Anchored Frames" on page 342. Try to set the width and height of the frame to be slightly larger than the width and height of the table you want to insert.

3 If the anchored frame is wider than the cell, resize the column (see "Resizing columns" on page 169).

4 Use the Text Frame tool on the Tools palette to draw a text frame in the anchored frame (see "Using text with graphics" on page 320).

5 Click in the text frame and insert a table.

Converting between text and tables

Converting text to tables

You can convert text that's already in your document to a table, or you can convert text in a text file as you open or import the file. In a structured document, the text is wrapped into a structure of table and table-part elements.

After converting text to a table, you might have to touch up the table, removing blank cells or recombining text that was split into two or more cells. In most cases, you can edit the table directly in the document. However, if you converted text that was imported by reference, you must edit the text in the original file.

To convert text to a table:

1 Select the text you want to convert.

2 Choose Table > Convert to Table.

3 If you're working in a structured document, choose a table element from the Element Tag pop-up menu.

4 Select a format for the table.

Note: In a structured document, the table element may have a format preselected, but you can change the format and it will not be considered a format rule override.

5 Specify how you want to convert paragraphs by doing one of the following:

• To convert text that uses tabs to separate information, click Tabs.

• To convert text that uses spaces to separate information, click Spaces and then enter the minimum number of spaces that indicate a separate cell.

• To convert text that uses other characters to separate information, click Other and then type the characters that can be used to separate cells.

• To convert each paragraph (such as those in a bulleted list) to a cell, click A Cell and then enter the number of columns you want in the table.

6 In the Heading Rows text box, enter the number of heading rows you want in the new table. If the paragraphs you're converting don't include headings and you want to fill in the headings later, select Leave Heading Rows Empty.

7 Click Convert.

Note: When working with structured documents, the Structure View has bubbles for the new elements. If the Attributes for New Element dialog box appears, enter attribute values for the table element and click Insert Element (see "Inserting elements" on page 36).

To convert a text file to a table as you open the file:

1 Choose File > Open, and select the text file you want to open.

2 If the Unknown File Type dialog box appears, select Text, and then click Convert.

3 Click Convert to Table, and then click Read.

4 Follow the instructions for converting text already in your document to a table, starting from step 3 in the previous procedure.

To convert a text file to a table as you import the file:

1 Click where you want to import the file.

2 Choose File > Import > File, and select the text file you want to import and the import method. For information, see "Importing unformatted text" on page 496.

3 Click Convert to Table and then click Import.

4 Follow the instructions for converting text to a table, starting from step 3.

💡 *If you want to merge a text file into an existing table, import the text file (see "Inserting a table within a table" on page 159) and convert it to a table. Then copy the rows and paste them into the existing table.*

To touch up a table after conversion:

❖ Do any of the following:

• To combine text that is split across two or more rows, cut and paste the text from the lower cells into the upper cell, and delete the extra rows.

💡 *To quickly combine text in adjacent cells, select the cells, choose Table > Straddle, and then choose Table > Unstraddle. This leaves empty rows or columns that you can delete.*

• To fix half-empty columns, cut and paste the text into the correct locations, and delete the extra columns.

• To fix major errors, you may want to return to the original text (choose Edit > Undo if necessary), edit the text (for example, by deleting extra tabs and forced returns), and then convert the text to a table again.

Converting tables to text

You can convert any table to text within FrameMaker, or you can copy the table as text to another application. You can also convert all the tables in a document at one time.

In structured documents, when you convert tables to text, all the table and table-part elements, except for the cells, are unwrapped. Change the cells to other elements or make other changes to correct the structure of the document.

To convert a table to text within FrameMaker:

1 Click in the table you want to convert to text.

2 Choose Table > Convert to Paragraphs.

3 Click Row by Row or Column by Column, and click Convert.

Plant	Bloom
Baylily	Spring
Catser	Fall
Dalux	Fall
Derana	Winter

A

Plant
Bloom
Baylily
Spring
Catser
Fall
Dalux
Fall
Derana
Winter

B

Plant
Baylily
Catser
Dalux
Derana
Bloom
Spring
Fall
Fall
Winter

Table converted to text
A. *Row by row* **B.** *Column by column*

To copy a table to another application as text:

1 Copy the table to the Clipboard.

2 In another application, choose Edit > Paste. The table is pasted, row by row, with tabs separating table cells, and a paragraph return at the end of each row.

To convert all tables in a document to text:

❖ Save the document in Text Only format, and specify how you want the tables converted (see "Saving documents in Text Only format" on page 26).

Copying, moving, and removing tables

You can remove tables either by cutting them, which places them on the Clipboard, or by deleting them, which does not.

To copy, move, or remove a table:

1 Control-triple-click a cell to select the entire table.

2 Do one of the following:

• To copy the table, choose Edit > Copy.

• To move the table, choose Edit > Cut. If a dialog box appears, click Remove Cells from Table, and click Cut. Then click where you want to move the table, and choose Edit > Paste.

• To remove the table (without changing the contents of the Clipboard), press Delete.

Changing the look of tables

When you insert a table, its appearance is determined by its table format. If the preset properties of the format are not to your liking, you can change them.

You can change the look of tables in many ways:

• Using the Table Designer, you can change the table's indents, cell margins, spacing, alignment, ruling, and shading. You can also adjust the title position, numbering, and the start position of the table.

• Using commands on the Table menu, you can rotate and straddle cells, change cell height and page breaks, and apply custom ruling and shading.

When you use the Table Designer to make a formatting change that doesn't match the table's predefined format, the change is a format override. Overrides are lost if you reapply the predefined format to the table. Changes made with the Table menu commands are not lost.

You can use the Table Designer and Table menu commands to change the look of tables. Template designers and other advanced users might also use the Table Designer to create new table formats and to change formats globally throughout a document (see "Creating table formats" on page 183).

Using the Table Designer

The Table Designer includes several areas and commands for creating, changing, and overriding table formats. The designer contains several groups of properties, displaying one at a time. It's shown here displaying the Basic group of table properties.
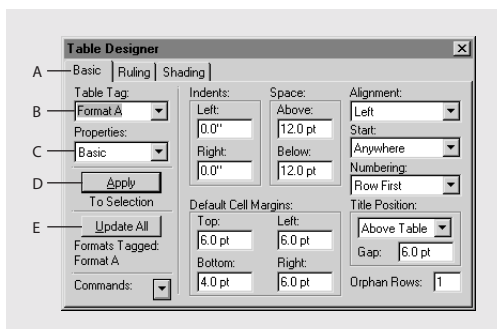
Table Designer
A. *(Windows) Click a tab to display a group of properties.*
B. *Choose from the Table Tag pop-up menu to display the stored properties for that format.*
C. *Choose from the Properties pop-up menu to display a group of properties, either Basic, Ruling, or Shading.*
D. *Apply all properties in all property groups to the current table's format.*
E. *Update all table formats that have the same tag, including the format stored in the Table Catalog.*

On the left side of the Table Designer, you choose a table format and property group. The table formats stored in the Table Catalog appear in the Table Tag pop-up menu. (In Windows, you can also click a tab to display a property group.)

On the right side of the Table Designer, you change the table's properties. The table's appearance doesn't change until you apply the properties.

To display the Table Designer and a property group:

1 Choose Table > Table Designer.

2 Choose a group of properties from the Properties pop-up menu or, in Windows, click a tab.

To apply property changes:

❖ Click Apply To Selection. When you make a formatting change that doesn't match the table's predefined format, it's considered a format override.

Note: *You won't need to click Update All unless you want to make a global change—change the table format and all tables in the document with the same format. Because Update All redefines a format, use it with caution.*

To reset properties after making some changes in the Table Designer:

❖ Do one of the following:

• To reset the properties to match the current table, including any format overrides, click in the table or choose Reset Window from Selection from the Commands pop-up menu.

• To reset the properties to match the stored table format, choose the format from the Table Tag pop-up menu. Do this even if its tag is already displayed in the Table Tag text box.

Applying different table formats

You select a format when you insert a new table, but you can apply a different format at any time.

When you apply a different format to an existing table, only the properties set with the Table Designer change. The following two categories of settings—which are not set in the Table Designer—do not change:

• Customizations made by using Table and Graphics menu commands, such as a forced page break, straddle cell, and rotated cells.

• The number of rows and columns, the widths of columns, the paragraph format of the title, and the paragraph formats of text in the heading, body, and footing cell of each column—all of which are supplied when you first insert a table.

When a new format is applied to this table, custom changes such as rotated cells are retained.

For information on table formats, see "About tables" on page 155.

To apply a different format to an existing table:

1 Click in the table that you want to apply a new format to.

2 Choose Table > Table Designer.

3 Choose the format you want to apply from the Table Tag pop-up menu, and click Apply To Selection.

Applying a format to several tables

You can apply a format to all tables in the document, to all tables with tags (format names) that occur in a selection, or to all tables that have a particular tag. For example, you could apply Format B to all tables currently tagged Format A.

When you apply a format to a table, only those properties set with the Table Designer change. Default properties not set in the Table Designer and custom settings are not affected. (These settings are described in "Applying different table formats" on page 164.)

To apply a format to several tables with a certain tag:

1 Select the tables you want to change by doing one of the following:

• To apply a format to all tables in the document, click in any table.

• To apply a format to several tables, but not all tables, in the document, select consecutive tables. (To select multiple tables, you must select their anchor symbols.)

2 Choose Table > Table Designer.

3 Choose the format you want to apply from the Table Tag pop-up menu, and choose Global Update Options from the Commands pop-up menu.

4 Choose the tables you want to reformat by doing one of the following:

• To retag all tables in the document, click All Tables and Catalog Entries.

• To retag the tables in the selection and all tables with the same tags as these tables, click All Matching Tags in Selection.

• To retag all tables with a specific tag, choose a tag from the pop-up menu.

5 Click All Properties in the Use Properties area, and click Update.

Positioning tables on a page

When you insert a table, the space above and below the table and its alignment and indents are determined by the table format. If you need to change these positioning properties, use the Table Designer.

Other positioning properties—straddling and text runaround—are not part of a table's format. You control these properties on a table-by-table basis.

Aligning and indenting tables

The alignment of a table determines how the table is positioned between its left and right indents.

The left and right indents determine where the table's edge is positioned horizontally when it's left-aligned or right-aligned.

To align or indent a table:

1 Click in the table you want to change, and choose Table > Table Designer.

2 In the Basic properties of the Table Designer, do the following:

• To specify an alignment, choose it from the Alignment pop-up menu.

• To specify a left and right indent, enter values.

3 Click Apply to Selection.

Adjusting the space above and below tables

You specify the space above and below a table just as you control the space above and below a paragraph.

The space between a table and the paragraph above it is determined by the table's space above setting or the paragraph's space below setting, whichever is larger. The space between a table and the paragraph below it is determined by the table's space below setting or the paragraph's space above setting, whichever is larger. When the table is at the top or bottom of a column, the above or below setting is ignored.

To specify the space above or below a table:

1 Click in the table you want to change, and choose Table > Table Designer.

2 In the Basic properties of the Table Designer, enter spacing values in the Above and Below text boxes.

3 Click Apply to Selection.

Controlling where tables begin

Normally, a table appears below the line of text containing the anchor symbol. However, you can force a table to start at the top of a page or column, or you can let the table float.

If there is not enough room in the text column where a floating table is anchored, a floating table moves to the first text column that can hold it. However, the line of text containing the table's anchor symbol does not move. If the table moves to the next text column, text fills the space below the line containing the anchor symbol.

Normal table and a floating table

If you want a table to start at the very top of a page with no text preceding it, anchor it on the previous page and set the table to float. If you want it to always float, make its orphan setting a large number such as 200 (see "Keeping a minimum number of rows on a page" on page 175).

To control where a table begins:

1 Click in the table you want to change and choose Table > Table Designer.

2 In the Basic properties of the Table Designer, choose the placement from the Start pop-up menu.

3 Click Apply to Selection.

If the anchor symbol for a top-of-column table appears below a paragraph that straddles columns, the table appears in the next column but just below the straddle paragraph, instead of at the top of the column.
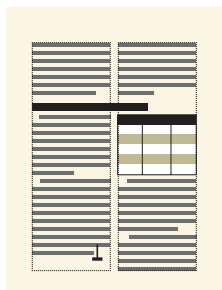
A top-of-column table anchored below a straddle

To control how a table breaks, see "Controlling page breaks in tables" on page 174.

Making tables straddle

Tables may straddle columns in multicolumn layouts, and their positions may be affected by straddle paragraphs. For information on straddle paragraphs, see "Creating straddle heads" on page 123.

To make a table straddle:

❖ Do one of the following:

• Anchor the table in a straddle paragraph. A table anchored in a straddle paragraph, whatever the table's width, always straddles the full width of the text frame.
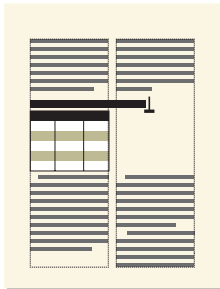
A table anchored in a straddle paragraph

• Extend the table width into a second column of the body area (see "Resizing columns" on page 169). If you want the table to straddle both the side-head area and the body area, extend it into the side-head area as well.
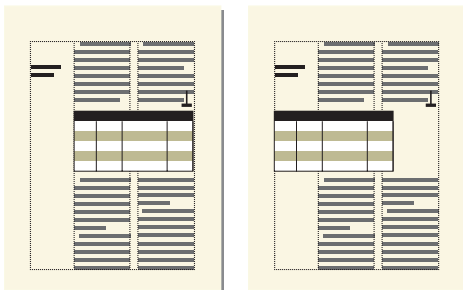
Straddling all columns and straddling side-head area

To unstraddle a table:

❖ Do one of the following:

• To unstraddle a table that's anchored in a straddle paragraph, move the anchor to a nonstraddle paragraph.

• To unstraddle a table that's anchored in an unstraddled paragraph, resize the column widths of the table to fit in the text column (see "Adjusting rows and columns" on page 168).

Running text around tables

Text does not run around a table that is anchored directly in a column of text. You can, however, run text around a table that's in an anchored frame or in a text frame that's disconnected from the main flow. (However, a table in a disconnected text frame won't autonumber with tables in the main flow.)

Table in an anchored frame and a table in a disconnected text frame

To run text around a table in an anchored frame:

1 Use Special > Anchored Frame to create an anchored frame with an anchoring position of Run into Paragraph.

2 Draw a text frame in the anchored frame and then place the table in it (see "Using text with graphics" on page 320).

To run text around a table that remains stationary on the page:

1 Draw a text frame directly on a page and drag it where you want it (see "Using text with graphics" on page 320). This type of text frame is not connected to the main flow.

2 Choose Graphics > Runaround Properties, click Run around Bounding Box, and click Set.

3 Insert a table in the text frame.

Adjusting rows and columns

Adding and deleting rows and columns

You can specify how many rows or columns you want to add and where you want to insert them.

To quickly add a row below the current one:

❖ Press Control+Return. The new row uses the same paragraph formats as the previous row.

To add a row or column:

1 Click in a table cell next to where you want to add the row or column.

2 Choose Table > Add Rows or Columns, and specify the number of rows or columns you want to add and where you want to insert them.

You can add rows above or below the indicated cell or in the heading or footing areas. You can insert columns to the left or right of the indicated cell.

3 Click Add.

The cells in the new rows or columns use the same paragraph formats as the current row or column. For example, when you click in a cell and add three rows, the cells in all three rows will have the same paragraph formats as the cells in the row in which you clicked.

To delete a row or column:

1 Select the rows or columns you want to delete, making sure you select entire rows or columns. (If you don't, the contents of the selected cells are deleted without a prompt for a decision.)

2 Press Delete, click Remove Cells from Table, and click Clear.

Copying and moving rows and columns

You can duplicate or move rows and columns, along with their contents, by copying or cutting them to the Clipboard and then pasting at a new location.

When working with structured documents, copying or moving rows or columns may make the structure of a table invalid. Use the Element Catalog and Structure View as guides.

The cells on the Clipboard replace the current rows or columns according to the following rules:

• If the number of rows or columns on the Clipboard is equal to the number of selected rows or columns, they are replaced exactly.

• If the number on the Clipboard is greater than the number you select to replace, only as many rows or columns as will fit are pasted.

• If the number on the Clipboard is less than the number you select to replace, the Clipboard contents are repeated so that they fill the rows or columns.

To split a table, cut rows or columns from a table and paste them where you want to make a new table. To combine two tables, cut the rows and columns from one table and paste them into another.

To copy or move rows or columns:

1 Select the rows or columns, and do one of the following:

• If you are copying them, choose Edit > Copy.

• If you are moving them, choose Edit > Cut, click Remove Cells from Table, and then click Cut.

2 Click next to where you want to insert the rows or columns, and choose Edit > Paste. You can insert them next to the current row or column, or you can replace the current row or column.

You can also drag a row's bubble in the Structure View to move the row, or Alt-drag (Windows), or Control-middle-drag (UNIX) the bubble to copy the row. For details, see "Copying elements" on page 43.

Resizing columns

The quickest way to change the width of a column is to drag a column boundary. You can also resize columns precisely by using a dialog box, and you can copy and paste a column's width in order to duplicate that width in the same table or in a different table.

To resize a column by dragging:

❖ Do one of the following:

• To change a column width, select a cell in that column and drag its handle until the column is the size you want.

You can drag a handle to resize a column.

Select several columns to resize them together.

• To move the border between two columns so one column grows wider and the other narrower, Alt-drag (Windows) or Shift-drag (UNIX) a selection handle. The overall width of the table doesn't change.

💡 *To align the column border with the snap grid, choose Graphics > Snap before you change the width.*

To specify a precise column width:

1 Select cells in the columns you want to resize (if you're resizing a single column, you can just click in it), and choose Table > Resize Columns.

2 Do one of the following:

• To specify a value for the width, click To Width and enter the value.

• To set the width to a percentage of the original width, click By Scaling and enter a percentage.

• To make the column the same width as another column in the table, click To Width of Column Number and enter the column number.

• To make the widths equal parts of a total, click To Equal Widths Totalling and enter the total width.

• To specify a total width while still keeping the columns' proportions the same, click By Scaling to Widths Totalling and enter the total width.

• To set the width to match the widest paragraph or frame in the selected cells, click To Width of Selected Cells' Contents and enter a maximum width.

3 Click Resize.

To copy and paste a column width:

1 Click in the column whose width you want to copy.

2 Choose Edit > Copy Special > Table Column Width.

3 Click in the column you want to change and choose Edit > Paste. Only the column width is pasted; the contents of the cells remain unchanged.

Adjusting the height of rows

The height of a row changes automatically to fit the cell's contents, but you can increase the height further if you want. You can also make all rows in a table the same height.

Note: When working with a structured document, adjusting the height of a row does not affect the structure of the table, and it is not a format rule override.

To adjust the height of a row:

1 Click in the row that has the height you want to increase, and choose Table > Row Format.

2 Enter values for the minimum and maximum row height and then click Set.

To make all rows the same height:

1 Determine the height of the tallest row in a table by doing the following:

• (Windows) Hold down Alt+Shift while drawing a selection border around the row.

• (UNIX) Hold down Control+Shift while drawing a selection border around the row.

2 Note the height, which appears in the status bar.

3 Select the entire table, and choose Table > Row Format.

4 Specify this value for the minimum row height and click Set.

You may have to repeat these steps if you edit the contents of the cells causing their heights to change.

Straddling and unstraddling cells

You can combine cells horizontally into a single cell that straddles several columns, or vertically into a single cell that straddles several rows. In a straddle cell, text and graphics flow across cell borders as if there were a single cell.

A. Cell straddling rows *B. Cell straddling columns*

If you straddle cells that have contents, the contents of those cells also merge, creating a separate paragraph for each merged cell. You can also unstraddle cells.

To make a cell straddle several rows or columns:

❖ Select the cells you want to straddle, and choose Table > Straddle.

To unstraddle a cell:

❖ Select the straddle cell, and choose Table > Unstraddle. The contents of the straddle cell appear in the upper left new cell, not back in the original cells.

Sorting columns and rows

You can rearrange the cells of columns or rows into either ascending or descending order. Ascending order sorts from the beginning of the alphabet or the lowest number; descending order sorts from the end of the alphabet or the largest number.

Plant	Bloom		Plant	Bloom
Catser	Fall		Baylily	Spring
Dalux	Summer		Catser	Fall
Baylily	Spring		Dalux	Summer
Derana	Winter		Derana	Winter

Original table (left) and sorted by first column (right)

Numbers are sorted based on their numerical value. For example, "124" appears after "23" in a list of numbers. When sorting numbers, currency symbols are ignored, but negative signs are recognized. For example, -9 or (9) sorts before *9* in an ascending sort. The comma and decimal separators displayed in numbers are treated according to the Regional options set for numbers and currencies on your system.

Text always comes after numbers in a sort. Text strings in tables are sorted based on the default system locale.

You can sort by date or time as long as you enter it as text, use a consistent format, and include leading zeros. For example, if you're using dd/mm/yy and hh:mm:ss formats, enter 04/12/2017 or 09:30:25.

To sort a table:

1 Save your document, so that you can revert to your last saved version if the sort gives unexpected results.

2 Make sure there are no hidden conditional rows in the table (use Special > Conditional Text).

3 Do one of the following:

• To sort all columns or all rows in a table, click anywhere in the table.

• To sort only certain rows, select cells in the rows you want to sort.

4 Choose Table > Sort.

5 If you're sorting all rows or all columns, click Select All Body Rows.

6 Do any of the following:

• To sort the rows of the table, click Row Sort. If the rows contain heading or footing cells as well as body cells, only the body cells will be sorted.

• To sort the columns of the table, click Column Sort.

7 To sort uppercase letters apart from lowercase letters, select Consider Case.

Plant	Bloom
A. Baylily	Spring
a. Catser	Fall
B. Dalux	Summer
b. Derana	Winter

Plant	Bloom
a. Catser	Fall
b. Derana	Winter
A. Baylily	Spring
B. Dalux	Summer

Ascending sort with and without Consider Case selected

8 Choose a primary sort key by selecting from the Sort By text box and clicking Ascending Sort or Descending Sort.

You may sort straddle cells as long as they don't extend past a row or column that you're using as a sort key. (Use Table > Unstraddle and try again.)

9 Optionally, choose a second and third sort key from the Then By areas.

10 Click Sort.

Note: Adobe FrameMaker will correctly sort numbers preceded by the special symbols ()+-,. and $. However, combining several of these symbols in a cell may adversely affect sorting. For example, a table cell containing -2 will fall correctly between -1 and -3, but a cell containing -2+3 will not (it will be interpreted as -23).

Note: The Table sorting feature supports the Unicode text encoding standard.

Rotating cells and tables

When you rotate a cell in a table, you can type in it just as you do in any other cell.

You can also rotate an entire table by placing the table in an anchored frame that is rotated. The rotated table can be in a page of unrotated text or in a rotated page (one that uses a rotated master page). Place the table on a rotated page instead of rotating the table itself if you want background items (such as headers or footers) or body text to be rotated as well as the table. You cannot edit a table in a rotated page.
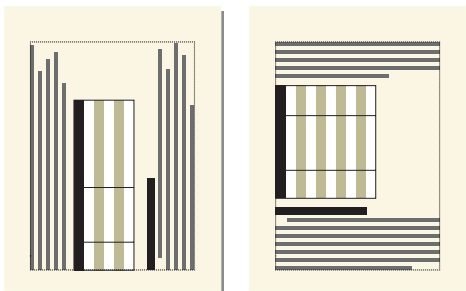
Table on a rotated page (left) and table in a rotated anchored frame (right)

To rotate a cell:

1 Select the cells you want to rotate, and choose Graphics > Rotate.

2 Specify the orientation you want for the cells and click Rotate.

Plant Name	Light		
	Bright (sunny)	Bright, indirect	Medium (filtered)
Baylily 🌼	X	X	
Catser 🌼		X	
Dalux 🍀			X

Rotated cells can save space.

💡 *As you type in a rotated cell, the cell height increases and the text doesn't wrap. You can limit the height of rotated cells so that text will wrap when it reaches the limit. For details, see "Adjusting the height of rows" on page 171.*

To insert a rotated table in a page of unrotated text:

1 Insert an anchored frame (see "Creating anchored frames" on page 343), and draw a text frame in it. For information on drawing a text frame, see "Using text with graphics" on page 320.

2 Insert the table in the text frame. For details, see "Inserting tables" on page 156.

3 Select the text frame, choose Graphics > Rotate and rotate the text frame counterclockwise. You may need to adjust the size of the text frame or the anchored frame to view the entire table.

If you want to edit the table, unrotate the text frame and then rotate it back when you're finished.

To create a rotated table on a page with other rotated text:

❖ Create a rotated master page and apply it to the body page where the table appears.

For details, see "Creating a rotated master page" on page 383 and "Assigning master pages to body pages" on page 385. If document editing causes the table to move to a different page, you'll need to reapply master pages.

Controlling page breaks in tables

If all the rows of a table don't fit in a text column, some of the rows move to the next page or column. You can control how the table breaks between pages or columns. For example, you can set the minimum number of rows that can appear on a page or column, or specify that two rows always appear together on the same page or column. You can also force a break at any row in a table.

When you insert a table, the minimum number of rows in a column or on a page is determined by the table format. You can change this number in the Table Designer.

On the other hand, keeping two rows together and forcing a page break are not part of the format; they are custom settings, which you make on a case-by-case basis. If you apply a different format to the table, these settings are not overwritten.

For information on controlling where a table starts on a page or in a column, see "Controlling where tables begin" on page 166.

Keeping a minimum number of rows on a page

If a table won't fit on one page or in one column, the location of the page break is based on the number of orphan rows allowed for the table. The orphan row property determines the minimum number of body rows that must be kept together on a page or in a column.

For example, the following figure shows a table with an orphan row property set to 3, so that at least three body rows must appear on each page. If there weren't room for three rows on the first page, the whole table would move to the next page.

Note: When working with structured documents, changes to page breaks do not affect the structure of a table and are not format rule overrides.

To set the minimum number of rows on a page or in a column:

1 Click in the table you want to change, and choose Table > Table Designer.

2 In the Basic properties of the Table Designer, enter the number of rows in the Orphan Rows text box. The number can be between 1 and 255.

3 Click Apply to Selection.

Specifying a large orphan row setting, such as 99, prevents a table from breaking across columns or pages.

Keeping rows together

You can specify that a particular row should always stay with the previous or next row.

To keep rows together:

1 Select the row you want to keep together with the next or previous row, and choose Table > Row Format.

2 In the Keep With area, choose Next Row or Previous Row, and click Set.

Breaking tables at a specific place

Just as you can have a table or paragraph always start at the top of a page or column, you can do the same with a specific row in a table. Later, you can remove the page break if you want to.

To add or remove a page break in a table:

1 Click in the row you want to change, and choose Table > Row Format.

2 Do one of the following:

• To force the row to the top of the next column, choose Top of Column or one of the Top of Page options from the Start Row pop-up menu.

• To remove a page break, choose Anywhere from the Start Row pop-up menu.

3 Click Set.

Positioning and autonumbering text within cells

When you insert a table, its *cell margins*—the distance between the cell edge and the cell text frame—are determined by the table format. The indent properties of text in the cell, which are measured from the cell margins, are part of the text's paragraph format.

A. *Left cell margins*
B. *Paragraph's left indent*

You can change the default cell margins for a table, and customize the margins and the vertical alignment of text in particular cells. You can also specify the direction of autonumbering within cells—across rows or down columns.

Setting default cell margins

Default cell margins apply to all cells in the table.

To set default cell margins in a table:

1 Click in the table you want to change and choose Table > Table Designer.

2 In the Basic properties of the Table Designer, enter the values for the top, bottom, left, and right margins in the Default Cell Margins area.

3 Click Apply to Selection.

If you want text to look vertically centered, make the top margin larger than the bottom margin. For example, make the top margin 5 points and the bottom margin 3 points.

Customizing cell margins

You use the Paragraph Designer to change the default settings for the margins of specific cells. When you customize cell margins in a table this way and later apply a different format to the table, the custom cell margins are not overwritten by the new table format's default margins.

Because custom cell margins are part of a paragraph format, they aren't normally stored as part of the Table Catalog format. However, the paragraph formats of the first title paragraph and the first paragraph in the heading, body, and footing rows of each column are stored. If you customize the cell margins of any of these paragraphs and then store the table format in the catalog, future tables that use that table format will have the custom settings as their defaults.

To customize a cell margin:

1 Click in the first paragraph of the cell whose margins you want to customize.

2 Choose Format > Paragraphs > Designer to display the Paragraph Designer.

3 Choose Table Cell from the Properties pop-up menu.

4 In the Cell Margin area, specify the margins you want to customize by doing one of the following:

• To create a margin relative to the default cell margin, choose From Table Format, Plus from the pop-up menu and then enter a value.

• To create a fixed margin measured from the edge of the cell, choose Custom from the pop-up menu and then enter a value.

5 Click Apply to Selection.

Customizing vertical alignment of text

You use the Paragraph Designer to change the default vertical alignment of specific cells. When you customize vertical alignment in a table this way and later apply a different format to the table, the custom vertical alignment settings are not overwritten by the new table format's alignment margins.
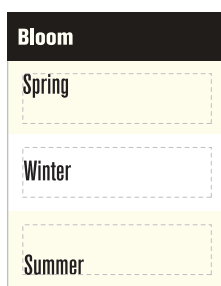
Top, middle, and bottom vertical alignment

You can specify the vertical alignment for individual cells—at the top, in the middle, or at the bottom. When you change the vertical alignment in a table and later apply a different format to the table, the custom vertical alignment settings are not overwritten by the new table format's default alignment settings.

Because alignment settings are part of a paragraph format, they aren't normally stored as part of the Table Catalog format. However, the paragraph formats of the first paragraph in the heading, body, and footing rows of each column are stored. If you customize the alignment of any of these paragraphs and then store the table format in the catalog, future tables that use that table format will have the custom settings as their defaults.

To customize the vertical alignment of text in a cell:

1 Click in the cell you want to customize.

2 Choose Format > Paragraphs > Designer to display the Paragraph Designer.

3 Choose Table Cell from the Properties pop-up menu and then choose Top, Middle, or Bottom from the Cell Vertical Alignment pop-up menu.

4 Click Apply to Selection.

Specifying the direction of autonumbering

When you insert a table, the direction of autonumbering within cells—either across rows or down columns—is determined by the table format. This property also sets the direction of autonumbering for table footnotes.

Color	
1. Yellow	2. Orange
3. Pink	4. Red
5. Rust	6. Blue

Color	
1. Yellow	4. Orange
2. Pink	5. Red
3. Rust	6. Blue

Autonumbering across rows and down columns

To change the direction of autonumbering in a table:

1 Click in the table you want to change, and choose Table > Table Designer.

2 In the Basic properties of the Table Designer, choose Row First or Column First from the Numbering pop-up menu.

3 Click Apply to Selection.

Working with ruling and shading

You can create more attractive and effective tables by using ruling and shading. For example, you could use ruling around the outside edges of a table and shading only in the heading cells. Or you could use ruling to separate all cells in a table and use shading for every other body row.

Plant	Bloom	Height in cm.	Colors
Baylily	Spring	30-150	White, Yellow
Catser	Fall	50-75	Pink, Violet
Dalux	Fall	30-45	Blue, Purple

All cells are ruled; every other body row is shaded.

When you insert a table, its regular ruling and shading are determined by the table format. Regular ruling and shading affect entire rows and columns in a specified repeating pattern. You can use the Table Designer to change a format's ruling or shading properties for particular tables that use the format.

You can also set up custom ruling and shading for a table. Custom ruling and shading aren't limited to entire rows or columns and aren't part of the table format. If you customize the ruling or shading of a table and later apply a different format to the table, the custom ruling or shading is not overwritten by the new format.

Setting up regular ruling

You can specify a ruling pattern for columns, body rows, heading and footing rows, and outside edges of a table. If you need to diverge from the pattern anywhere in the table, use a custom setting (see "Customizing ruling" on page 179).
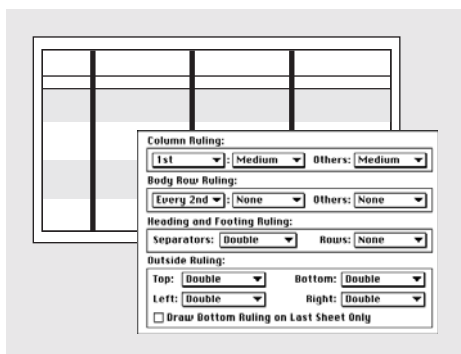
Changing the table ruling

To set up or remove regular ruling:

1 Click in the table you want to change and choose Table > Table Designer.

2 In the Ruling properties of the Table Designer, set up the ruling styles for columns, body rows, heading and footing rows, and outside edges.

3 Click Apply to Selection.

Customizing ruling

You can customize the ruling for individual cells, rows, or columns. Unlike a table's regular ruling, a table's custom ruling is not stored as part of the table format. Wherever the regular and custom settings are in conflict, the custom settings prevail.

To customize ruling or remove custom ruling:

1 Select the cells, rows, or columns that you want to customize.

2 Choose Table > Custom Ruling & Shading.

3 Select a custom ruling style, or select From Table to remove custom ruling.

The scroll list shows the document's predefined ruling styles. For information, see "Creating or changing ruling styles" on page 179.

4 In the To Selection area, specify the parts of the current selection that you want to change.

5 To keep from inadvertently changing any shading, turn off Custom Cell Shading.

6 Click Apply.

Creating or changing ruling styles

You can create additional ruling styles (such as Double, Thick, or Thin line styles), and edit or delete existing ones. If you edit a ruling style, the change applies to both the regular and custom ruling that use that style.

When editing ruling styles, you may want to zoom in to a high percentage. This lets you see slight differences in line thickness.

To create or change a ruling style:

1 Choose Table > Custom Ruling & Shading.

2 Select a style in the scroll list that you want to edit or, if you're creating a new style, select one similar to the style you want to create.

3 Click Edit Ruling Style.

4 Enter the width, and choose a color and pen pattern for the style.

5 Click Single or Double to specify single or double lines. If you click Double, specify a value for the gap separating the lines.

6 If you're creating a new style, type a name in the Name text box.

7 Click Set.

To delete a ruling style:

1 Choose Table > Custom Ruling & Shading.

2 Select the style you want to delete.

3 Click Edit Ruling Style and click Delete. If the style was used for a table's regular ruling, the occurrences of the style use no ruling. If the style was used for custom ruling, the table's regular ruling is restored.

Setting up regular shading

You can specify a shading percentage for heading and footing rows, and two percentages for body rows or columns. For example, you can fill the heading row and every other body row with different shades. If you need to diverge from the regular shading anywhere in the table, use a custom setting (see "Customizing shading" on page 181).
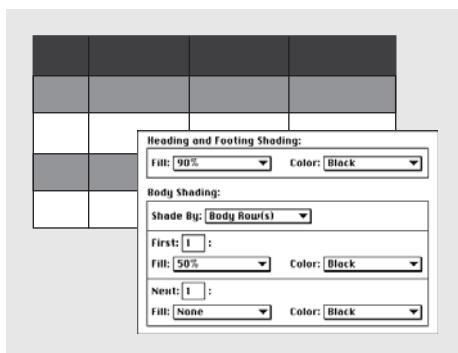
Changing the table shading

To set up regular shading:

1 Click in the table you want to change, and choose Table > Table Designer.

2 In the Shading properties of the Table Designer, specify the shading for heading and footing rows and for body rows or columns.

3 Click Apply to Selection.

Customizing shading

As with ruling, you can customize the shading or color for individual cells, rows, or columns to draw attention to specific areas of a table. A table's custom shading is not stored as part of the format. Wherever the regular and custom settings are in conflict, the custom settings prevail.

To customize shading or remove custom shading:

1 Select the cells, rows, or columns that you want to customize, and choose Table > Custom Ruling & Shading.

2 Specify a fill percentage and color for the shading. Choose From Table to remove custom shading.

3 To keep from inadvertently changing any ruling, turn off Custom Cell Ruling.

4 Click Apply.

Displaying a cell's ruling and shading settings

Because regular and custom ruling and shading work together, you sometimes need to determine which is which.

To display a cell's ruling and shading settings:

1 Select the cells, rows, or columns that have the ruling and shading properties you want to see.

2 Choose Table > Custom Ruling & Shading, and click Show Current Settings.

In the dialog box, Mixed means that the selected cells use more than one custom ruling style, fill, or color. From Table means that the selected cells use the regular ruling or shading set in the Table Designer.

Redefining (updating) table formats

If you're a template designer or if your document lacks a format you need, you may need to globally redefine (update) a table format throughout a document.

To change a table format, you change a table's properties and then change the corresponding catalog format to match the table.

The properties applied to the catalog format include those set in the Table Designer and the defaults not set in the Table Designer—for example, the default paragraph formats (see "About tables" on page 155). In addition, properties set in the Table Designer (but not default properties that aren't changed in the Table Designer) are applied to existing tables in the document that have the same tag.

If you change properties in the Table Designer and then decide you don't want to update the format, you can cancel the operation and reset the properties by simply clicking in text. You can also choose Reset Window from Selection from the Commands pop-up menu in the Table Designer.

To redefine a table format:

1 Click in a table whose format you want to redefine, and choose Table > Table Designer. If the table you click in has format overrides, these overrides—not the catalog format's definition—appear in the Table Designer.

2 If you want to base the changed format on the catalog format, without any overrides, choose the format tag from the Table Tag pop-up menu, even if the tag you want is already displayed in the Table Tag text box.

3 Do the following:

• Use the Table Designer to change any of the settings for the Basic, Ruling, or Shading properties.

- Change any of the default properties, such as the number of rows and columns, widths of columns, and the paragraph format of the title and of the first paragraph of each column. These properties are supplied when you first insert a new, empty table (see "Applying different table formats" on page 164).

4 Click Update All. If any of the tables being updated contain format overrides, an alert message asks whether you want to remove them.

Changing properties in several table formats at the same time

You can change specified properties of several table formats at the same time. For example, you can change all table formats from centered to left-aligned. Rather than update each format separately, you can update them all at the same time.

To change specific properties in several table formats:

1 Select the tables whose formats you want to redefine by doing one of the following:

- To redefine the format of all tables in the document, click in any table.

- To redefine several table formats, but not all formats in the document, select consecutive tables that use the formats you want to redefine. (To select multiple tables, select their anchor symbols.)

2 In the Table Designer, display the group of properties from which you want to apply one or two properties.

3 Change the properties as needed.

4 Choose Global Update Options from the Commands pop-up menu.

5 Choose the table formats you want to apply the properties to.

6 Click the current property group in the Use Properties area and click Update. If any of the tables being updated contain format overrides, an alert message asks whether you want to remove them.

FrameMaker applies the properties to the Table Catalog formats you specified and to all tables in the document with the same tags.

Using one group of properties to redefine other formats

You can use a group of properties from one table format to redefine (update) other formats. For example, if you want to change the default ruling properties of all tables in a document, you can change them for one format and apply the changes to the remaining formats in the catalog without changing any other properties.

To use a group of properties from one table format to redefine another table format:

1 Select the tables whose format you want to redefine by doing one of the following:

- To redefine one table format or all table formats in the document, click in any table.

- To redefine several table formats, but not all formats in the document, select consecutive tables whose formats you want to redefine. (To select multiple tables, select their anchor symbols.)

2 In the Table Designer, choose the property group you want to update—Basic, Ruling, or Shading.

3 Delete the tag from the Table Tag text box if the text box isn't empty. Deleting the tag sets the text box to As Is, which keeps FrameMaker from changing the tags of the formats you update (see "Using As Is" on page 105).

4 Change any of the table's properties.

5 Choose Global Update Options from the Commands pop-up menu.

6 Choose the table formats you want to apply the properties to.

7 Click the current property group in the Use Properties area and click Update. If any of the tables being updated contain format overrides, an alert message asks whether you want to remove them.

FrameMaker applies the properties to the Table Catalog formats you specified and to all tables in the document with the same tags.

Renaming and deleting table formats

You may need to rename or delete a table format when designing a template. You may also need to rename a table format if you want to copy an entire catalog from a template and don't want a format to be overwritten.

Deleting a format from a catalog does not affect any tables that have the same tag—the tables simply have a format that isn't stored in the catalog. If you want to change the format of these tables, you can then retag them (see "Applying different table formats" on page 164).

To rename a table format:

1 Click in a table whose format you want to rename.

2 In the Table Designer, choose the tag you want to change from the Table Tag pop-up menu.

Make sure you perform this step even though it means choosing the same tag as the one currently displayed. Choosing a tag from the pop-up menu ensures that the stored format properties—not overrides—are displayed.

3 Type a new name in the Table Tag text box, and click Update All.

4 Click OK.

To delete a format from the Table Catalog:

1 In the Table Designer, choose Delete Format from the Commands pop-up menu.

2 Select the format in the scroll list and click Delete. You can delete additional formats if you want to.

3 Click Done.

Creating table formats

Typically, you insert tables using the table formats already defined in the document. Occasionally, you may need to override a table format or customize it in special cases.

If you're a template designer, however, or if your document lacks a format you need, you may need to create a table format. You can create a new format by modifying the properties of an existing table and storing the format in the Table Catalog with a different tag.

To create a new table format:

1 Click in a table that has a format similar to the one you want to create. (The more similar it is to the format you're defining, the fewer changes you'll have to make.)

2 Set up the rows and columns by adding or deleting body, heading, and footing rows and adjusting columns as necessary. (See "Adjusting rows and columns" on page 168.)

3 Use the Table Designer to modify any of the table's properties:

• Its position in the text frame (see "Positioning tables on a page" on page 165)

• Whether it has a title (see "Adding or removing table titles" on page 158)

• Its Orphan Rows setting (see "Controlling page breaks in tables" on page 174)

• Its cell margins (see "Positioning and autonumbering text within cells" on page 176)

• Its ruling and shading (see "Working with ruling and shading" on page 178)

Don't set any property to As Is. Table formats must have all properties specified. (An alert message warns you if not all settings are specified so you can go back and change any As Is properties.)

4 Use the Paragraph Designer to create or change any of the following paragraph formats, which are stored as part of a table format: the paragraph formats of the first title paragraph, and the first paragraph in the heading, body, and footing rows of each column.

5 When the table looks the way you want, choose New Format from the Commands pop-up menu in the Table Designer.

6 Enter a name for the new format in the Tag text box.

7 To store the format in the Table Catalog, select Store in Catalog.

8 To apply the new format to the current table, select Apply to Selection.

9 Click Create.

Working with tables in structured documents

Structured tables work in much the same way as unstructured tables. Much of the table's structure is determined by its element definition. When you insert the table, at least some row and cell elements are inserted along with it, ready for you to provide the contents.

Elements for structured tables and table parts

A table and its table parts (such as title, rows, and cells) are each represented in an element. You can see and work with these elements in the Structure View.
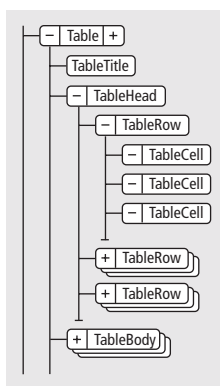
Table and table part elements

When you insert a table element, some of the table parts are inserted automatically. You can use the Element Catalog as a guide for building the rest of the table. If you add more table parts, they may also have an initial structure; for example, a new row element contains cell elements. The content rules for table and table-part elements define an initial structure for that element.

A table may also have cells that are defined to remain empty. No valid elements can be inserted in these cells, and you cannot type in them. An empty cell element's tag may describe the use of the cell—look for names such as Blank-Header or SpacerCell.

How structured tables are formatted

The appearance of a structured table is determined by its table format, a variety of settings in the Table menu, and paragraph formats for text.

Table formats A table format controls the spacing, indentation, and alignment of a table in a column, the start position on a page, the location of the title, default margins for cells, the direction of autonumbering in cells, and default ruling and shading. A document stores table formats in a Table Catalog.

The format rules for a table element may suggest a particular table format. You can apply a different format to the table, either when you create the table or later, and the change is not considered a format rule override. (Changing the table format makes a table invalid, though, if the format adds a title and the table's content rules don't allow one.)

Table menu commands The Table menu has commands for rotating and straddling cells, changing cell height and page breaks, adding rows and columns, and applying custom ruling and shading to cells. These settings take precedence over the table format for particular cells.

You can use any of the Table menu commands in a structured table. The commands are not format rule overrides and, except for Add Rows and Columns, do not affect the structure of the table.

Paragraph formats Paragraph formats define fonts, line spacing, and other properties for text in the cells and the title. Table-part elements may specify paragraph formats.

Inserting structured tables

When working in a structured flow, you use a table element to insert a table. The new table appears in the document with elements for table parts, such as a title, a heading row, and some body rows. The element definitions for the table and table parts determine the table's configuration. You can change the number of rows and columns as you insert the table, though your change may make the table invalid.
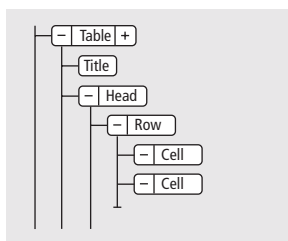
Table parts inserted automatically

To add other table-part elements to the table, use the Element Catalog as a guide.

A table is anchored to a specific location in text. As you edit the text, the table moves in the document along with the text. An anchor symbol ⊥ appears at the table's anchor location in the document window.

When you insert a table, you specify where to anchor it. For example, you might anchor a table in a Para element (as a child element to the Para) or you might anchor it in a Section element (as a sibling to Para and other elements in the Section). It depends on how the elements are defined for your document.

To insert a table element:

1 Click where you want to insert the table.

2 Select a table element in the Element Catalog, and click Insert.

You can also use Table > Insert Table to insert an element. If more than one table is available, choose the one you want from the Element Tag pop-up menu in the Insert Table dialog box.

3 To change the table format, select a format in the scroll list. The table element may have a format preselected, but you can change the format and it will not be considered a format rule override.

Consult your developer before changing a table format. Your element catalog may have a separate element defined for each format you'll need.

4 If necessary, change the number of rows and columns. Changing these numbers may make the table invalid.

5 Click Insert. FrameMaker inserts an anchor symbol ⊥ at the insertion point and a table with predefined descendant elements. The Structure View has bubbles for the new elements.

6 If the Attributes for New Element dialog box appears, enter attribute values for the table element and click Insert Element (see "Entering attribute values as you insert elements" on page 46).

Select cells in the table and then right-click to display a context menu for working with the cells. You can also use the QuickAccess bar as a quick way to apply table commands (see "Using the QuickAccess bar" on page 11).

If no table element is available at the location you want, you might use an invalid element. After inserting the table, talk to your developer about making it valid at this location.

To use an invalid table element:

❖ Do one of the following:

• To use a table that is valid in another part of the document, either insert the table in a valid location and then move it, or use the All Elements setting (see "Changing the scope of elements available in a structured document" on page 18) to make the table available everywhere and then insert the table where you want it.

• To insert an invalid table with default tags, choose Table > Insert Table and choose TABLE from the Element Tag pop-up menu. (This option appears in the menu if the document has no defined table elements.) The table and table parts will have default tags, such as TABLE, HEADING, and ROW. After replacing the table with a valid table, change the table parts to valid elements. (See "Editing elements" on page 39 for instructions on changing elements.)

Note: Changing an invalid table with default tags to a valid table can be a laborious process, so it's usually best to work with tables that are defined.

Filling in structured tables with text and graphics

Each intersection of a column and row is a *cell*. In a structured table, each cell is an element with a definition that describes possible contents for the cell—usually text, but anchored frames or other elements may also be used. (Anchored frames might, in turn, contain graphics or other tables.) As you type text or insert an anchored frame in a cell, the cell's height expands as needed.

You can copy, cut, and paste the contents of cells just as you do text and graphics in any other part of a document. Special system variable elements may be available that specify continuation text in the titles or heading rows of multipage tables.

Typing and selecting text in structured tables

You can type text in the current cell when the <TEXT> indicator appears in the Element Catalog. You may also be able to insert footnotes, cross-references, and other text-related elements in the cell. Use the Element Catalog as a guide.

To place the insertion point in a table cell:
❖ Click in the cell, or click to the left of the cell's text snippet in the Structure View.

To select all the contents of a cell (but not the cell itself):
❖ Click in the cell and press Esc t h a, or double-click the cell's bubble in the Structure View. You can also triple-click a cell's contents if it contains just one paragraph.

To select the contents of the next or previous cell:
❖ Press Tab or Shift+Tab.

To select the contents of the cell below or above:
❖ Do one of the following:
• (Windows) Press Control+Alt+Tab or Control+Alt+Shift+Tab.
• (UNIX) Press Meta+n or Meta+p.

To insert a tab in a cell:
❖ Press Esc Tab.

Selecting structured table cells

When you work in a table, you may need to select cells, rows, columns, or the entire table. When a cell (rather than its contents) is selected, a handle appears with the cell in the document window.

Height in cm.	Colors
60-150	White, Yellow, Pink, Red, Violet
30-75	Pink, Violet
30-95	Yellow, Orange, Pink, Red, Rust, Blue
45-135	Pink, Blue

Selection handle

To select a single cell:

❖ Drag across the cell's boundary and back, or click the cell's bubble in the Structure View. You can also Control-click the cell.

To select multiple cells:

❖ Drag across the cells, or click the first cell and then Shift-click the last cell in the selection.

Note: A contiguous selection of cells in the document window may not appear as contiguous bubbles in the Structure View.
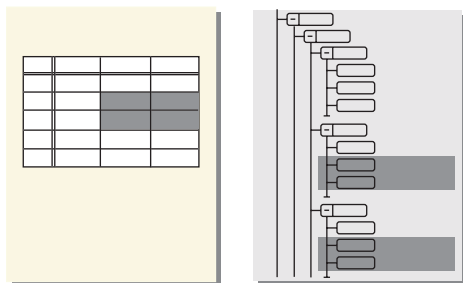
Selected cells (left) and bubbles (right)

To select a row:

❖ Drag across the cells in the row, click in the row and press Esc t h r, or click the row's bubble in the Structure View.

Note: If you click between table-part elements (such as between two rows) in the Structure View, the insertion point appears in the Structure View but not in the document window.

To select a column:

❖ Click in the column and press Esc t h c, or drag from a heading cell into the first body cell.

Copying or moving the contents of cells in structured tables

You can paste a cell's contents into another cell in the same table or a different table. Use the Element Catalog as a guide to be sure you're pasting into a location that allows the contents.

When selecting contents to paste, you select either the contents only or the entire cell. If you select the cell, the cell's formatting (such as any special shading or ruling) is pasted along with the contents.

To copy or move a cell's contents:

1 Select the contents (see "Typing and selecting text in structured tables" on page 187), or select the entire cell if you want to include the formatting (see "Selecting structured table cells" on page 188). You can also select multiple cells.

2 Cut or copy the selection, click in another cell, and paste.

You can also drag a cell's bubble in the Structure View to move the cell, or Alt-drag (Windows), or Control-middle-drag (UNIX) the bubble to copy the cell. For details, see "Copying elements" on page 43.

Adding or removing structured table titles

A table title appears above or below a table and is repeated on all pages of a multipage table. The title typically has format rules that control the look of the title, such as its font and whether it is centered or autonumbered.

Title centered below (left), autonumbered title left-aligned above (right)

A table's element definition sometimes specifies whether or not the table should have a title. You can add a title to any table, but you should check in the Structure View to be sure that the title is not invalid in the table.

The title element is always the first child element of a structured table, regardless of whether the title appears above or below the table.

To add or remove a table title:

1 Click in the table and choose Table > Table Designer.

2 In the Basic properties of the Table Designer, choose Above Table, Below Table, or No Title from the Title Position pop-up menu.

3 Specify the gap between the table and the title.

4 Click Apply to Selection. If the title has been defined to be autonumbered, the number (such as Table 1) appears in the title cell. You enter the text of the title yourself.

Adding "continuation" text to structured tables

In a multipage table, you may want to include special "continuation" text in the title or in heading or footing rows. Your document may have variable elements defined for this purpose, such as one that displays *(continued)* and another that tells the number of sheets in the table.

A. and C. Table Sheet variable *B.* Table Continuation variable

To add continuation text:

1 On the first page of the table, click in the title or in the heading or footing where you want to insert the variable element.

2 Select a variable element for continuation text in the Element Catalog, and click Insert. The variable appears at the insertion point, and a bubble appears in the Structure View, with a text snippet that shows the first part of the variable's text.

On the first page of the table, the variable appears as a nonbreaking space ⊔. On subsequent pages, the variable displays its text—for example, *(continued)*.

Placing graphics in structured table cells

If your table cells allow graphic elements, you can draw or import graphics in the cells. A new graphic element can be either an empty anchored frame that you can draw in or an anchored frame with an imported graphic.

For information on drawing graphic objects in an anchored frame, see "About Anchored Frames" on page 342.

To place a graphic in a table cell:

1 Click where you want to place the graphic in the cell.

2 Select a graphic element in the Element Catalog and click Insert. The element's definition determines which dialog box appears.

3 Do one of the following:

• If the Anchored Frame dialog box appears, choose At Insertion Point from the Anchoring Position pop-up menu, and click New Frame.

• If the Import File dialog box appears, select the file to import, and click Import.

An anchored frame appears in the cell, and a bubble with the text snippet GRAPHIC appears in the Structure View.

4 If the anchored frame is wider than the cell, resize the column (see "Resizing columns" on page 169).

To resize a column to match its contents, select the column and press Esc t w.

5 If necessary, center the graphic in the frame. Select the graphic, choose Graphics > Align, select T/B Centers or L/R Centers (or both), and click Align.

Nesting structured tables in table cells

You can insert a table within a table cell—for example, to show two independent tables side by side (in separate cells) or to nest tabular material.

Before you insert a table in a cell, you add an anchored frame to the cell and draw a text frame in the anchored frame. The cell must allow graphic elements.

Nested table

Important: If you export a document to SGML or XML, you can lose the contents of anchored frames in it because they are not part of the main structured flow. Work with your application developer if you plan to export to SGML or XML to avoid losing data in the nested table.

To nest a table in a table cell:

1 Click where you want to place the table in the cell.

2 Select a graphic element for empty anchored frames in the Element Catalog, and click Insert.

You can also use Special > Anchored Frame to insert an element. Choose a frame element from the Element Tag pop-up menu in the Anchored Frame dialog box.

3 Choose At Insertion Point or Below Current Line from the Anchoring Position pop-up menu, set the width and height of the frame, and click New Frame.

Anchor the table below the current line if the cell has other text (as in the example above). Try to set the size of the frame to be slightly larger than the size of the table.

4 If the anchored frame is wider than the cell, resize the column (see "Resizing columns" on page 169).

5 Draw a text frame in the anchored frame. Click the Tools button ◿ at the upper right in the document window, click the Text Frame tool ▦ in the Tools palette, drag to draw the frame, and click Set in the dialog box that appears.

See "Using text with graphics" on page 320 if you need more information on text frames.

6 Click in the text frame and use Table > Insert Table to insert an unstructured table.

Copying, moving, and removing structured tables

You can copy, move, or remove an entire table. For these purposes, it's usually easiest to select and work with the table in the Structure View.

If you copy or move an unstructured table to a structured flow, the table is given a basic structure with default elements named TABLE, HEADING, ROW, and so on. Change the default elements in the new table to appropriate elements defined in the document.

If you copy or move a structured table to an unstructured flow, the table structure may no longer be valid.

To select a table:

❖ Click the table's bubble in the Structure View or control-triple-click a cell.

To copy or move a table:

1 Select the table.

2 Choose Edit > Copy; or choose Edit > Cut, select Remove Cells from Table, and click Cut.

3 Click where you want to insert the table and choose Edit > Paste. Look at the Element Catalog before pasting to verify that the location is valid for a table.

You can also drag a table's bubble in the Structure View to move the table, or Alt-drag (Windows), or Control-middle-drag (UNIX) the bubble to copy the table. For details, see "Copying elements" on page 43.

To remove a table without using the Clipboard:

❖ Select the table element in the Structure View, and then press Delete.

Applying different formats to structured tables

A table format controls many aspects of a table's appearance, including its indentation, spacing, alignment, autonumbering, cell margins, and title. (See "How structured tables are formatted" on page 185.)

The format rules for a table element may suggest a particular table format, but you can apply a different format, either when you insert the table or later, and the change is not considered a format rule override. If you remove format rule overrides in the document, the table will not return to its original format.

When you apply a different table format, only the properties associated with table formats change in the table. That is, any customizations you've made to the table—the column widths, the number of rows and columns, and the settings from the Table menu—are not affected.

Table with old (left) and new (right) formats; custom rotated cells retained

You can apply a table format to one table or to a group of tables that currently use a certain format.

Important: *If a new table format adds a title to the table and the table's content rules do not allow a title, the title is invalid.*

Your application developer may have suggestions on which formats are appropriate for particular tables. If a document does not have a format that meets your needs, see your developer about redefining a format or creating a new one.

To apply a different format to a table:

1 Click in the table.

2 Choose Table > Table Designer.

3 Choose the format from the Table Tag pop-up menu, and click Apply To Selection.

To apply a format to several tables that use a certain format:

1 Select tables by doing one of the following:

• To apply a format to several consecutive tables, select the table elements in the Structure View.

• To apply a format to tables throughout the document, click in any table.

2 Choose Table > Table Designer.

3 Choose the format from the Table Tag pop-up menu, and choose Global Update Options from the Commands pop-up menu.

4 Specify the tables to reformat by doing one of the following:

• To reformat the tables in the selection and all tables with the same format as these tables, select All Matching Tags in Selection.

• To reformat all tables that use a specific format, choose a format from the All Tagged pop-up menu.

5 Select All Properties in the Use Properties area, and click Update.

Positioning structured tables on a page

The space above and below a table, and the table's alignment and indentation, are determined by the table format. You can control other positioning properties—straddling and text runaround—on a table-by-table basis.

Making structured tables straddle

Tables can straddle text columns in a multicolumn layout. Straddling does not affect the structure of a table and is not a format rule override.

To make a table straddle:

❖ Do one of the following:

• Anchor the table in a paragraph element that's formatted to straddle the columns. If the table is wide enough, it straddles the full column width. If it is not wide enough, the plane of the table nevertheless straddles the full width.
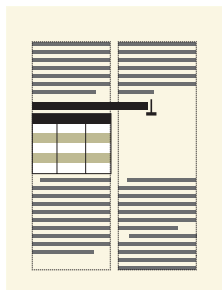
The plane of a one-column table straddling the full column width

• Extend the table width into a second column of the body area (see "Resizing columns" on page 169). If you want the table to straddle both the side-head area and the body area, extend it into the side-head area as well.
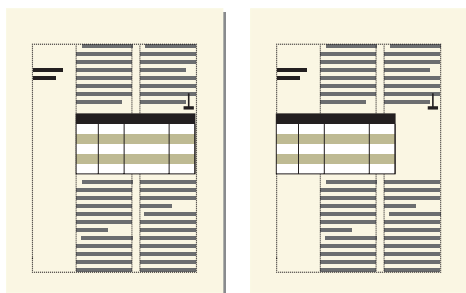
Straddling all columns (left), straddling columns and side-head area (right)

To unstraddle a table:

❖ Do one of the following:

• To unstraddle a table that's anchored in a straddle paragraph element, move the anchor to a nonstraddle element.

• To unstraddle a table that's not anchored in a straddle paragraph element, resize the column widths of the table to fit in the text column (see "Straddling and unstraddling cells in structured tables" on page 196).

Running text around structured tables

Text does not run around a table that's anchored directly in a column of text. But if your developer has set up the application this way, you can run text around a table in an anchored frame or in a text frame that's disconnected from the main flow.

A table in an anchored frame moves with the text it's anchored to. A table in a disconnected text frame remains in place on a page while other text flows around it.

Important: The contents of an anchored frame or a disconnected text frame are not part of a document's main structured flow, so they are not normally exported to SGML. If you plan to export to SGML, work with your application developer to avoid losing data in the table.

A table in a disconnected text frame will not autonumber with tables in the main flow.

To run text around a table in an anchored frame:

1 Click in text where you want to anchor the table.

2 Select a graphic element for an empty anchored frame in the Element Catalog, and click Insert.

You can also use Special > Anchored Frame to insert an element. Choose a frame element from the Element Tag pop-up menu in the Anchored Frame dialog box.

3 Choose Run into Paragraph from the Anchoring Position pop-up menu, set the width and height of the frame, and click New Frame. Try to set the size of the frame to be slightly larger than the size of the table.

4 Draw a text frame in the anchored frame. Click the Tools button ◢ at the upper right in the document window, click the Text Frame tool ▤ in the Tools palette, drag to draw the frame, and click Set in the dialog box that appears.

5 Click in the text frame and use Table > Insert Table to insert an unstructured table.

To run text around a table that remains stationary on the page:

1 Draw a text frame directly on a page and drag it where you want it. This type of text frame is not connected to the main structured flow.

2 Choose Graphics > Runaround Properties, click Run around Bounding Box, and click Set.

3 Click in the text frame and use Table > Insert Table to insert an unstructured table.

Adjusting rows and columns in structured tables

You can add, remove, copy, move, and resize rows and columns in a table, and you can make selected cells straddle rows or columns. For information on selecting cell, rows, and columns, see "Selecting structured table cells" on page 188.

Adding and removing rows and columns in structured tables

You can specify how many rows and columns you want to add and where to insert them. A new row already contains cell elements.

Adding rows or columns may make the structure of the table invalid. For example, a table set up to contain only three columns will be invalid if you add a fourth. Check the Structure View when you're finished to be sure the table is still valid.

It's best to use the Element Catalog for adding heading or footing rows, because tables are often defined to have a specific number of these rows.

To quickly add a row below the current one:

❖ Press Control+Return. The new row has the same structure and paragraph formatting as the current one.

To add a row using the Element Catalog:

❖ Click where you want to add the row in the Structure View, select a row element in the Element Catalog, and click Insert. See "Adding elements" on page 34 for details.

To add rows or columns using a Table command:

1 Click in a table cell next to where you want to add the rows or columns.

2 Choose Table > Add Rows or Columns, and specify the number of rows or columns to add and where you want to insert them. You can add rows above or below the current cell, and columns to the left or right of the cell.

3 Click Add. The new rows or columns have the same structure and paragraph formatting as the current row or column.

To remove a row or column without using the Clipboard:

1 Select the row or column. You need to select entire rows or columns; if you don't, the contents of the selected cells will also be removed.

2 Press Delete, click Remove Cells from Table, and click Clear.

Straddling and unstraddling cells in structured tables

You can combine cells horizontally into a single cell that straddles several columns, or vertically into a single cell that straddles several rows. Text and graphics flow across cell borders as if it were a single cell.

*A. Cell straddling rows **B.** Cell straddling columns*

The elements of the combined cells merge into the element of the cell at the upper left in the original selection.

In the Structure View, you can usually spot a straddle cell because one row has fewer cells than other rows in the table.
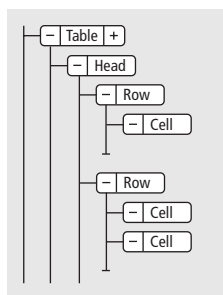
The first row has a single straddle cell.

If you straddle cells that have contents, the contents of those cells also merge, creating a separate paragraph for each merged cell. You can also unstraddle cells.

To turn several cells into a single straddle cell:

❖ Select the cells and choose Table > Straddle.

To unstraddle a cell:

❖ Select the straddle cell and choose Table > Unstraddle. The contents of the straddle cell appear in the new cell at the upper left, not in the original cells.

Rotating cells and tables in structured documents

When you rotate a cell in a table, you can type in it just as you do in any other cell.

Plant Name	Light		
	Bright (sunny)	Bright, indirect	Medium (filtered)
Baylily	X	X	
Catser		X	
Dalux			X

Rotated cells

If your developer has set up the application this way, you can also rotate a table. A rotated table can be in an anchored frame on a page of unrotated text or on a rotated page (one that uses a rotated master page). Place the table on a rotated page instead of rotating the table itself if you want background items (such as headers or footers) or body text to be rotated as well as the table.
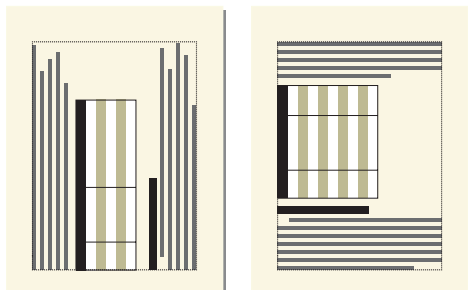
Table on a rotated page (left), rotated table on a regular page (right)

Note: *A rotated table in an anchored frame is not part of a document's main structured flow and is not normally exported to SGML. If you plan to export to SGML, you may want to rotate the page rather than just the table. If you must rotate just the table, work with your application developer to avoid losing data in the table.*

Rotating a cell or a page with a table does not affect the structure of a table, and it is not a format rule override.

To rotate cells:

1 Select the cells and choose Graphics > Rotate.

2 Specify the orientation you want for the cells and click Rotate.

As you type in a rotated cell, the cell height increases and the text doesn't wrap. You can limit the height of rotated cells so that text will wrap when it reaches the limit (see "Adjusting the height of rows" on page 171).

To insert a rotated table in a page of unrotated text:

1 Click in the text where you want to anchor the table.

2 Select a graphic element for empty anchored frames in the Element Catalog and click Insert.

3 Choose Below Current Line from the Anchoring Position pop-up menu, set the width and height of the frame, and click New Frame. Try to set the size of the frame to be slightly larger than the size of the table.

4 Draw a text frame in the anchored frame. Click the Tools button ◢ at the upper right corner in the document window, click the Text Frame tool ▤ in the Tools palette, drag to draw the frame, and click Set in the dialog box that appears.

5 Click in the text frame and use Table > Insert Table to insert an unstructured table.

6 Choose Graphics > Rotate and rotate the text frame. You may need to adjust the size of the text frame or the anchored frame to view the entire table.

To edit a rotated table:

❖ Unrotate the text frame, edit the table, and then rotate it back when you're finished.

To create a rotated table on a page with other rotated text:

❖ Apply a rotated master page to the page with the table. See your application developer about master pages defined for this purpose and how to use them.

Chapter 5: Cross-references and footnotes

Inserting cross-references

In Adobe FrameMaker, when you need a cross-reference, you specify its source and the predefined wording to use—for example, whether it contains the heading text, section number, or page number. FrameMaker inserts the text of the cross-reference (for example, *See "Volcanism and Plate Tectonics" on page 7-71*) for you. Later, if page numbers or headings change when you edit the source documents, FrameMaker can automatically update the cross-references.

You can also add footnotes to body text and tables; FrameMaker numbers and positions the footnotes for you as you type.

FrameMaker provides two types of cross-references—to paragraphs and to specific spots within paragraphs. In both cases, FrameMaker uses markers to keep track of the sources of cross-references.

Paragraph cross-references are easier to create than spot cross-references because you don't have to manually mark a particular spot. Paragraph cross-references also make it easier to edit a document that contains them, because you don't have to work around an easy-to-miss marker in the middle of a paragraph as you do with spot cross-references.

If you're inserting a cross-reference in a structured document, see "Working with cross-references in structured documents" on page 215.

Note: *The Cross-references feature supports the Unicode text encoding standard.*

Inserting paragraph cross-references

Paragraph cross-references refer to a heading or some other text that occupies a whole paragraph. If the paragraph extends beyond the page on which it begins and the cross-reference includes a page number, the page number is that of the beginning page. Because most cross-references are to entire one-line or two-line paragraphs—for example, headings, figure titles, and table titles—you'll probably use paragraph cross-references most of the time.
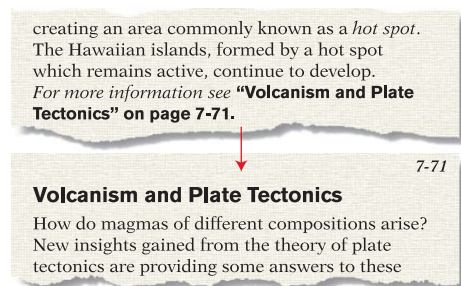
Paragraph cross-reference

If you insert a paragraph cross-reference to a text inset, the cross-reference marker may be lost when the text inset is updated. To prevent the marker from being lost, first insert a cross-reference to the paragraph in the text inset's source document.

To insert a paragraph cross-reference:

1 If you're cross-referencing another document, open that document. You must have write permission to the document to add a cross-reference marker to it.

2 Click where you want to insert the cross-reference. You can insert a cross-reference in text frames but not in text lines (graphic objects created with the Text Line drawing tool).

3 Choose Special > Cross-Reference.

4 If you're cross-referencing information in another document, choose the name of that document from the Document pop-up menu.

5 Choose Paragraphs from the Source Type pop-up menu. All the tags in the document's Paragraph Catalog appear in the scroll list.

6 In the Paragraph Tags scroll list, select the tag of the paragraph you want to cross-reference. For example, if you're cross-referencing a paragraph tagged Head1, select Head1 in the Paragraph Tags scroll list. All Head1 paragraphs then appear in the Paragraphs scroll list.

7 In the Paragraphs scroll list, select the paragraph to cross-reference.

8 Choose the format of the cross-reference from the Format pop-up menu. The menu lists the cross-reference formats in the current document.

9 Click Insert. FrameMaker puts the cross-reference at the insertion point and a marker ⊤ at the start of the paragraph to which the cross-reference refers. FrameMaker inserts a marker only if a cross-reference marker isn't already there.

To insert a cross-reference to a paragraph in a text inset:

1 Open the source of the inset by double-clicking the inset and then clicking Open Source.

2 Insert a cross-reference to the paragraph anywhere in the source document.

3 Delete the cross-reference text. The marker will remain.

4 Save the source document, and then update the text inset by using Edit > Update References in the document that contains the text inset.

5 Insert another cross-reference to the paragraph, this time in the document that contains the inset. The cross-reference uses the marker in the updated inset.

Inserting spot cross-references

Spot cross-references refer to an individual word or phrase—a spot—in a paragraph. For example, use a spot cross-reference if you have a paragraph that spans two pages and you want to refer to the second page of your reference.
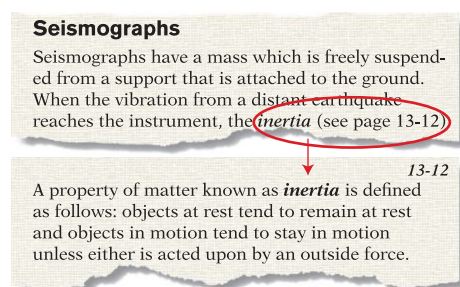
Spot cross-reference

To insert a spot cross-reference:

1 Click where you want to insert the marker. For example, if you want to direct readers to a definition, click at the start of the defined word. Or, if you want to direct readers to an anchored frame, click next to the anchored frame symbol. You can put a marker anywhere within a column of text.

If you want to insert a cross-reference marker in a text inset, insert the marker in the source document (see "Displaying the source of a cross-reference" on page 201).

2 Choose Special > Marker.

3 Choose Cross-Ref from the Marker Type pop-up menu.

4 Enter an identifying word or phrase for the marker in the Marker Text box. The marker text can be up to 255 characters long. (Each character in a Japanese font counts as two characters.)

For example, if you insert a marker where *inertia* is defined, you can enter **Definition of inertia**. This text appears in the Cross-Reference dialog box to help you identify the source. It doesn't appear in the cross-reference itself.

5 Click New Marker. A marker symbol ⊤ appears at the insertion point when text symbols are visible.

6 Insert a cross-reference as if it were a paragraph cross-reference (see "Inserting paragraph cross-references" on page 199) but in step 5, choose Cross-Reference Markers from the Source Type pop-up menu. Then select the marker text in the Cross-Reference Markers scroll list, choose a cross-reference format, and click Insert.

To display the information that is kept in cross-reference markers, you can generate a list of Cross-Ref markers (see "Resolving cross-references" on page 207). Alternatively, you can use Edit > Find/Change to find markers of type Cross-Ref (see "About searching" on page 76).

Working with cross-reference markers

FrameMaker uses a marker (of type Cross-Ref) to keep track of the source of each cross-reference. If you move a marker and then update cross-references, the marker's new location is used to update the cross-reference.

For paragraph cross-references, the marker text contains a number assigned to the marker, and the paragraph tag and text of the paragraph being cross-referenced. (The marker text is not updated, so the tag and text may not match the cross-reference.) For spot cross-references, the marker text is the text you typed for the marker.

When you insert a paragraph cross-reference, a cross-reference marker is inserted for you automatically at the beginning of the paragraph if necessary. Before you insert a spot cross-reference, however, you must insert a marker manually to mark the spot.

Within a document, when you copy and paste text that contains a cross-reference marker, the marker is not duplicated. The cross-reference continues to refer to the text in its original location.

Displaying the source of a cross-reference

You can easily display the source of any cross-reference, even if the source is in a different document.

To display the source of a cross-reference:

❖ Double-click the cross-reference, and then click Go to Source. FrameMaker displays the page that contains the source of the cross-reference and places the insertion point at the beginning of the source paragraph.

You can also use one of the following shortcuts to select the cross-reference marker:

• (Windows) Alt-Control-click the cross-reference.

• (UNIX) Control-right-click the cross-reference.

If the source is in a different document, hold down Shift while using one of the preceding shortcuts to open the document without closing the current document.

Editing cross-references

You copy, move, and delete cross-references, as well as cross-reference elements in structured documents, just as you do regular text. You can also edit a cross-reference in the following ways:

• Reword the cross-reference by choosing a different cross-reference format.

• Refer to different information by choosing a different source.

If you want to edit the text of the cross-reference as you do regular text, you must convert it to text. After conversion, the text can no longer be updated as a cross-reference.

To select a cross-reference:

❖ Click it once.

Note: When working with structured documents, you can click the cross-reference element in either the document window or the Structure View.

To choose a different source or format for a cross-reference:

1 Double-click the cross-reference. If the source is located in a different document, click OK to open the source document.

2 Specify a source or format in the same way that you would when inserting a cross-reference (see "Inserting cross-references" on page 199).

3 Click Replace.

To convert a cross-reference to text:

1 If you're converting a single cross-reference, select it; otherwise, click in the document.

2 Choose Special > Cross-Reference.

3 Click Convert to Text.

4 Indicate the scope of cross-references to convert and click Convert.

Creating cross-reference formats

Cross-reference formats help maintain a consistent cross-reference style throughout a document by determining the appearance of each cross-reference—its wording, the information it contains, and its character format. For example, the format of the cross-reference *See "Volcanism and Plate Tectonics" on page 7-71* determines that the section title is in quotation marks. The cross-reference format also provides the words *See* and *on page,* and it provides building blocks that represent the actual section title and page number.
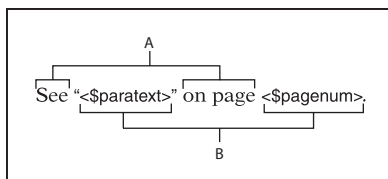
A. *Text you type* **B.** *Building blocks*

A cross-reference format consists of a name and a definition. The entire definition, including building blocks, can be up to 255 characters long.

FrameMaker templates include several cross-reference formats. You can change them or create others. If another document contains the cross-reference formats you want, you can import them into your document (see "Importing and updating formats" on page 408 and "Changing the format of files in a book" on page 465).

To create a cross-reference format:

1 Choose Special > Cross-Reference.

2 Click Edit Format.

3 Type a name for the cross-reference format in the Name text box. Format names are case-sensitive *page* and *Page* would be different formats.

4 Do any of the following:

- To use text (such as *See* or *on page*) in a cross-reference format, click in the Definition text box and enter the text. For information, see "Including text in a cross-reference" on page 204.

- To include a building block that refers to source information, such as a page number, chapter number, or heading text, click in the Definition text box and then click the building block in the Building Blocks scroll list. The building block appears at the insertion point. For information, see "Using building blocks for source information" on page 204.

- To change the character format within the cross-reference, click in the Definition text box and then click the character format at the bottom of the Building Blocks scroll list. The building block appears at the insertion point. To return to the default paragraph format before the end of the cross-reference, insert <Default ¶ Font> in the definition. For information, see "Using building blocks for character formats" on page 205.

5 Click Add and then click Done. The new cross-reference format appears in the Formats pop-up menu in the Cross-Reference dialog box.

Including text in a cross-reference

You can include specific characters or words in the cross-reference. In most cases, you simply enter the text in the Definition text box. But a few characters are entered or displayed differently.

For example, an angle bracket (< or >) in a cross-reference format ordinarily signals a building block. To include an angle bracket as part of the text, precede it with a backslash (\).

For information on adding volume and chapter numbers to cross-references, see "Including volume and chapter numbers in cross-references" on page 464.

Note: Some special characters are entered or displayed differently in dialog boxes. In Windows, you enter a sequence of characters beginning with a backslash (\); these sequences are listed in "Appendix A: Typing in dialog boxes" on page 670. In UNIX systems, the backslash sequences may appear in text boxes, even though you don't have to type the sequences to enter the characters.

Using building blocks for source information

You use building blocks to include information about the source of the cross-reference, such as its paragraph text (but not the cross-reference marker text), paragraph autonumber, or volume, chapter, or page number. Building blocks for source information appear in angle brackets (< and >) and begin with a dollar sign ($). The following building blocks are grouped by the type of information they represent.

Source file FrameMaker provides the following building blocks for referring to the source file.

Building block	Meaning
<$filename>	The name of the source document
<$fullfilename>	The full pathname of the source document
<$volnum>	The volume number of the document that includes the source paragraph
<$chapnum>	The chapter number of the document that includes the source paragraph

Source paragraph FrameMaker provides the following building blocks for referring to the source paragraph.

Building block	Meaning
<$pagenum>	The page number of the source paragraph
<$paratext>	The text of the source paragraph, excluding its autonumber (If the character format of text in the source paragraph was changed by applying a Character Catalog format, the font family, superscript, and subscript properties are preserved in the text of the cross-reference.)
<$paratag>	The tag of the source paragraph
<$paranum>	The source paragraph's entire autonumber, including any text in the auto-number format
<$paranumonly>	The source paragraph's autonumber counters, including any characters between them

Paragraph preceding the source paragraph   A cross-reference to a subsection often needs to identify the section that contains it. For example, a cross-reference to a subheading might identify the main heading under which it is found, as in the following: *See "Types of Plate Boundaries" in "Plate Tectonics."* In the example, *Types of Plate Boundaries* is the source paragraph, and *Plate Tectonics* is the main heading under which the source paragraph appears.

FrameMaker provides the following building blocks for referring to a paragraph preceding the source. In each of the building blocks, replace *tag* (in brackets) with the tag of the paragraph to which you want to refer, but don't delete the brackets. For example, if you want to refer to the text of the preceding paragraph tagged Head1, use <$paratext[Head1]>.

Building block	Meaning
<$pagenum[*tag*]>	The page number of the preceding paragraph with the specified tag
<$paratext[*tag*]>	The text of the preceding paragraph with the specified tag, excluding its autonumber (If the character format of text in the source paragraph was changed by applying a Character Catalog format, the font family, super-script, and subscript properties are preserved in the text of the cross-reference.)
<$paratag[*tag*]>	The tag of the preceding paragraph with the specified tag
<$paranum[*tag*]>	The entire autonumber of the preceding paragraph with the specified tag, including any text in the autonumber format
<$paranumonly[*tag*]>	The autonumber counters of the preceding paragraph with the specified tag, including any characters between them

Important: Don't use a paragraph tag that includes brackets ([ ]).

Using building blocks for character formats

All formats in the document's Character Catalog appear at the end of the Building Blocks scroll list. You insert them as you do other building blocks.

If you don't insert a character format in a cross-reference format, FrameMaker uses the font at the insertion point when a cross-reference is inserted with that format. If you change the character format for the cross-reference, the change applies only to the cross-reference, not to the text following it in the paragraph.

Important: Don't use a character tag that includes angle brackets (< >).

Examples of cross-reference formats

The first four examples in the following table include building blocks that refer to the source paragraph. The first example uses a chapter number building block and the source paragraph's text (see "Including volume and chapter numbers in cross-references" on page 464). The second includes the source paragraph's text and autonumber. The third includes only the source paragraph's text. The fourth includes only the page number of the source paragraph.

Example	Format
Chapter 4, "Climatic Effects."	<$chapnum>, "<$paratext>."
Section 2.3.4, *Volcanoes.*	Section <$paranumonly>, <TitleFont><$paratext>.
See *Plate tectonics*, next.	See <TitleFont><$paratext> <Default ¶ Font>, next.
page 23	page <$pagenum>
See "Magma" in "Volcanoes."	See "<$paratext>" in "<$paratext[Head1]>."

The last example includes a building block that refers to a paragraph preceding the source paragraph. In this example, the cross-reference format could also be the following:

See "<$paratext>" in "<$paratext[Title, Head1]>."

In this case, the cross-reference refers to either the chapter title (Title) or the section heading (Head1), whichever is closer to the *Magma* source paragraph.

You can use the </> building block as a substitute for <Default Para Font> in cross-reference definitions.

Editing cross-reference formats

When you change or delete cross-reference formats, the changes are reflected immediately in all cross-references that use the affected formats.

You can change the format of cross-references in a text inset (text imported by reference) if the inset uses the formats of the document into which it is imported. If the inset uses formats from the source document, you need to change the formats in the source document.

To change a cross-reference format:

1 Choose Special > Cross-Reference and click Edit Format.

2 In the Formats scroll list, select the format you want to change, and then edit the definition. You can use text and building blocks in the same way you do when creating a cross-reference format (see "Creating cross-reference formats" on page 203).

3 Click Change, and then click Done. If cross-references in the document use the format, the Update Cross-Reference dialog box appears. Indicate the scope of cross-references to update, and then click Update.

To delete a cross-reference format:

1 Choose Special > Cross-Reference, and click Edit Format.

2 In the Formats scroll list, select the format you want to delete.

3 Click Delete, and then click Done. If cross-references in the document use the format, you are asked whether you want to convert these cross-references to text.

Maintaining cross-references

If you edit the source of a cross-reference or if the pagination of the source document changes, the cross-reference may no longer be accurate. You can update cross-references to be sure that they show correct information from the source.

Normally, FrameMaker updates all cross-references when you open a document. It also updates all internal cross-references and cross-references to open documents when you print a document. You can also update cross-references manually. If the document contains unresolved cross-references—cross-references to sources that FrameMaker can't find—you'll need to help locate the sources.

Note: FrameMaker does not update cross-reference when opening a document in the following circumstances: when fonts or dictionaries are missing, when opening a document saved with an earlier version of FrameMaker, and when opening a MIF file.

When editing text, make sure you don't accidentally delete cross-reference markers; see "Resolving cross-references" on page 207.

Suppressing automatic updating of cross-references

If a document contains many cross-references, you can improve its opening time by suppressing automatic updating of the cross-references. After you suppress automatic updating, cross-references are no longer updated when you open the document. However, internal cross-references and cross-references to open documents are still updated automatically when you print.

To suppress automatic updating of cross-references in a document:

1 To suppress updating in a document, choose Edit > Update References.

2 Choose Suppress Automatic Updating from the Commands pop-up menu.

3 Select Suppress Automatic Updating of All Cross-References, and then click Set. Click Done. Cross-references will be updated only when you print or when you manually give instructions to update.

To suppress automatic updating of cross-references in a book:

1 In a book window, choose Edit > Suppress Automatic Reference Updating.

2 Select Suppress Automatic Updating, and then click Set. Cross-references will be updated only when you print or when you manually give instructions to update.

Updating cross-references manually

You should update all cross-references in a document before distributing the document. You should also routinely update after editing the document or editing any other documents that are sources for the cross-references. For information on updating cross-references in a book, see "Updating books" on page 466.

FrameMaker does not update cross-references when opening a document in the following circumstances:

• When cross-references refer to information in hidden conditional text. Show the text that contains the sources of the cross-references before updating the cross-references.

• When fonts or dictionaries are missing.

• When opening a document saved with an earlier version of FrameMaker.

• When opening a MIF file.

To update cross-references in a document manually:

1 Choose Edit > Update References.

2 Select All Cross-Reference, and then click Update. If FrameMaker resolves all the cross-references, you're finished. If FrameMaker can't resolve all the cross-references, the Update Unresolved Cross-References dialog box appears.

Resolving cross-references

Occasionally, FrameMaker can't update a cross-reference for the following reasons:

• The marker indicating the source of the cross-reference has been moved to a different file, or the file itself has been moved or renamed.

- The marker indicating the source has been deleted.

- The file containing the marker is currently open by someone else on the network server.

When FrameMaker can't resolve a cross-reference during an automatic update (when opening or printing), an alert message appears. You can resolve the cross-references after dismissing the message.

If you want to inspect all the unresolved cross-references at the same time, you can generate a list of unresolved cross-references.

To resolve a cross-reference when a marker has been moved to another file or the file has been renamed:

1 Choose Edit > Update References.

2 Choose Update Unresolved Cross-References from the Commands pop-up menu.

3 In the Total of Unresolved Cross-References scroll list, select the file that used to contain the source of the unresolved cross-reference. The text below the scroll list indicates how many cross-references to the selected file are unresolved.

4 In the Look In scroll list, select the file that contains the source, and click Open.

If FrameMaker can't perform the update, select a different file in the Look In scroll list, and then try again.

5 To resolve cross-references to any other file listed in the Total of Unresolved Cross-References scroll list, repeat steps 3 and 4. Then click Done.

To resolve a cross-reference when a marker has been deleted:

1 Choose Edit > Find/Change.

2 Choose Unresolved Cross-Reference from the Find pop-up menu and click Find. FrameMaker finds the first unresolved cross-reference and selects it. The marker text of the last-used source marker for the cross-reference appears in the Find text box to help you locate the source.

3 If you no longer need the cross-reference, delete it. Otherwise, do one of the following:

- If FrameMaker finds an unresolved paragraph cross-reference, double-click the cross-reference to display the Cross-Reference dialog box, specify a different source, and click Replace.

- If FrameMaker finds an unresolved spot cross-reference, insert a new cross-reference marker in the appropriate text (see "Inserting cross-references" on page 199). Use exactly the same marker text that appears in the Find/Change dialog box.

4 Repeat steps 2 and 3 until all unresolved cross-references are resolved.

To generate a list of unresolved cross-references:

1 Choose Special > List of > References. When prompted, specify whether you want to create the generated file as a stand-alone document or add it to a book.

2 Move Unresolved Cross-Refs to the Include References scroll list, and then click Set.

The generated list includes the page number of each unresolved cross-reference, indicates whether each missing source is internal (in the current document) or external (in a different document), and includes additional infor-mation—for example, the tag and text of the source paragraph. The tag and text may be inaccurate because they aren't updated after you initially insert the cross-reference. For spot cross-references, the list includes the marker text.

Working with footnotes

When you insert a footnote reference and footnote, FrameMaker gives it a number, formats the text of the footnote, and inserts a separator if the footnote is the first one in a column.
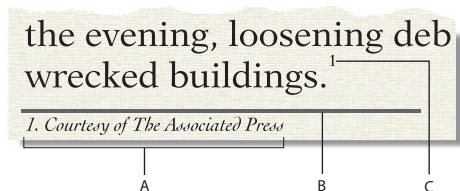
A. *Footnote* **B.** *Footnote separator* **C.** *Footnote reference*

As you insert, move, and delete footnotes, FrameMaker adjusts the numbering. As you edit the surrounding text, FrameMaker moves the footnotes from page to page as needed.

The footnote reference and the footnote itself usually appear in the same column. When you insert a footnote reference in a table, the footnote appears at the end of the table. If the table flows onto a second page, all the footnotes appear on the second page regardless of the page on which the footnote reference appears.

FrameMaker allows document footnotes to be numbered consecutively across all files in a book. See "Changing the footnote numbering style" on page 212.

If you're working with footnotes in a structured document, see "Working with footnotes in structured documents" on page 221.

Note: *The Footnotes feature supports the Unicode text encoding standard.*

To insert a footnote:

1 Click where you want the footnote reference to appear. You can insert a footnote reference in a column of text or in a table cell.

2 Choose Special > Footnote. FrameMaker inserts the footnote reference, displays the footnote number at the bottom of the column or below the table, places the insertion point after the footnote number, and renumbers any footnotes that follow. (Footnotes are numbered consecutively in a text flow. If your document contains several text flows, footnote numbering in each flow will be independent of the others.)

3 Type the text of the footnote at the insertion point. When you finish typing the footnote, return to the main text by clicking in it or by choosing Special > Footnote again.

To place two footnote references together, place a space or a comma between them—for example, references [5] [6] or references [5,6]. Otherwise, the second footnote won't be created. If you place a comma between the footnote references, you should manually format the comma in superscript.

To edit a footnote:

❖ Select the footnote text and edit it as you do other text. You can't change a footnote number, because FrameMaker maintains the numbering.

To duplicate, move, or delete a footnote:

1 Select the footnote reference (not the footnote text).

2 Do one of the following:

• To duplicate or move the footnote, use Edit > Copy or Edit > Cut, and then Edit > Paste.

• To delete the footnote, press Delete.

Keeping a footnote in the same column as its reference

FrameMaker sometimes can't keep footnotes in the same column as the corresponding footnote reference. For example, if you insert a footnote reference at the bottom of a column of text so there is no space for the footnote below it, FrameMaker moves the footnote to the bottom of the next column. In such cases, you can force a column or page break before the footnote reference to keep the reference and the footnote together in the same column.

Adding text to a footnote may cause the last footnote in a column or on a page to move to the bottom of the next column or page. To reduce the chance of a footnote not fitting in a column, allocate more space for footnotes in a column (see "Changing footnote properties" on page 211).

Inserting more than one reference to a footnote

You can create a single footnote that has several footnote references—for example, a table footnote with references in several cells.

Type	Depth in Kilometers	Greatest Richter Magnitude
Shallow	0-60ᵃ	8.6
Intermediate	60-300ᵃ	7.5
Deep	300 or more	6.9

a. Approximately 90% of all earthquakes occer at depths between 0 and 100 Kilometers

Two references for one footnote

You create multiple footnote references by inserting the first reference in the usual way and then using cross-references for additional footnote references.

If you add or remove a footnote that appears before the footnote being cross-referenced, the cross-reference may refer to the wrong number. Choose Edit > Update References to update the numbering.

To insert more than one reference to a footnote:

1 Insert the first footnote reference.

2 If necessary, create a cross-reference format for additional footnote references.

The cross-reference format must display the footnote number correctly. For example, if footnote references are displayed in superscript, and if the document contains a Superscript character format, a cross-reference format defined as <Superscript><$paranumonly> displays the autonumber of a paragraph as a superscript. When you use it to refer to a paragraph that contains a footnote, it displays the footnote number in superscript.

3 Click where you want to insert the additional footnote reference.

4 Choose Special > Cross-Reference to insert a cross-reference to the footnote where you clicked. Use the cross-reference format you created in step 2.

5 Click Insert. FrameMaker inserts a cross-reference that is identical to the original footnote reference.

Maintaining cross-references to footnotes after editing

After you edit a document, make sure the additional references to footnotes are accurate. For example, a cross-reference to a footnote reference may be misnumbered, or the footnote—unless the reference is in a table—may be on the wrong page. If a cross-reference is misnumbered, update the cross-references in the document (see "Maintaining cross-references" on page 206). If the footnote is on the wrong page, fix the page break or move the footnote.

Changing footnote formats

You can change any of the footnote properties—for example, the style of numbers, the numbering format, or the paragraph format to use for footnote text. And you have complete control over the size and contents of the separator—the area between the bottom of the column or table and the first footnote.

FrameMaker uses different formats for document and table footnotes.

Changing footnote properties

When you change footnote properties, all the changes except the paragraph format are applied to both new and existing footnotes.

To change footnote properties:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Choose Format > Document > Footnote Properties. To edit table footnote properties, choose Table Footnote from the pop-up menu.

3 Do the following:

• To adjust the maximum height allowed for footnotes in a column, enter a value in the Maximum Height Per Column text box.

• To use a different paragraph format for new footnotes, enter the format's tag in the Paragraph Format text box. (The format must be stored in the document's Paragraph Catalog.) To use a different format for an existing footnote, apply the format to it directly.

By default, documents may include paragraph formats named Footnote and TableFootnote to be used for new footnotes. To change the look of footnotes, change these formats. See "About paragraph and character formats" on page 101.

• Specify the format of the footnote reference in the main text and of the footnote number in the footnote. Either number can be in the superscript, baseline, or subscript position, and either can have a prefix and suffix.

4 Click Set.

Changing the footnote numbering style

You use the Numbering Properties dialog box to change footnote and table footnote numbering styles.

Note: If you're working with documents that are part of a book, it's a good idea to set the properties from the book window rather than directly from the document window. When the book is updated, the book properties will override the document properties.

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Choose Format > Document > Numbering. Choose either Footnote or Table Footnote from the pop-up menu.

3 Choose a numbering style from the Format pop-up menu. If you choose Custom, you can specify a set of custom footnotes in the Custom Numbering dialog box; click Set when you're done.

Your custom style can use any combination of numbers, letters, and symbols, which will be used in the order you enter them. If you use symbols in a custom style and your document contains more footnotes than symbols, the symbols are repeated. For example, if you use the two symbols * and †, and the document contains three footnotes, the third footnote is marked **. The footnote number will appear in the default font of the footnote's paragraph format.
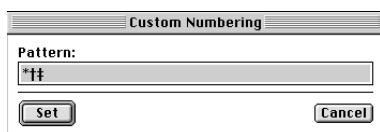
Custom footnote numbering

Note: Some special characters are entered or displayed differently in dialog boxes. In Windows, you enter a sequence of characters beginning with a backslash (\); these sequences are listed in "About typing in dialog boxes" on page 670. On UNIX systems, the backslash sequences may appear in text boxes, even though you don't have to type the sequences to enter the characters.

4 Choose whether you want document footnote numbers to be restarted on each page, start numbering footnotes at a specific number, or be continued from the previous chapter in the book. When you number sequentially, you can start from any number. The numbering of table footnotes always starts over with each table.

5 Click Set.

Changing the footnote separator

The footnote separator is a graphic frame automatically placed between the bottom of the body text or table and the first footnote. It usually contains a line or other design element to provide visual separation between the body text and footnotes. The height of the frame determines the space between the body text or table and the footnote.

Separator frames for document and table footnotes are stored on a reference page (see "Working with reference pages" on page 397). Their names are the same as the paragraph formats used for these footnotes—by default, Footnote and TableFootnote.

Reference page

the evening, loosening debr
wrecked buildings.[1]

1. Courtesy of The Associated Press

Footnote separator on body page

To change the footnote separator:

1 Choose View > Reference Pages and display the page that contains the footnote separator frame.

2 Resize the frame or edit its contents. You can change the size or position of the line in the frame, or remove or replace the line. If you reduce the height of the frame, the first footnote is positioned closer to the bottom of the text or table. If you move the line downward in the frame, the first footnote stays in the same position but the line moves closer to it.

💡 *To add space, but not a line, between the body text or table and the footnotes, leave the separator frame empty.*

3 Choose View > Body Pages.

Using footnotes in multicolumn layouts

The placement of footnotes in multicolumn layouts depends on the location of the footnote reference and on the presence or absence of side heads or text that straddles columns.

Side heads In a single-column document with side heads, footnotes in the body column run the width of the body column, but footnotes in a side head span the side-head area *and* the body column.
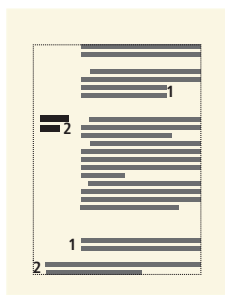
Footnotes in side head span body column and side-head area.

If you want a footnote in a side head to be aligned with footnotes in the body column, change the indents of the footnote in the side head area by adding a distance equal to the width of the side-head area plus the gap (see "Changing indents and alignment" on page 110).

Straddles In a multicolumn format where some text straddles all columns and other text does not, footnotes may or may not straddle the columns. Footnotes whose references appear in straddle text always straddle the columns, and these footnotes appear at the bottom of the text frame. Footnotes whose references appear in nonstraddle text straddle the columns if the footnotes' paragraph format is set to Across All Columns (in the Pagination properties of the Paragraph Designer).
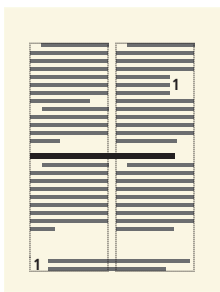
Footnote across all columns

If the paragraph format is set to In Column, the footnote appears either just above the next straddle paragraph (if there is one on the page) or at the bottom of the column.
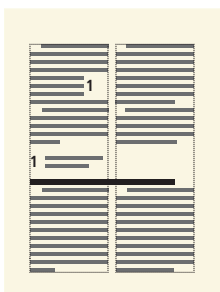
Footnote in column

If the footnotes appear out of order, select Across All Columns for the footnote paragraph format to force all footnotes to appear in numerical order at the bottom of the page.

Working with endnotes

Endnotes appear at the end of a document rather than at the bottom of a page or below a table. You type the endnotes at the end of the document just as you would any other paragraphs, give the endnotes paragraph autonumbers, and then use cross-references to the autonumbered paragraphs as endnote references.

FrameMaker does not automatically maintain endnotes. If you change the order of endnote references while editing the document, you'll need to rearrange the endnotes in matching order. If you delete an endnote, you'll need to delete the reference to it manually. If you're not willing to maintain the endnotes in these ways, use footnotes. FrameMaker automatically maintains footnote order and numbering.

To create endnotes:

1 Type the first endnote at the end of the document and assign it the paragraph format for endnotes. The paragraph format should include an autonumber so the endnotes will be numbered consecutively.

2 Click where you want to insert the endnote reference and cross-reference the endnote. Use the cross-reference format you created for endnotes.

For example, if endnote references are to be displayed in superscript, and if the document contains a Superscript character format, the cross-reference format <Superscript><$paranumonly> displays the autonumber of the endnote paragraph as a superscript.

3 Create additional endnotes as you created the first one.

To maintain endnotes:

❖ Do the following:

• If you change the order of endnote references while editing the document, rearrange the endnotes to match the order of the references. Then update the cross-references to update the endnote reference numbers. For information on updating cross-references, see "Maintaining cross-references" on page 206.

• If you delete an endnote, delete all references to it. Otherwise, the reference will be an unresolved cross-reference.

Working with cross-references in structured documents

When working with structured documents, FrameMaker keeps cross-references, variables, and footnotes up to date for you. To add a cross-reference in FrameMaker, you normally use an element designed for that purpose. The cross-reference element points to a location, or *source*, that can be in the same document or a different document. The source is also normally an element, such as a Chapter, Section, Figure, or Table element.

When you use an element at both ends of a cross-reference—that is, the cross-reference element and another element as the source—the reference is represented in the document's structure and is preserved if you export to XML or SGML.

Most element-based cross-references show text from the source element, up to the first paragraph break. In the following example, the cross-reference points to a Section element and shows text from the Head element at the beginning of the Section.
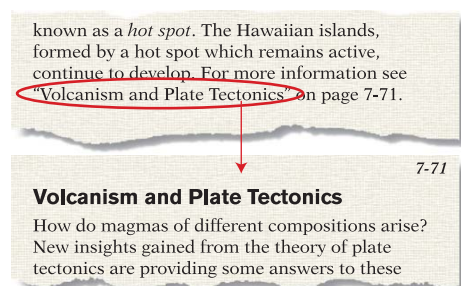
An element-based cross-reference shows text from the source element.

If a cross-reference points to a source in an unstructured flow, the source can be either a whole paragraph or a marked spot in text. It is also possible to point to a paragraph or a spot in a structured flow, but it's best to point to another element. (Cross-reference elements are often defined to be invalid if they point to anything other than an element.)

ID and ID Reference attributes in structured documents

FrameMaker uses attributes in cross-reference and source elements to maintain the connection between the two elements. The source element has an ID attribute that stores a unique identifier in the document or book. The cross-reference element has an ID Reference attribute that also stores the source's identifier as a way of keeping track of what the reference points to.

You can see these attributes if you look at the Structure View with attributes showing, but you usually do not need to do anything with them.
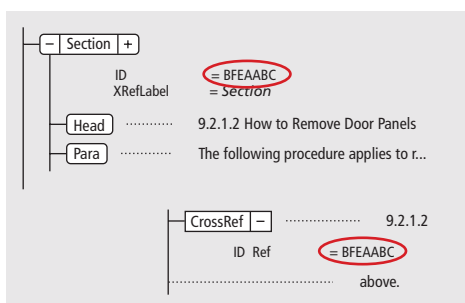
ID from the source element (above); same ID stored in cross-reference (below)

In most cases, FrameMaker provides the IDs for you, as random eight-character strings. (If your attributes are set up this way, you can provide the IDs yourself.) Then when you insert a cross-reference and specify its source, FrameMaker fills in the cross-reference's attribute with the ID from the source.

An ID that FrameMaker generates conforms to the structure reference concrete syntax so that your cross-references are preserved if you export to a structured format.

Cross-reference formats in structured documents

A cross-reference format defines the appearance of a cross-reference: its wording, the source information it shows, and, optionally, any special text formatting. For example, the cross-reference *See "Volcanism and Plate Tectonics" on page 7-71* might use this format:
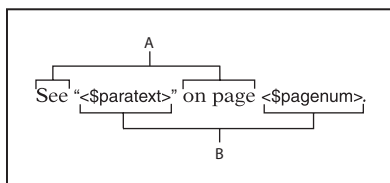
A. *Text that appears literally* **B.** *Building blocks*

The *building blocks* of the formula are replaced with source information and are updated when necessary—for example, if the source element's page number changes.

When you insert a cross-reference, you can select the format to use. A cross-reference element may have a format already associated with it as part of its element definition.

If your document does not have a cross-reference format you need, ask your developer to create one or to modify an existing format.

Use the following building blocks to create cross-reference formats that refer to structured FrameMaker elements:

Building block	Meaning
<$elempagenum>	The page number of the source element
<$elemtext>	The text of the source element (up to the first paragraph break), excluding its autonumber, but including any prefix and suffix specified in the element definition
<$elemtextonly>	The text of the source element (up to the first paragraph break), excluding its autonumber and any prefix and suffix specified in the element definition
<$elemtag>	The tag of the source element
<$elemparanum>	The entire autonumber of the source element's first paragraph (or of the paragraph containing the source element), including any text in the auto-number format
<$elemparanumonly>	The autonumber counters of the source element's first paragraph (or of the paragraph containing the source element), including any characters between the counters
<$attribute[name]>	The value of the attribute with the specified name (or, if no value is specified, the default value)

Inserting element-based cross-references in structured documents

When inserting a cross-reference, you normally use a cross-reference element and point the reference to another element. The source element might be an entire section or chapter, a table or graphic, a paragraph, or a location within a paragraph (such as a definition)—it depends on how the elements are defined in your document.

Note: An element can be a source for cross-references only if it has a unique ID attribute. If you want to insert a cross-reference to a source that does not have an ID attribute, ask your application developer to add the attribute to the source element's definition.

For information on inserting a cross-reference that's not an element, or pointing to a source that is a paragraph or spot, see "Inserting cross-references" on page 199.

To insert an element-based cross-reference:

1 If the source element is in another document, open that document. If the source element does not have a value assigned to its ID attribute, you must have write permission to the other document so that FrameMaker can provide an ID.

2 Click where you want to insert the cross-reference element. You can insert a cross-reference in text frames but not in text lines (graphic objects created with the Text Line drawing tool).

3 Select a cross-reference element in the Element Catalog and click Insert.

You can also use Special > Cross-Reference to insert an element. If more than one element is available, choose the one you want from the Element Tag pop-up menu in the Cross-Reference dialog box.

4 If you're cross-referencing information in another document, choose the name of that document from the Document pop-up menu.

5 Choose Elements Listed in Order or Elements Listed by ID from the Source Type pop-up menu. The tags of all elements for which an ID attribute is defined (in the source document's element definitions) appear in the Element Tags scroll list.

💡 *List elements by IDs if you provided the IDs and have used values that identify the elements' contents. (If FrameMaker provided the IDs, the values are random strings that will not be helpful in finding the element you want.)*

6 Select the tag of the source element in the Element Tags scroll list. For example, if you're cross-referencing a Section element, select Section. All Section elements in the source document appear in the Elements scroll list.

Some elements may use *context labels* to provide information about the element's location in the structure. For example, if Section elements can be nested within other Section elements, the labels might identify whether the elements are first-, second-, or third-level sections.
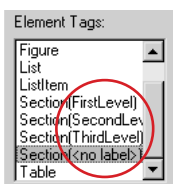
Context labels

If an element uses context labels, a <no label> entry also appears in the scroll list for occurrences not described by the labels. In the example above, Section(<no label>) represents Section elements that are at a fourth level or lower in the document.

7 Select the element you want to cross-reference in the Elements scroll list.

If you chose Elements Listed in Order from the Source Type pop-up menu, the elements are listed in the order they appear in the document.

If you chose Elements Listed by ID, they are listed in alphabetical order by ID value. The ID value appears first, followed by a colon and the starting text of the element. Elements with no ID value appear at the end of the list, preceded by a colon.

8 To change the cross-reference format, choose from the Format pop-up menu. The menu lists cross-reference formats stored in the current document. The cross-reference may have a format preselected, but you can change the format and it will not be considered a format rule override.

Consult your developer before changing a cross-reference format. Your document may have a separate element defined for each format you'll need.

9 Click Insert. FrameMaker puts the cross-reference at the insertion point. A bubble for the reference appears in the Structure View, with a text snippet that shows the first part of the text from the reference.

10 If the Attributes for New Element dialog box appears, enter attribute values for the cross-reference, and select Insert Element (see "Entering attribute values as you insert elements" on page 46).

If no cross-reference element is available at the location you want, you might use an invalid element. After inserting the element, talk to your developer about making it valid at this location.

To use an invalid cross-reference element:

❖ Do one of the following:

• To use a cross-reference element that is valid in another part of the document, either insert the element in a valid location and then move it, or use the All Elements setting (see "Changing the scope of elements available in a structured document" on page 18) to make the element available everywhere and then insert the element where you want it.

• To insert an invalid cross-reference element with a default tag, choose Special > Cross-Reference, and choose CROSSREF from the Element Tag pop-up menu. (This option appears in the menu if no defined cross-reference elements are available.)

Working with ID values in structured documents

FrameMaker uses attributes to maintain the connection between a cross-reference element and a source element. The source element has an ID attribute with a value that uniquely identifies the location in the document. When you insert a cross-reference to the source, the same value is stored in an IDRef attribute for the cross-reference element.

If you insert a cross-reference to a source that has an ID attribute but does not yet have a value for the attribute, FrameMaker automatically provides the value.

ID attributes are often defined to be read-only so that FrameMaker always provides the ID values. An ID that FrameMaker generates is an eight-character string that conforms to the XML or SGML reference concrete syntax.

How ID attributes are validated in structured documents

FrameMaker tries to ensure that your IDs are unique in the following ways:

• When FrameMaker generates an ID, it is virtually guaranteed to be unique in its document—and even in its book, because documents in a book have different filenames and part of the generated IDs comes from the filename.

• If you enter an ID that is not unique, the ID is not accepted. FrameMaker does not test for whether an entered ID is used in a different document in a book, but you can validate the book to find duplicate IDs (see "Validating structured books" on page 473).

• If you paste a copy of an element with a duplicate ID, the pasted element loses its ID.

It is still possible for a document to end up with IDs that are not unique—for example, if you show hidden conditional text that contains an element with the same ID as another element. The duplicate IDs are identified as invalid in the Structure View. (The ID is in red and has a red *x* to its left.)
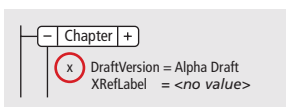
Invalid value

An ID Reference attribute may be defined to require a value. If an attribute requires a value but does not have one, the cross-reference probably points to a paragraph or spot within text rather than an element. FrameMaker identifies the attribute as invalid in the Structure View. (The attribute has a red hole to its left and *<no value>* in red where the value should be.)
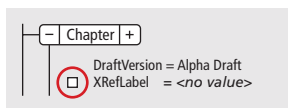
Missing a required value

Providing your own ID values in structured documents

If the ID attributes are not read-only, you may want to provide the IDs so that you can use values that are more meaningful. Give the source elements their IDs before inserting cross-references to them.

To provide a value for an ID attribute:

❖ Enter an ID in the Attributes dialog box. You can use any combination of characters on your keyboard, up to 255 characters. For information on entering attribute values, see "Assigning attribute values" on page 46.

Keep in mind that the ID will appear in the Cross-Reference dialog box and in the Structure View. Use a brief name that you'll remember or recognize later. For example, you might assign the ID value Art to an element for a chapter titled The Art Department.

If you plan to export to XML or SGML, follow the naming rules for the syntax you'll be using in XML or SGML. Ask your developer for recommendations on name length and characters allowed.

You can also edit an ID (unless the attribute is defined to be read-only), but any cross-references pointing to the element will be unresolved.

If you need to change an element's ID, you can update existing cross-references to the element. Search for elements that have an ID Reference attribute with the old ID, and replace the old ID with the new one. For more information on searching for attribute values, see "Finding elements and attributes" on page 49.

Resolving cross-references in structured documents

Occasionally, FrameMaker does not update a cross-reference because it cannot find the source. This can happen for one of the following reasons:

• The source of the cross-reference has been moved to a different file, or the source file itself has been moved or renamed.

• The source has been deleted, or if the source is a paragraph or spot, the marker indicating the source has been deleted.

• The value for the source element's ID attribute or the cross-reference's ID Reference attribute has been changed or deleted. The ID value must be the same at both locations.

For more information on resolving cross-references, see "Resolving cross-references" on page 207.

To resolve a cross-reference when the source has been deleted:

1 Choose Edit > Find/Change.

2 Choose Unresolved Cross-Reference from the Find pop-up menu and click Find. The Find/Change dialog box finds the first unresolved cross-reference and shows the ID, element tag, and text of the source.

3 Do one of the following:

• If you do not need the cross-reference, delete it.

• If you want the cross-reference to point to a different source, double-click the reference in the document window to display the Cross-Reference dialog box, specify a source, and click Replace.

4 Repeat step 2 and step 3 until all unresolved cross-references are resolved.

To resolve a cross-reference when the ID and ID Reference values do not match:

❖ Edit the ID or the ID Reference value so the two values match. (ID attributes are often read-only, so you may have to edit the ID Reference.) For information on editing attribute values, see "Entering or editing attribute values for elements already in a document" on page 47.

To generate a list of unresolved cross-references:

1 Choose Special > List of > References. When prompted, specify whether you want to create the generated file as a stand-alone document or add it to a book.

2 Move Unresolved Cross-Refs to the Include References scroll list, and then click Set.

The generated list includes the page number of each unresolved cross-reference, indicates whether each missing source is internal (in the current file) or external (in a different file), and shows the ID, element tag, and text of the source element.

Volcanoes (BABBHFIC: Section (3rd Level): Climatic effects) 87
(Internal) (CDBHFKLC: Figure: Magma flows) 23
Glaciers (DBAFHJKC: ChapterTitle: Glaciers) 41
Earthquakes (JMKELODA: ChapterTitle: Earthquakes) 57
(Internal) (HFDBKNLE: Section (1st Level): Erosion) 15
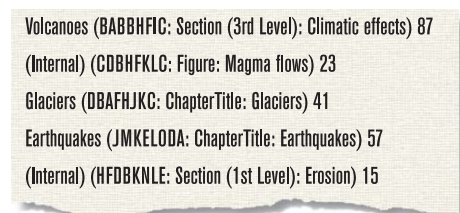
Generated list of unresolved cross-references

Note: *The element information in a generated list may be inaccurate because it is not updated after you initially insert cross-references.*

Working with footnotes in structured documents

As with unstructured documents, you can insert a footnote to text in a column or in a table in a structured document.

the evening, loosening deb
wrecked buildings.[1]

1. Courtesy of The Associated Press
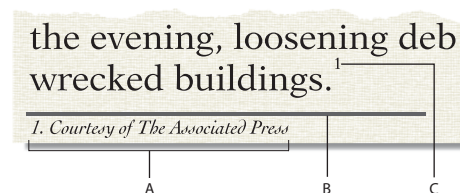
A. *Footnote*   **B.** *Footnote separator*   **C.** *Footnote reference*

Your document stores properties that determine the appearance of footnotes—for example, the style of the numbering (numbers, letters, or symbols), the paragraph format for footnote text, and the spacing above separators. If you need to change any of these properties, see your application developer.

For general information on footnotes, and information on inserting a footnote that's not an element (which you can do only in an unstructured flow), see "Working with footnotes" on page 209.

To insert a footnote element:

1 Click where you want the footnote reference to appear.

2 Select a footnote element in the Element Catalog and click Insert.

FrameMaker inserts the footnote reference, displays a footnote number at the bottom of the column or end of the table, and renumbers any footnotes that follow. A bubble for the footnote appears in the Structure View, with a text snippet that shows the beginning of the footnote text.

You can also use Special > Footnote to insert a footnote element. If more than one footnote element is available, choose one from the Element Tag pop-up menu in the dialog box that appears.

3 If the Attributes for New Element dialog box appears, enter attribute values for the element and click Insert Element (see "Assigning attribute values" on page 46).

4 Type the text of the footnote at the insertion point. When you finish typing the footnote, return to the main text by clicking in it or by choosing Special > Footnote.

If no footnote element is available at the location you want, you might use an invalid element. After inserting the element, talk to your developer about making it valid at this location.

To use an invalid footnote element:

❖ Do one of the following:

• To use an element that is valid in another part of the document, either insert the element in a valid location and then move it, or use the All Elements setting (see "Changing the scope of elements available in a structured document" on page 18) to make the element available everywhere and then insert the element where you want it.

• To insert an invalid footnote with the default tag FOOTNOTE, choose Special > Footnote. (A default footnote is created if no defined footnote elements are available.)

To change the text of a footnote:

❖ Select the footnote text and edit it as you do other text. You can't change a footnote number because FrameMaker maintains the numbering.

To select a footnote for other editing:

❖ Click the footnote reference (not the footnote text), or click the footnote's bubble in the Structure View.

Inserting more than one reference to a footnote in a structured document

You can create a single footnote that has several footnote references—for example, a table footnote with references in several cells.

Type	Depth in Kilometers	Greatest Richter Magnitude
Shallow	0-60[a]	8.6
Intermediate	60-300[a]	7.5
Deep	300 or more	6.9

a. Approximately 90% of all earthquakes occer at depths between 0 and 100 Kilometers

Two references for the same footnote

To do this, you insert the footnote in the usual way and then use cross-references for the additional references to it.

You need to have a special cross-reference element already defined for the additional references. The element should display a reference number in the same way that the original footnote reference does. For example, if the number is in superscript in the original reference, the number in the cross-reference element should also be in superscript.

Note: If you add or remove a footnote that appears before the footnote being cross-referenced, the cross-reference may refer to the wrong number. Choose Edit > Update References to update the numbering.

To insert more than one reference to a footnote:

1 Insert the footnote element.

2 Where you want an additional footnote reference, insert a cross-reference element that was defined to display only a footnote reference (see "Inserting element-based cross-references in structured documents" on page 217).

Working with endnotes in structured documents

In structured documents, you usually use elements to set up endnotes. The endnote element is a regular autonumbered paragraph (not a footnote element). The cross-reference element displays a reference number to the endnote.

For general information on endnotes, setting up endnotes without using elements (which you normally do only in an unstructured flow), and maintaining endnotes, see "Working with endnotes" on page 214.

To create endnotes:

1 Insert the endnote element at the end of the document, and type the text of the note.

2 Click where you want to insert the reference to the endnote.

3 Insert a cross-reference element that was defined to display an endnote reference (see "Inserting element-based cross-references in structured documents" on page 217).

4 Create additional endnotes as you created the first one.

Note: Make sure that the sequence of endnotes is the same as the sequence of references in the document. FrameMaker does not automatically sequence endnotes as it does with footnotes.

Chapter 6: Variables and equations

About variables

To use a short passage of text (for example, a word or phrase representing a product or company name) in several places in a document, or to include information that is updated automatically (for example, the current date), use variables. Variables save you the trouble of typing or changing the text yourself.

Variables are useful when you expect certain text to change often or when you know the same text will be used in several places. User variables, such as a product name, are defined by you. System variables, such as the current date, use information supplied by Adobe FrameMaker and your computer system.

User variables

Each user variable has a name and a definition. A definition includes text and optional building blocks for the character format of the text. For example, suppose you define a variable as follows:

<BookTitleFormat>The Earth Sciences

If the BookTitleFormat character format is defined as italics, this variable will appear on the page as
The Earth Sciences.

You can change the definition of any user variable. For example, if you're using a variable to represent the title of a book, you can change the definition of the variable when the book's title changes. When you change the definition, all occurrences of the variable in your document are updated to use the new definition.

The standard templates don't provide any user variables. If you're using one of these templates, you have to create your own user variables. If you're using a template created at your site, it may already include some user variables.

System variables

Documents come with a set of system variables. The variables display information that FrameMaker generates—for example, the current page number, the page count of the document, or the current date. You can't add to the set, delete a variable from it, or rename system variables.

Each system variable has a name and a definition. A system variable definition can contain the following items:

- Building blocks for system information such as the month, day, year, and filename
- Text characters such as the comma and the spaces that appear in the date *May 1, 1997*
- Building blocks for character format changes

For example, the Table Sheet variable that appears in a table title as *(Sheet 3 of 5)* has the following definition.

A

(Sheet <$tblsheetnum> of <$tblsheetcount>)

B
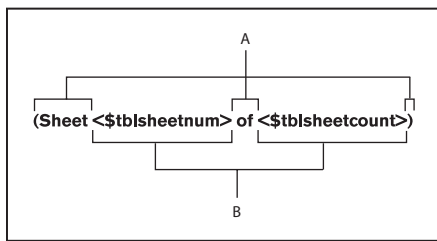
A. Text you type B. Building blocks

You can change the definition—the way the information is displayed—by adding, removing, or rearranging building blocks and by editing the text in the definition. For example, you can change the format used to display the current date. For a complete list of the system variables and their default definitions, see "Default values for system variables" on page 226.

Probably the most common way to use system variables is in background text frames, such as headers and footers. (A background text frame is on a master page and doesn't have a flow tag.) The contents of these text frames appear on the corresponding body pages. For example, you can use system variables to create running headers and footers that contain chapter titles, section headings, or other information that may change from page to page.
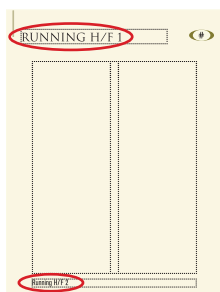
System variable names appear on master pages.
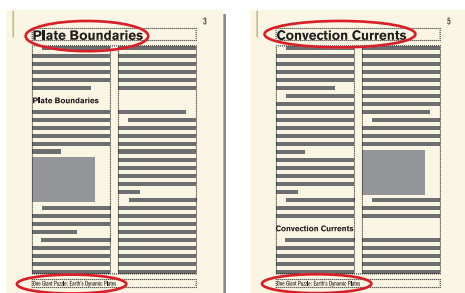
FrameMaker provides values on body pages.

The values of system variables inserted on master pages are updated automatically. However, if you place a system variable on a body or reference page, the value is updated only when you open or print the file. You can also manually update the value of the variable when the file is open.

Note: *Variables and Variable names support the Unicode text encoding standard.*

Default values for system variables

Most system variables can be inserted on a body, reference, or master page. However, the Current Page # and Running H/F variables can be inserted only in a background text frame on a master page.

System variable	Default definition (US English version)	Example of display
Current Page #	<$curpagenum>	3
Page Count	<$lastpagenum>	18
Current Date (Long)	<$monthname> <$daynum>, <$year>	October 11, 1997
Current Date (Short)	<$monthnum>/<$daynum>/<$shortyear>	10/11/97
Modification Date (Long)	<$monthname> <$daynum>, <$year>, <$hour>:<$minute00> <$ampm>	September 24, 1997, 10:48 am
Modification Date (Short)	<$monthnum>/<$daynum>/<$shortyear>	9/24/97
Creation Date (Long)	<$monthname> <$daynum>, <$year>	July 1, 1997
Creation Date (Short)	<$monthnum>/<$daynum>/<$shortyear>	7/1/97
Filename (Long)	<$fullfilename>	(Windows) c:\Memos\Staffing.fm (UNIX) /usr/tom/Memos/Staffing.fm
Filename (Short)	<$filename>	Staffing.fm
Table Continuation	(Continued)	(Continued)
Table Sheet	(Sheet <$tblsheetnum> of <$tblsheetcount>)	(Sheet 1 of 2)
Volume Number	<$volnum>	3
Chapter Number	<$chapnum>	3
Running H/F 1	<$paratext[Title]>	The Turbulent Oceans
Running H/F 2	<$paratext[Heading1]>	Threat of Extinction
Running H/F 3	<$marker1>	Plate tectonics
Running H/F 4	<$marker2>	Volcanoes
Running H/F 5–12	<$paratext[paratag]>	Lava

Inserting variables

You can insert a variable on any type of page in a document—a body page, master page, or reference page. You can insert a variable in a text frame but not in a text line.

To insert a variable:

1 Click to place the insertion point where you want the variable to appear. If you're inserting the Current Page # variable or a running header/footer variable (see "About running header/footer variables" on page 232), you must click in a background text frame on a master page.

2 Choose Special > Variable.

3 Select a variable in the Variables scroll list.

The scroll list contains the variables allowed at the insertion point in the document. For example, if the insertion point is in a text frame on a body page, the scroll list doesn't contain the Current Page # variable. The user variables appear in the scroll list after the system variables. The last system variable is Table Sheet.

4 Click Insert.

In most cases, the value of a variable inserted on a master page appears on both the master and the corresponding body pages. However, if you insert the Current Page # variable, a number sign (#) appears on the master page, and the actual page number appears on the body page. If you insert a running header/footer variable, the variable name appears on the master page, and the value appears on the body page.

To insert a variable by using the keyboard:

1 Click where you want to insert the variable and press Control+0 (zero). The Tag area on the left side of the status bar prompts you for a variable name.
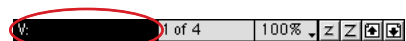
Typing the variable name

2 Start typing the variable name.

Type lowercase letters to search forward, uppercase to search backward. You can also use the Up Arrow and Down Arrow keys to scroll through variables. You need to type only enough letters to identify the variable uniquely. For example, if the only variable that begins with *B* is BookTitle, the phrase *BookTitle* appears in the Tag area when you type **B.**

3 Press Return to insert the variable in the document. If you decide to cancel the operation, Press Control+c or click in the document without pressing Return.

Editing variables

When you insert a variable, its value is displayed at the insertion point. You can then move it, replace it with another variable, or delete it.

You can't edit occurrences of a variable directly in a document. To change the variable, you change its definition (see "Changing variable definitions" on page 230), or you convert it to editable text and then edit the text in the document. If you convert the variable to text, however, the text is no longer updated when the variable definition changes.

To copy or move a variable:

1 Click the variable to select it.

2 Copy or move the variable as you do editable text—by using the Edit > Copy, Edit > Cut, and Edit > Paste commands.

To replace a variable:

1 Double-click the variable to display the Variable dialog box.

2 Select a different variable in the Variables scroll list, and click Replace.

Deleting variables

You can delete an occurrence of a user or system variable. You can also delete the definition of a user variable. Deleting a variable definition converts all occurrences of the variable in your document to editable text.

To delete a variable in a text inset, delete the variable in the source document.

To delete one occurrence of a variable:

❖ Click the variable once to select it and press Delete. Backspacing the insertion point over a variable doesn't delete the variable.

To delete a user variable definition:

1 Choose Special > Variable.

2 Select the variable in the Variables scroll list and click Edit Definition.

3 Click Delete and then click Done.

Converting variables to text

After you convert a variable to text, you can edit the text. However, the text will no longer be treated as a variable.

To convert a variable to text:

1 If you want to convert a single occurrence of the variable, select it.

2 Choose Special > Variable and click Convert to Text.

3 Do one of the following:

- To convert a single occurrence of a variable, click Selected Variable.

- To convert all occurrences of a particular variable, select the variable in the Variables Named scroll list, or choose the variable's element tag from the Variables with Element Tag pop-up menu (structured documents only).

- To convert all variables in the document, click All Variables.

4 Click Convert.

Updating system variables on body or reference pages

When you change the definition of a variable, FrameMaker immediately updates the variable throughout the document, regardless of the type of page on which the variable appears. However, if the value (not the definition) of a variable changes, occurrences of the variable on body and reference pages will be updated automatically only when you open or print the file. Variables on master pages are updated when you save the document. If the value of a variable changes after you open or print the file, you can update the variable manually.

Note: Although updated variables may print, they do not automatically appear on-screen unless you redraw the document by pressing Control+l (lowercase L).

To update system variables manually:

1 Choose Special > Variable.

2 Click Update and then click OK.

Importing variable definitions

When you want to use another document's variable definitions, copy those definitions to your document or to files in a book by using the File > Import > Formats command. For more information, see "Importing and updating formats" on page 408 and "Changing the format of files in a book" on page 465.

Creating user variables

Before you create a user variable, decide on the name of the variable, the text it will contain, and the character format of the text. For example, you might create a user variable for a product name that may change or for a long manual name that is difficult to type.

If you don't specify a character format in the variable definition, the variable uses the format at the insertion point. If you change the character format for the variable, the change applies only to the variable, not to the text that follows.

To create a user variable:

1 Click in a text frame and choose Special > Variable.

2 Click Create Variable.

3 Enter the name and definition of the variable. Variable names are case-sensitive; *Title* and *title* would be different variables. The complete definition, including typed text and character formats, can be up to 255 characters long. You cannot use system variable building blocks for user variables.

To include an angle bracket in a variable definition as text, precede it with a backslash (\).

Note: Some special characters are entered or displayed differently in dialog boxes. In Windows, you enter a sequence of characters beginning with a backslash (\); see "About typing in dialog boxes" on page 670. On UNIX systems, the backslash sequences may appear in text boxes, even though you don't have to type the sequences to enter the characters.

4 To change the character format within the variable definition, do the following:

• To use a character format stored in the Character Catalog, place the insertion point in the Definition text box where you want to change the character format, and then click the character format in the Character Formats scroll list. The scroll list includes all the formats in the Character Catalog of the current document.

Important: Don't use a character format whose tag includes angle brackets.

• To change the character format back to the paragraph's default font before the end of the variable, place the insertion point in the Definition text box where you want to change the character format, and then click <Default ¶ Font> in the Character Formats scroll list.

5 Click Add. The variable appears in the User Variables scroll list.

6 To add more user variables, repeat steps 3 through 5.

7 Click Done to return to the Variable dialog box and then click Done.

Changing variable definitions

You can change a variable's definition at any time. For example, if you use a variable for a product's code name, you'll eventually need to change the definition to the final product name.

When you change the definition of a variable, the variable is immediately updated throughout the document, regardless of the type of page on which it appears. If the variable is in a header or footer on a master page, you may need to redisplay a body page to see the update.

Note: If a variable is in a text inset that uses the source document's formats, you must change the variable definition in the source document. For information on text insets and their formatting options, see "Importing formatted text" on page 495.

To change a variable definition:

1 Click in a text frame and choose Special > Variable. If you're changing the definition of the Current Page # variable or a running header/footer variable, you must click in a background text frame on a master page.

2 Select a variable in the Variables scroll list and click Edit Definition.

3 Do one of the following:

• For user variables, edit the name or definition, and click Change.

• For system variables, edit the definition and click Edit. You can insert a building block for system-supplied information or for a character format at the insertion point by clicking the building block in the Building Blocks scroll list. Only the building blocks that are appropriate for the variable (for example, <$fullfilename> and <$filename> for the filename variables) appear in the scroll list. All the character formats in the Character Catalog appear at the bottom of the scroll list.

You can change the text and character format within the definition as described in "Creating user variables" on page 229.

4 If you're editing a user variable, you can edit additional variables by selecting them in the scroll list, changing their definitions, and clicking Change.

5 Click Done.

Changing definitions of date and time variables

FrameMaker includes both long and short versions of variables for the current date, the date the document was last modified, and the date the document was created (for example, *February 17, 1997 1:12 pm*). FrameMaker provides the following building blocks for date and time variables.

Building block	What it displays	Example
<$second>	Seconds	8 or 32
<$second00>		08 or 32
<$minute>	Minutes	8 or 32
<$minute00>		08 or 32
<$hour>	Hours	8 or 12
<$hour01>		08 or 12
<$hour24>		08 or 22

Building block	What it displays	Example
<$ampm>	Morning or evening designation	am or pm
<$AMPM>		AM or PM
<$daynum>	Number of the day	8 or 28
<$daynum01>		08 or 28
<$dayname>	Name of the day	Monday
<$shortdayname>		Mon
<$monthnum>	Number of the month	8 or 12
<$monthnum01>		08 or 12
<$monthname>	Name of the month	August
<$shortmonthname>		Aug
<$year>	Year	1997
<$shortyear>		97

FrameMaker uses the language of the current paragraph to determine the language used in date and time variables. For example, the current day name variable may appear as *Wednesday* in an English paragraph but as *Miercoles* in a Spanish paragraph. If you change the language of a paragraph, the system variables in the paragraph are updated to use the new language.

If your system supports the typing of Japanese text in documents and dialog boxes, the following additional building blocks are available for Japanese dates.

Building block	Example
<$daynumkanjikazu>	一 or 三十一
<$daynumkanjinumeric>	一 or 三一
<$monthnumkanjikazu>	一 or 十二
<$monthnumkanjinumeric>	一 or 一二
<$imperialyear>	**1** or **10**
<$imperialyear01>	**01** or **10**
<$imperialyearspecialkanjikazu>	元 or 十
<$imperialyearspecialkanjinumeric>	元 or 一〇
<$imperialyearkanjikazu>	一 or 十
<$imperialyearkanjinumeric>	一 or 一〇
<$imperialera>	平成

Japanese dates appear in a variable when the variable uses a Japanese font family and the Language property is set to Nihongo. For information on related Chinese and Korean features, see the online manual on Chinese and Korean features in the Documents folder.

Creating variables for running headers and footers

A running header/footer variable gives information about the contents of a page and can change from page to page. You might use running header/footer variables to include information such as the number and title of the current chapter, the name of the current first-level section, or the current page number.

In addition to using running header/footer variables, you can also use the <$chapnum> and <$volnum> building blocks to add chapter and volume numbers to headers and footers. See "Including volume and chapter numbers in headers or footers" on page 464.

About running header/footer variables

Running headers and footers use system variables such as the current page and current date variables. They also use twelve system variables provided especially for running headers and footers (Running H/F 1, Running H/F 2, and so on).

Running header/footer variables can refer to a paragraph with a particular tag—usually a title or heading paragraph—or to marker text. You can use these variables with their default definitions, or you can customize them—for example, by changing the tag that appears in the variable definition.

You insert a running header/footer variable in a background text frame on a master page in the same way that you insert variables elsewhere (see "Inserting variables" on page 226).

By default, the Running H/F 1 and Running H/F 2 variables use definitions that refer to the Title and Heading 1 paragraph tags, respectively. The Running H/F 3 and Running H/F 4 variables use definitions that refer to markers. The Running H/F 5–12 variables use definitions that refer to paragraph tags you specify. You can change these default definitions either before or after you insert the variable. For instructions on changing a variable definitions, see "Changing variable definitions" on page 230.

Running headers and footers based on paragraph tags

The following table contains examples of running headers and footers that refer to paragraph tags.

Running header/footer variable definition	Explanation	Examples of display
<$paratext[Head1]>	The text of the first paragraph that FrameMaker finds with the tag Head1	Types of plate boundaries
<Header><$paratext [Head1]>	The text of the first paragraph with the tag Head1 (The text appears in the Header character format—uppercase, italic letters.)	*TYPES OF PLATE BOUNDARIES*
<$paranum[SectTitle]>	The complete autonumber of the first paragraph with the tag SectTitle	Chapter 2
<$paranumonly[SectTitle]>	The autonumber counters for the first paragraph with the tag SectTitle	2
<$paratag[Chapter]>	The tag of the first paragraph with the tag Chapter	Chapter
<$paratext[SectTitle, AppendixTitle]>	The text of the first paragraph with either the SectTitle or AppendixTitle tag	PLATE TECTONICS

Displaying paragraph text, tags, or autonumbers

The most common use of running headers and footers is to show the text, autonumber, or tag of paragraphs with a specified tag. For example, a running header might show the current section heading or chapter number.

FrameMaker searches each body page to find a paragraph with the tag you specify and then puts the paragraph's text, autonumber, or tag in the running header or footer for that page. If a page doesn't contain a paragraph with the tag you specify, FrameMaker searches backward through the preceding pages and uses information from the first appropriate paragraph it finds.

The following building blocks in running header/footer variables refer to a paragraph tag.

Building block	What it displays
<$paratext[*paratag*]>	The paragraph's text
<$paranum[*paratag*]>	The paragraph's autonumber, including any text in the auto-number format
<$paranumonly[*paratag*]>	The paragraph's autonumber counters, including any characters between them
<$paratag[*paratag*]>	The paragraph's tag

Follow these guidelines for using paragraph tag building blocks:

- Don't use a paragraph tag that includes brackets.

- Replace *paratag* in the building block with the tag of the paragraph for which you want to display information. Don't delete the brackets. For some examples, see "About running header/footer variables" on page 232.

- You can include more than one paragraph tag in the *[paratag]* part of a building block. When you include multiple paragraph tags, FrameMaker uses the first paragraph it finds with one of the tags. Separate the tags with commas, as in the following example: <$paratext[Head1, Head2]>

Displaying text from a marker

If the text you want to show in a header or footer doesn't appear in a paragraph of its own, you can show text associated with a marker. For example, you can use a marker to show an abbreviated version of a title or to summarize the contents of a page. When text symbols are visible, marker symbols ⊤ indicate the location of markers.
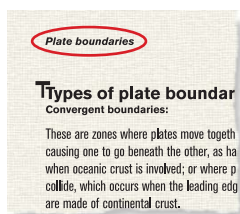
Page header contains abbreviated heading.

In this example, the marker in the heading contains the marker text *Plate boundaries*. A running header/footer variable then displays the marker text in the page header.

FrameMaker searches for a marker just as it does for a paragraph tag, searching the current page and then backward from the current page until it finds a marker of the specified type. You can use two marker types for running headers or footers: Header/Footer $1 and Header/Footer $2.

To display text from a marker:

1 Insert a Running H/F variable in the header or footer on a master page (see "About running header/footer variables" on page 232). By default, the Running H/F 3 and Running H/F 4 variables use definitions that look for markers.

2 Edit the definition of the variable to use a <$marker1> or <$marker2> building block (see "Changing variable definitions" on page 230). The <$marker1> building block displays the text of a Header/Footer $1 marker. The <$marker2> building block displays the text of a Header/Footer $2 marker.

3 Display a body page and click where you want to insert a marker.

4 Choose Special > Marker.

5 In the Marker dialog box, choose either Header/Footer $1 or Header/Footer $2 from the Marker Type pop-up menu, enter the marker text, and click New Marker. When you enter the marker text, make sure that the spaces, punctuation, and capitalization are as you want them.

Note: You can't format marker text in the Marker Text box. To format the marker text, insert a character-format building block before the marker building block in the system variable definition.

Displaying a condition tag

In a document that uses conditional text, you can show a condition tag that appears on the current page in the running header or footer. (For information on conditional text, see "About conditional text" on page 293.) A predefined variable is not included for this purpose, but you can redefine any of the existing running header and footer variables to use the condition tag building block. Unlike the system variables that refer to a paragraph or a marker, variables with the condition tag building block search only on the current page.

To display a condition tag:

1 Insert a Running H/F variable in the header or footer on a master page (see "Creating variables for running headers and footers" on page 232).

2 Edit the definition of the variable to use the <$condtag [*hitag, …,lotag, nomatch*]> building block (see "Changing variable definitions" on page 230).

Replace *hitag, lotag,* and the ellipsis with one or more condition tags you want FrameMaker to find. Replace *nomatch* with the text you want to display if FrameMaker doesn't find one of the tags in the definition. If you don't want to display any text when there's no match, enter a nonbreaking space (a backslash followed by a space) in place of *nomatch*.

FrameMaker searches a page for the condition tags you specify. If it finds one of the tags, the tag appears in the running header or footer. If it finds more than one tag, the tag that appears first in the definition appears as the value of the variable.

Displaying the security level

If your document contains classified information, you can use condition tags in running headers or footers to display the highest security level on a page.

To display the security level on a page:

1 Apply condition tags, such as Top Secret and Secret, to the classified information.

2 Set up headers or footers to include these tags on pages that contain classified information. For example, to display Top Secret on pages that contain both Top Secret and Secret information and Unclassified on pages that contain neither condition tag, define the building block as <$condtag[Top Secret,Secret,Unclassified]>.

Creating dictionary-style headers or footers

You can use dictionary-style headers or footers to show the range of information that appears on one body page or on two facing body pages. Dictionary-style headers or footers appear frequently in documents such as dictionaries, indexes, and glossaries.

Headers show first entry on left and last on right.

To create a dictionary-style header or footer:

1 Insert a different running header/footer variable in the header or footer of each of two facing master pages ("Creating variables for running headers and footers" on page 232). For example, insert Running H/F 1 on the left master page and Running H/F 2 on the right master page.

2 Edit the definition of the variable on the left master page to use the <$paratext[*paratag*]> building block (see "Changing variable definitions" on page 230). Replace *paratag* with the paragraph tag of dictionary terms.

3 In the same way, edit the definition of the variable on the right master page to use the <$paratext[+,*paratag*]> building block. The plus sign (+) tells FrameMaker to find the last paragraph on the page matching the tag rather than the first paragraph.

Working with variables in structured documents

As with unstructured documents, you can use either system or user variables in structured documents.

System variables display information that your system generates. You can add a system variable to a structured flow, with or without a special variable element.

User variables display text associated with the variable. You do not use special variable elements for user variables but insert them directly in elements defined for text.

The following building blocks in running header/footer variables refer to an element tag:

Building block	Meaning
<$elemtext[tag]>	The text (up to the first paragraph break), excluding its auto-number, but including any prefix and suffix specified in the element definition
<$elemtextonly[tag]>	The text (up to the first paragraph break), excluding its autonumber and any prefix and suffix specified in the element definition
<$elemtag[tag]>	The tag
<$elemparanum[tag]>	The entire autonumber of the element's first paragraph

Building block	Meaning
<$elemparanumonly[tag]>	The first paragraph's autonumber counters, including any characters between them

Using valid variables in structured documents

Variables in FrameMaker are exported as entities, and usually the entity name is the same as the variable name. However, if you create a variable whose name is not a valid XML or SGML name, the entity name will not be the same as the variable name.

Here are some examples of invalid names:

• A name with multibyte (Asian-language) characters.

• A name that includes anything other than alphanumeric characters, hyphens, or periods.

• A name containing more characters than the number specified by the value of NAMELEN in the XML or SGML declarations for the particular application.

Inserting system variable elements in structured documents

You can use an element to insert a system variable in a structured flow. FrameMaker comes with a set of system variables, and a variable element's format rules determine which variable to use with it. You cannot change a system variable element to use a different variable.

The values of system variables you insert are updated when you open or print the document. You can also update system variables manually. (System variables in headers or footers are updated when the page is redisplayed.)

For information on inserting a system variable that's not an element, see "Inserting variables" on page 226.

To insert a system variable element:

1 Click where you want to insert the variable.

2 Select a system variable element in the Element Catalog and click Insert.

3 If the Attributes for New Element dialog box appears, enter attribute values for the element and click Insert Element (see "Adding elements" on page 34).

The current value of the variable appears at the insertion point. A bubble for the variable appears in the Structure View, with a text snippet that shows the beginning of the variable's text.

If no variable element is available at the location you want, you might use an invalid element. After inserting the element, talk to your developer about making it valid at this location.

To use an invalid system variable element:

❖ Insert an element that is valid in another part of the document. Either insert the element in a valid location and then move it, or use the All Elements setting (see "Changing the scope of elements available in a structured document" on page 18) to make the element available everywhere and then insert the element where you want it.

To update all system variables in the document:

❖ Choose Special > Variable, click Update, and then click OK.

Inserting user variables in structured documents

You can insert a user variable directly in text, without using a special variable element. Your application may have some user variables already defined, and you can define and maintain other user variables as needed. If the value of a user variable changes, it is updated automatically wherever it occurs.

For information on defining user variables, see "Creating user variables" on page 229. For information on inserting variables, see "Inserting variables" on page 226.

About Equations

FrameMaker provides a full palette of math elements to streamline the creation of typeset equations. After you create equations, you can reformat them by changing their fonts, their alignment, and the exact positioning of their math elements. You can also use commands on the Equations palette to evaluate equations mathematically.

Using the Equations palette

The Equations palette contains the commands you use to create and change equations, as well as the symbols, operators, functions, and other math elements you insert in equations. To display the palette, click the Equations button Σ at the upper right in the document window.
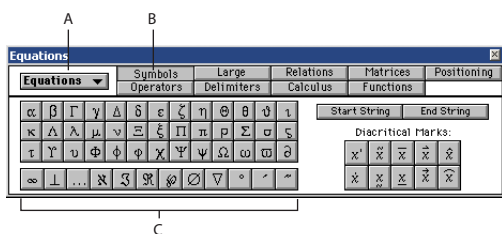
A. The Equations pop-up menu appears on every page.
B. The names of the pages appear here, with the current page highlighted.
C. This part of the palette changes from page to page.

The Equations palette contains nine pages of math elements and commands. To display a page, click its name at the top of the palette.

Symbols Greek characters, atomic symbols, diacritical marks, and strings

Operators Roots, powers, signs, subscripts, superscripts, and logic symbols

Large Sums, products, integrals, intersections, and unions

Delimiters Parentheses, brackets, braces, and substitution

Relations Equal, less than, greater than, similar to, subset of, superset of, and proportional to

Calculus Integrals, derivatives, partial derivatives, gradients, and limits

Matrices Matrices and matrix commands

Functions Trigonometric, hyperbolic, and logarithmic functions; commands for evaluating expressions; and commands for creating and applying rules

Positioning Controls to adjust the position of an expression and the spacing around it, commands to specify alignment, and commands to set and clear manual line breaks

About positioning equations

You can put an equation in line with paragraph text or on display in a paragraph of its own. In either case, FrameMaker creates an anchored frame for the equation. You can also position an equation with other objects in an existing graphic frame—for example, to annotate a graphic or to put more than one equation in a graphic frame. The graphic frames that contain equations can be either anchored or unanchored.

Suppose that $x = x_0$ and $y = y_0$ A

$$\frac{x - x_0{}^2}{a^2} + \frac{y - y_0{}^2}{b^2} = 1$$

B

$$\frac{x-2{}^2}{16} + \frac{y-4{}^2}{9} = 1$$

C
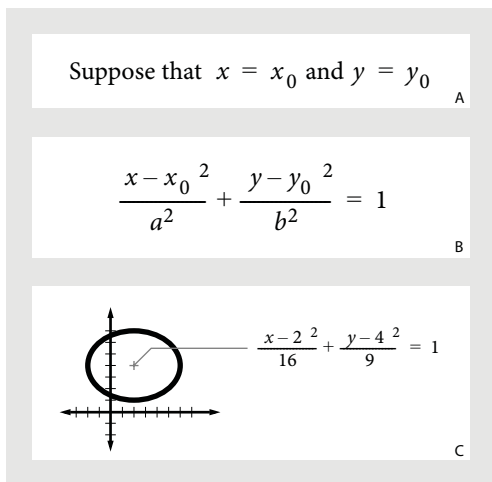
A. Inline B. Display C. In a graphic with other objects

Creating equations

To create an equation, you insert an equation object in the document and then insert math elements in the equation. This section discusses how you can create an equation object. For instructions on inserting math elements into the equation, see "Inserting math elements" on page 241.

For information on creating equations for SGML and XML, see "About equation elements in structured documents" on page 278.

When working with an equation, zoom in until it's easy to read.

To create an inline equation:

1 Click in text where you want to insert the equation. If the text is in a rotated text frame, unrotate the frame first by selecting the rotated text frame and pressing Esc g 0 (zero).

2 Choose Special > Equations, or click the Equations button Σ at the right side of the document window.

3 On the Equations palette, choose one of the New Equation commands from the Equations pop-up menu. Small, Medium, and Large specify the font sizes used in the new equation.

A new equation object appears as a question mark in a frame anchored below the line with the insertion point. The first math element you insert replaces the question mark prompt.
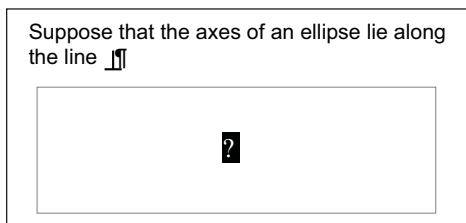
New inline equation

4 Insert the math elements in the equation by typing the elements or by clicking items on the Equations palette.
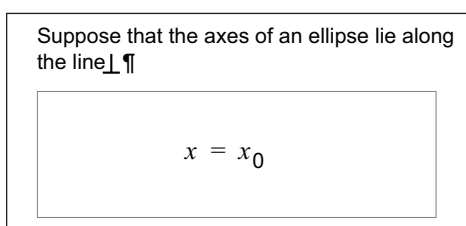
Inserted elements

5 Choose Shrink-Wrap Equation from the Equations pop-up menu. This shrinks the frame around the equation and puts the equation in the line of text at the anchor symbol.
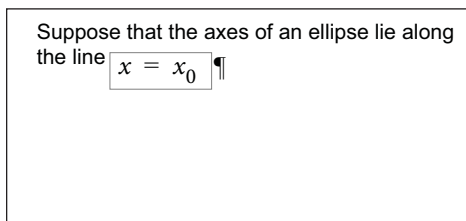
Shrink-wrapped inline equation

6 If the equation seems too close to the text on either side, insert a space before or after the frame. FrameMaker treats the frame that contains an in-line equation as a character and doesn't provide extra space around it.

7 If the equation is too tall for the line, open up more space above or below the line by using the Line Spacing pop-up menu on the formatting bar to turn off fixed line spacing. For details, see "Changing spacing" on page 114.

To create an equation in a paragraph of its own (a display equation):

1 Click in an empty paragraph.

2 Apply a paragraph format from the Paragraph Catalog (see "Applying predefined formats to text" on page 102) or set up your own format. The paragraph format determines the alignment (left, right, or center), vertical spacing, and any autonumber for the paragraph that contains the equation.

If you created the document from a book or report template, use the Equation paragraph format. You can also copy this format to your document, but you'll probably want to make some changes (for example, to the Default Font and Spacing properties).

3 Click the Equations button Σ at the right side of the document window.

4 On the Equations palette, choose one of the New Equation commands from the Equations pop-up menu. Small, Medium, and Large specify the font sizes used in the new equation.

A new equation object appears as a question mark in a frame anchored below the empty paragraph. The first math element you insert replaces the question mark prompt.

The ellipse is represented by the following
equation:¶
 ⊥¶

 ?
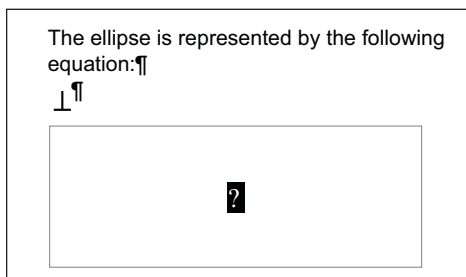
New equation in anchored frame

5 Insert the math elements in the equation by typing the elements or by clicking items on the Equations palette.

The ellipse is represented by the following
equation:¶
 ⊥¶

$$\frac{?\,x - x_0^{\;2}}{a^2} + \frac{?\,y - y_0^{\;2}}{b^2} \;=\; 1$$
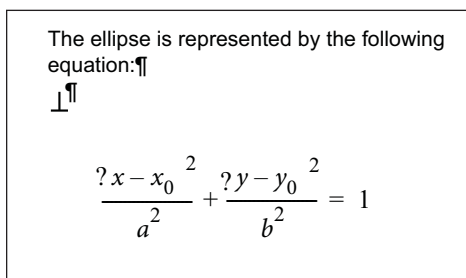
Inserted elements

6 Choose Shrink-Wrap Equation from the Equations pop-up menu. This shrinks the frame around the equation and puts the equation in the empty paragraph.

The ellipse is represented by the following
equation:

$$\frac{x - x_0^{\;2}}{a^2} + \frac{?\,y - y_0^{\;2}}{b^2} \;=\; 1 \quad ¶$$
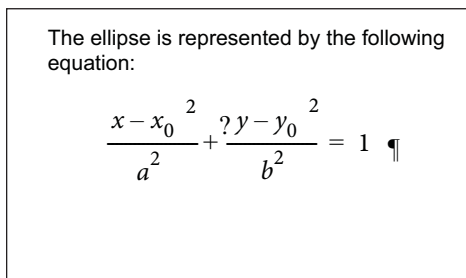
Shrink-wrapped equation in its own paragraph

To create an equation in a graphic frame with other objects:

1 Click the Equations button Σ at the right side of the document window.

2 Select a graphic frame or an object in a graphic frame.

3 On the Equations palette, choose one of the New Equation commands from the Equations pop-up menu. Small, Medium, and Large specify the font sizes used in the new equation.

A new equation object appears as a question mark inside the frame. The first math element you insert replaces the question mark prompt.
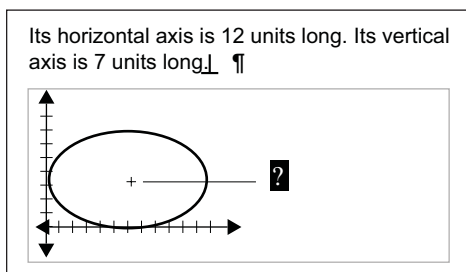
New equation object

4 Insert the math elements in the equation by typing the elements or by clicking items on the Equations palette.

5 To place the equation exactly where you want it, first select it by Control-clicking the equation.

6 Move the equation by doing one of the following:

• Drag it with the mouse.

• Move it with the arrow keys.

• Position it precisely with the Graphics > Object Properties command.

For details, see "Moving objects" on page 327.

Inserting math elements

An equation contains expressions made up of math elements—characters, text strings, operators, and other mathematical elements from the Equations palette.

A. *Alphanumeric character* **B.** *Text string*
C. *Expression* **D.** *Operator*

After you create an equation object, you insert math elements in it by typing them or by clicking them on the Equations palette. (The Equations palette doesn't have to be open when you insert an item from the keyboard.) For details on creating equations, see "Creating equations" on page 238. For a general description of the math elements on the Equations palette, see "Using the Equations palette" on page 237.

Use the following general steps when you insert any math element. For details on inserting particular types of elements, see the following sections beginning with "Inserting text strings" on page 243.

Note: *Math equations support the Unicode text encoding standard.*

To insert a math element in an equation:

1 Select an expression or put the insertion point in an equation.

2 Do any of the following:

• To insert a math element by using the Equations palette, click the element.

• To insert an alphanumeric character or a symbol that appears on the keyboard, type it. You can type parentheses, brackets, plus signs, equal signs, and so on. If you type an open parenthesis, FrameMaker inserts the closing parenthesis.

• To insert an element by using a keyboard shortcut, press the sequence of keys.

• To insert an element by typing a backslash sequence, type a backslash (\) and the string that identifies the element, and then press Return. For example, to insert the symbol for infinity ∞, type **\infty** and press Return.

• To insert a custom math element, see "Inserting custom math elements" on page 249.

If an element needs one or more operands, a question mark prompt ⁇ appears for each operand; otherwise, an insertion point appears. To move from one operand to another, press Tab.

About the scope of operations

When you insert a math element in an equation, FrameMaker adjusts the mathematical syntax. The result depends on the *scope of operation*—the selection or the location of the insertion point. For example, when you insert x in a fraction, the result depends on whether the numerator, the denominator, or the entire fraction is selected.

If you multiply by x	The result is
$\dfrac{2y + 7\|}{4}$ or $\dfrac{2y + \boxed{7}}{4}$	$\dfrac{2y + 7x}{4}$
$\dfrac{\boxed{2y + 7}}{4}$	$\dfrac{(2y + 7)x}{4}$
$\dfrac{2y + 7}{4}\Big\|$ or $\boxed{\dfrac{2y + 7}{4}}$	$\dfrac{2y + 7}{4}x$

In the first example, only the *7* is multiplied by x. In the second example, FrameMaker adds parentheses to show that the entire expression *2y + 7* is multiplied by x. In the last example, the entire fraction is multiplied by x. The size of the insertion point in the first and last examples indicates the scope.

Many mistakes in equations result from an incorrect scope of operation—having too little or too much selected when inserting an element. Be careful to select the range you want before inserting an element. For information on changing the selection in an equation, see "Editing equations" on page 250.

Inserting text strings

A text string is a series of characters that is interpreted as a unit. Unlike characters that make up an expression, the characters in a text string don't usually appear in italics and aren't multiplied together.

$$\underline{\text{one electron volt}} = 1.60 \quad 10^{-19} \, \underline{joule}$$

A. Text strings

Text strings have no mathematical meaning in FrameMaker. For example, evaluation commands can evaluate the function *tan* but not the string "tan".

To insert a text string in an equation:

1 On the Symbols page of the Equations palette, click Start String. Two double quotation marks ("") appear. You can also type an apostrophe (') or a double quotation mark (") to start the string.

2 Type the text of the string. The quotation marks disappear, and the text appears as you type. To insert a straight apostrophe or straight double quotation mark as part of the string, hold down Control while pressing the key.

3 Click End String on the Symbols page or press Return.

Inserting horizontal and vertical lists of expressions

An equation object usually contains one equation or expression. But you can set up a horizontal or vertical list in which several expressions are contained in the same object. When you select a list, all the expressions in the list are selected as one object.

$$A \quad \text{———} 2xy \qquad 3ab$$

$$B \quad \left[\begin{array}{l} y = ?x - 3 \quad 2 \\ = x^2 - 6x + 9 \end{array} \right.$$

A. Horizontal list *B.* Vertical list aligned on equal signs

FrameMaker aligns the expressions in the list automatically. When you move the list, all the expressions maintain their relative positions. For information on changing the alignment of items in a list of expressions, see "Aligning items in lists, matrices, and multiline equations" on page 262.

To insert a horizontal or vertical list of expressions:

1 Select the expression you want to be the first item in the list.

2 On the Operators page of the Equations palette, click the horizontal list element **? ?** or vertical list element $^?_?$. A horizontal or vertical list appears. The selected expression appears as the first item in the list. A second item appears in the list as a question mark prompt.

Before clicking	After clicking
?	? ?

Before clicking	After clicking
$\boxed{abc}$	abc
	$\boxed{?}$
$ab\boxed{c}$	$ab\left(\dfrac{c}{\boxed{?}}\right)$

In the first example, a horizontal list is inserted. In the second example, a vertical list is inserted, and the selected expression becomes the first item in the list. In the last example, a vertical list is inserted as part of a larger expression.

To add an item to a horizontal or vertical list:

1 Select one of the items in the list.

2 On the Operators page of the Equations palette, click the horizontal list element ? ? or vertical list element $\overset{?}{.}$.

3 Insert the math elements in the list item by typing the elements or by clicking items on the Equations palette. For instructions, see "Inserting math elements" on page 241.

Inserting symbols

The Symbols page on the Equations palette contains the Greek alphabet, other symbols, and diacritical marks.
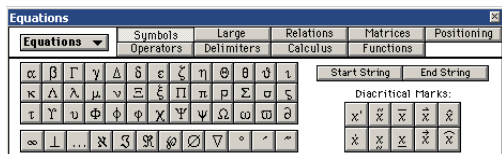
The Symbols page

The Symbols page doesn't include Greek letters that have Roman-alphabet equivalents, such as the uppercase alpha (*A*). The following examples show the result of clicking π on the Symbols page.

Before clicking	After clicking
$y + 7\rfloor$	$y + 7\pi$
$\boxed{y + 7}$	$(y + 7)\pi$

Diacritical marks appear on the element to the left of the insertion point or on the selected expression. Click the dot or prime button once for each dot or prime diacritical mark you want to insert.

Note: If you want a summation, product, or partial differential element to be interpreted and manipulated mathematically, insert the element from the Large page or Calculus page rather than from the Symbols page. Elements from the Symbols page are not evaluated.

Inserting operators

The Operators page on the Equations palette contains commonly used operators—addition, subtraction, multiplication, and division—as well as roots, powers, signs, subscripts, superscripts, and logic symbols.
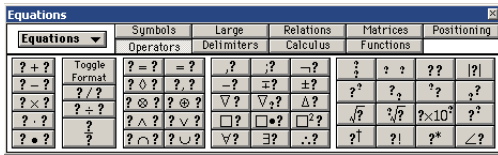
The Operators page

If an expression is selected when you insert the operator, the expression becomes the first operand. The following examples show the result of clicking the plus sign + or the division operator ÷ on the Operators page.

Before clicking	After clicking
$2x$	$2x + \boxed{?}$
$2\boxed{x}$	$2(x + \boxed{?})$
$3\boxed{xy}$	$3\dfrac{xy}{\boxed{?}}$

You can represent the division operator as a slash (/), a horizontal bar –, or a division symbol ÷. For details, see "Toggling an element's format" on page 252.

FrameMaker can evaluate exponents mathematically, but not superscripts.

A. Superscript B. Exponent

Inserting large elements

The Large page on the Equations palette contains sums, products, integrals, intersections, and unions.
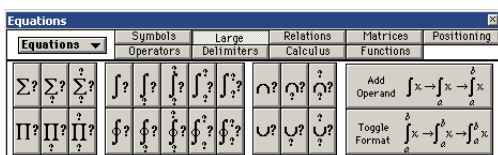
The Large page

If an expression is selected when you insert a large element, the expression becomes the first operand. The following examples show the result of clicking the summation symbol Σ on the Large page.

Before clicking	After clicking
$2x$	$2x \sum \boxed{?}$
$\boxed{2x}$	$\sum 2x$

You can add an operand after inserting a math element from the Large page. For details, see "Inserting operators" on page 245.

Inserting delimiters

The Delimiters page contains delimiters such as parentheses, brackets, and braces.
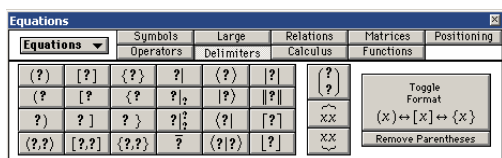
The Delimiters page

If an expression is selected when you insert a pair of delimiters, the expression is placed inside the delimiters. The following examples show the result of clicking the parentheses on the Delimiters page.

Before clicking	After clicking
$2x$	$2x(\boxed{?})$
$\boxed{2x}$	$(\boxed{2x})$

You can also represent parentheses as brackets ([ ]) or braces ({ }). For details, see "Toggling an element's format" on page 252.

Inserting relations

The Relations page contains relation symbols such as =, <, >, $\approx$, $\equiv$, $\in$, $\supset$, and $\subset$.
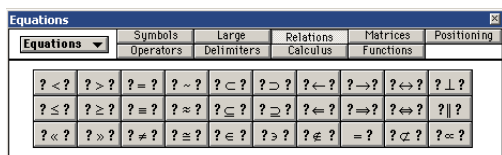
The Relations page

All relation symbols—except the binary equal sign ? = ?—apply to the character to the left or right of the insertion point or to the selection. When you insert a relation symbol between multiplied elements, it applies to the elements on either side of the insertion point.

Binary equal signs ? = ? appear to the right of the current expression (as shown in the second example). When the insertion point or selection is in a subscript or superscript, the equal sign appears in the subscript or superscript.

Before clicking	After clicking
$ab\|c$	$abc\ =$
$2x\|+ 3y$	$2x + 3y\ =\ ?$
$2x_{p\|}+ 3y$	$2x_{p\ =\ ?}+ 3y$

To insert a binary equal sign at the insertion point rather than to the right of the expression:

❖ Press Esc m =

Before clicking	After clicking
$\dfrac{a}{b\|}$	$\dfrac{a}{(b\ =\ ?)}$

Inserting calculus elements

The Calculus page contains integrals, derivatives, partial derivatives, gradients, and the limit function.
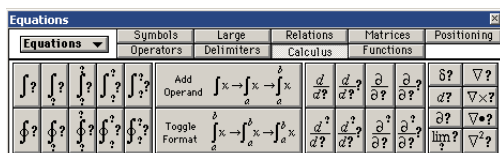
The Calculus page

If an expression is selected when you insert the calculus element, the expression becomes the first operand. The following examples show the result of clicking the integral symbol ∫ on the Calculus page.

Before clicking	After clicking
$x^2\|$	$x^2\int ?$
$x^2 dx$	$\int x^2 dx$

You can change the position of operands and add operands. For details, see "Toggling an element's format" on page 252 and "Adding operands to math elements" on page 252.

Inserting matrices

The Matrices page contains elements for matrices ranging in size from 1 by 1 to 3 by 3. After creating a matrix, you can add rows and columns. For details, see "Changing matrices" on page 253.
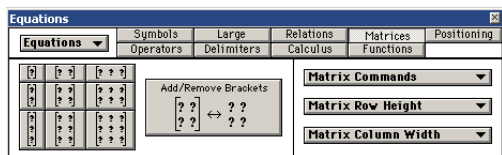
The Matrices page

If an expression is selected when you insert the matrix element, the expression becomes the first cell in the matrix.

Before clicking	After clicking
$3x$	$3x \begin{bmatrix} ? & ? \\ ? & ? \end{bmatrix}$
$3x$	$3 \begin{bmatrix} x & ? \\ ? & ? \end{bmatrix}$

Inserting functions

The Functions page contains trigonometric, hyperbolic, and logarithmic functions, and also the sign, limit, and general functions.
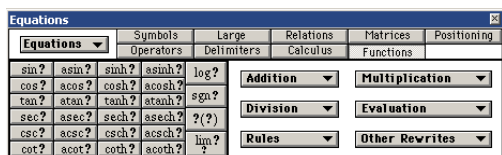
The Functions page

FrameMaker places functions at the insertion point or at the selection. When an expression is selected, the expression becomes the argument of the function—except for the limit and general functions $?(?)$ and $\lim_{?} ?$. The following examples show the result of clicking the sin function on the Functions page.

Before clicking	After clicking
π	$\pi \sin ?$
π	$\sin \pi$

Inserting custom math elements

In addition to inserting math elements that are built into FrameMaker, you can insert custom math elements that have been defined for a document. For details on defining custom math elements, see "Creating and defining math elements" on page 254.

Custom math elements have no mathematical meaning in FrameMaker. For example, a custom math element for an operator will be treated as an operator in an equation, but FrameMaker will not be able to evaluate it.

To insert a custom math element in an equation:

1 On the Equations palette, choose Insert Math Element from the Equations pop-up menu.

2 Select the element name and click Insert.

Shrinkwrapping equations

Shrinkwrapping an equation shrinks the surrounding anchored frame so that it's just large enough for the equation, changes the frame's anchoring position to At Insertion Point, and puts the insertion point after the frame.

A circle whose center is at the origin and whose radius is r is represented by the equation ¶

$$x^2 + y^2 \ = \ r^2$$
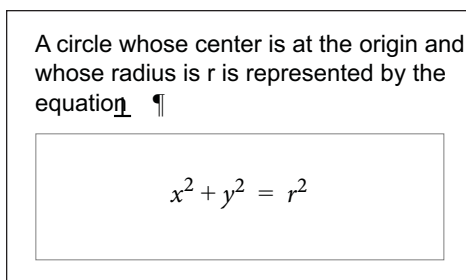
Before shrinkwrapping

A circle whose center is at the origin and whose radius is r is represented by the equation $x^2 + y^2 = r^{\ 2}$ ¶
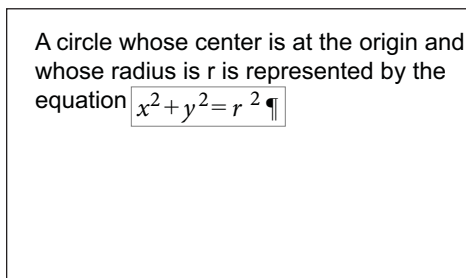
After shrinkwrapping

Shrink-wrap an equation when you finish working with it so that the equation doesn't take up any more space than it needs and so that it aligns with the baseline of the surrounding text. Unwrap an equation to enlarge the anchored frame for easy editing.

To shrinkwrap or unwrap an equation:

1 Click in the equation or select its frame.

2 On the Equations palette, choose Shrink-Wrap Equation or Unwrap Equation from the Equations pop-up menu. The edges of a shrinkwrapped equation may not appear on-screen, but they will appear in the printed document.

If you want to shrinkwrap all inline equations in selected book files, select the documents in the book and then press Esc r w m. See "In-line anchored frames" on page 344.

Editing equations

You can edit an equation as you edit text—adding, changing, rearranging, and removing math elements, and cutting, copying, and pasting them. As you edit an equation, the syntax of the equation is adjusted as necessary.

You can change a matrix—add or delete rows and columns, delete brackets, and change row height and column width. You can also choose among several representations for some math elements such as parentheses, and you can add operands to others such as integrals and summations.

If your equation is shrinkwrapped, unwrap the equation before editing it. This makes the anchored frame full-sized again, giving you more room to work.

Note: To edit a rotated equation, you first need to restore the equation or text frame to its unrotated position by pressing Esc g 0 (zero).

To place and move the insertion point in an equation:

❖ Do one of the following:

• To put the insertion point next to a specific character, click as close as possible to the character.

$$F(x) \;=\; \frac{1}{\sqrt[\sigma]{2\pi}}$$

Placing insertion point next to character

• To put the insertion point next to an entire equation, click at the far right of the equation. The size of the insertion point depends on its location in the equation. This helps you determine whether the insertion point is in the right place.

$$F\;(x) = ?\;\; \frac{1}{\sqrt[\sigma]{2\pi}}$$

Placing insertion point next to equation

• To move the insertion point left or right, press the Left Arrow or Right Arrow key.

• To move the insertion point from beside a fraction to its numerator, press the Down Arrow key.

• To move the insertion point beside a fraction from the denominator, press the Up Arrow key.

To select part of an equation by using the mouse:

❖ Drag through the elements you want to include. As you drag, the selection expands to include the next subexpression.

To extend the selection using the keyboard:

❖ Press the spacebar. The selection expands to include the next higher expression. The following example shows the result of pressing the spacebar repeatedly.

Original selection
$$x = \frac{-b \quad \sqrt{b^2 - 4ac}}{2a}$$
Pressed once
$$x = \frac{-b \quad \sqrt{b^2 - 4ac}}{2a}$$
Pressed twice
$$x = \frac{-b \quad \sqrt{b^2 - 4ac}}{2a}$$

To change the selection:

❖ Do one of the following:

• To change the selection to the next subexpression on the right, press the Right Arrow key.

• To change the selection to the next subexpression on the left, press the Left Arrow key.

• To change the selection to the next question mark prompt, press Tab.

To replace a math element:

1 Select the element you want to replace and press Delete.

2 Click on the Equations palette or type to insert the replacement. The new element replaces the prompt.

To delete a math element:

1 Select the element you want to delete and press Delete. A question mark prompt replaces the element.

2 Press Delete again. The prompt disappears. FrameMaker also removes any elements that are no longer necessary—for example, a plus sign or parentheses.

To delete an entire equation:

1 Control-click the equation to select the equation.

2 Press Delete.

Removing delimiters

After entering or editing an equation, you may end up with extra delimiters—parentheses, braces, and brackets. You can remove extra delimiters, but if you later use evaluation commands, FrameMaker evaluates the equation as if the delimiters were still present.

To remove all parentheses, braces, and brackets in an expression:

1 Select the expression.

2 On the Delimiters page of the Equations palette, click Remove Parentheses.

Before clicking	After clicking
$(2a(b))$	$2ab$

To remove one delimiter:

❖ Place the insertion point to the right of the delimiter and press Delete. If the delimiter has a mate, such as the left parenthesis between a and b in the example, the mate is also removed.

Before	After
$2a(b)$	$2ab$

Toggling an element's format

Some math elements can be represented in more than one way. For example, delimiters can appear as (x), $[x]$, or $\{x\}$. Division can appear as $x \div y$, x/y or $\frac{x}{y}$.

To toggle an element's format:

1 Select the entire element.

2 On the Operators, Large, Delimiters, or Calculus page of the Equations palette, click Toggle Format. The command is the same on all four pages and operates on any element with multiple formats. You might need to click more than once to get the format you want.

Adding operands to math elements

Radical symbols, gradient symbols, and logarithms can have one or two operands. Integrals and other symbols on the Large and Calculus pages can have one, two, or three operands.
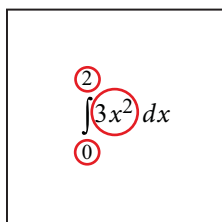
Operands

You can add operands to these elements without starting over.

To add an operand to a math element:

1 Click or select anywhere in the expression with the element.

$$\sum_{n\,=\,1} \lfloor Ax_n$$

Insertion point in equation

2 Click Add Operand on the Large or Calculus page. A question mark prompt appears where the new operand will appear.

$$\boxed{?}$$
$$\sum_{n\,=\,1} Ax_n$$

Added operand

Changing matrices

You can change the number of rows or columns in a matrix and add or remove brackets around the matrix. You can allow the column width to vary from column to column, depending on the contents, or specify that all columns be of equal width. Similarly, you can allow the row height to vary from row to row.

You can also transpose a matrix and perform matrix algebra (see "Matrix Commands pop-up menu" on page 267).

To add a row or column to a matrix:

1 Put the insertion point in the matrix.

2 On the Matrices page of the Equations palette, choose Add Row or Add Column from the Matrix Commands pop-up menu.

Before Add Column	After Add Column
$\begin{bmatrix} a\,b \\ c\ d \end{bmatrix}$	$\begin{bmatrix} a\ b\ \boxed{?} \\ c\ d\ ? \end{bmatrix}$

Add Row adds a row at the bottom. Add Column adds a column at the far right.

To delete a row or column from a matrix:

❖ Select the row or column and press Delete.

Before	After
$\begin{bmatrix} a\ b\ \boxed{c} \\ d\ e\ \boxed{i} \end{bmatrix}$	$\begin{bmatrix} a\ b \\ d\ e \end{bmatrix}$

To add or remove brackets around a matrix:

1 Select the entire matrix.

2 On the Matrices page of the Equations palette, click Add/Remove Brackets.

To change the row height or column width in a matrix:

1 Select the matrix.

2 On the Matrices page of the Equations palette, choose All Equal or Proportional from the Matrix Row Height or Matrix Column Width pop-up menu.

$$\begin{bmatrix} \dfrac{x+3}{y} & x \\[1em] x & y-2 \end{bmatrix} \qquad \begin{bmatrix} \dfrac{x+3}{y} & x \\[1em] x & y-2 \end{bmatrix}$$
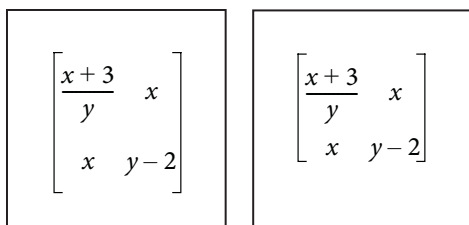
Equal row heights (left) and Proportional row heights (right)

If you choose Proportional, each row will be tall enough to hold the tallest cell in the row; each column will be wide enough to hold the widest cell in the column. If you choose All Equal, each row will be tall enough to hold the tallest cell in the entire matrix; each column will be wide enough to hold the widest cell in the entire matrix.

Creating and defining math elements

If you need a math element that doesn't appear on the Equations palette, you can create a custom element—for example, a new operator such as ✱. However, FrameMaker won't be able to evaluate custom math elements mathematically.

If you want to display a built-in element on the palette differently in your document, you can redefine the element. For example, you can redefine the *asin* (inverse sine) function so it appears as sin^{-1}. You can redefine the appearance of a built-in element, but you can't change its type. For a description of the custom math elements you can create, see "Math element types" on page 254.

You can also import math element definitions from another document. For details, see "Importing and updating formats" on page 408.

Math element types

A math element's type indicates how the element behaves in relation to other elements around it. For example, a plus sign (+) has the type infix, which means that it has two operands, one to the left and one to the right.

You can define custom math elements of the following types.

Type	Example	Number of operands
Atom	α	None
Delimiter	(α)	One
Function	$\sin\alpha$	One, to the right of the element
Infix	$\alpha + \beta$	Two, to the left and the right of the element

Type	Example	Number of operands
Large	$$\sum_{1}^{\infty} x^2$$	Up to three, above, below, and to the right of the element
Limit	$$\lim_{x \to \infty} \frac{1}{x^2}$$	Up to two, below and to the right of the element
Prefix	$-\alpha$	One, to the left of the element
Postfix	$\alpha!$	One, to the right of the element
Vertical list	α β γ	Two, one above the other (The text line that defines a custom vertical list is used as a separator between list items.)

You cannot define custom math elements of the following types.

Type	Example
Derivative	$$\frac{d}{dx}$$
Diacritical mark	α', $\ddot{\beta}$
Horizontal list	$xy \qquad x + y$
Matrix	$$\begin{bmatrix} \alpha & \beta \\ \gamma & \delta \end{bmatrix}$$
Root	$\sqrt{x}$, $\sqrt[3]{x}$
Script	α^2, β_0
Substitution	$x\big|_{x=3}$
Vertical division bar	$\alpha!$

Creating and changing math element definitions

Custom math element definitions are stored on one or more reference pages whose name begins with *FrameMath*. Each definition is a text line in an unanchored graphic frame whose name is the element name.
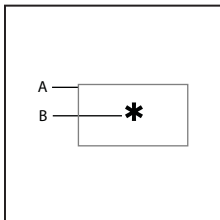
A. Graphic frame B. Text line

To define a custom math element or change a built-in math element's definition:

1 Choose View > Reference Pages and display a FrameMath reference page.

If the document doesn't contain a FrameMath reference page, display a reference page and then choose Special > Add Reference Page. Name the new page FrameMath1. (Capitalize the letters *F* and *M* as shown.)

2 Use the Graphic Frame tool to draw an unanchored graphic frame on the page (see "Using reference frames on reference pages" on page 399).

3 In the Frame Name dialog box, enter a name for the math element. If you are redefining a built-in element, enter that element's name. To find the name of a built-in element, see the following procedure.

4 Use the Text Line tool to add a text line in the graphic frame (see "Using text with graphics" on page 320).

5 Create the math element in the text line using the following guidelines:

• You can type any characters in the text line, and you can change the character format (see "Applying predefined formats to text" on page 102 and "Changing font properties" on page 106). You can also move the characters by using micropositioning shortcuts.

• For all math elements except delimiters, the text line represents just the mathematical symbol, not the operands. When you later insert the element in an equation, FrameMaker places the operands in the appropriate places, based on the type of math element. For example, a large element, such as a summation or an integral sign, has up to three operands—one above, one below, and one to the right of the symbol.

• A custom delimiter can contain only one operand, even though some built-in delimiters contain two or three. To indicate the location of the operand, insert a space in the text line. If you do not insert a space in the text line, FrameMaker places the operand between two copies of the delimiter.
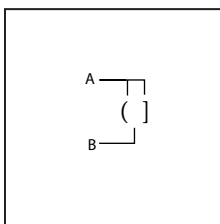
A. Characters in delimiter
B. Space indicates the operand.

• FrameMaker uses the first text line in the frame for the custom math element, so make sure there's only one text line in the frame.

6 Select the graphic frame.

7 On the Equations palette, choose Add Definition to Catalog from the Equations pop-up menu.

8 If you're defining a custom math element, choose an element type from the pop-up menu, and click Add. For information on the types of elements you can define, see "Math element types" on page 254.

To find the name of a math element:

1 Place the insertion point in an equation.

2 On the Equations palette, choose Insert Math Element from the Equations pop-up menu.

3 Turn off Show Custom Only, and then scroll through the element names to find the one you want.

4 Click Cancel.

To change a custom math element definition:
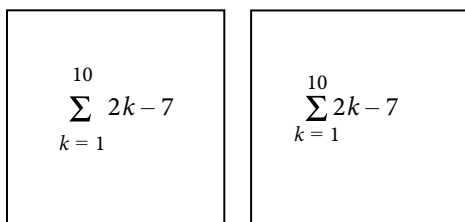
1 Display the FrameMath reference page that contains the math element by doing one of the following:

• If the custom math element appears in an equation, select the element, and choose Update Definition from the Equations pop-up menu on the Equations palette. Then click Go to Frame.

• If you haven't inserted the custom math element into an equation, choose View > Reference Pages. Then display the FrameMath reference page you want.

2 Edit the text line that defines the math element. When you display a body page again, FrameMaker uses the modified definition, and shrinkwraps the equations again.

To delete a custom math element definition:

❖ Display the FrameMath reference page that contains the math element and delete the graphic frame. If the element appears in an equation, FrameMaker displays the element name, surrounded by question marks, instead of the element.

Positioning math elements in an equation

FrameMaker positions math elements according to their mathematical meaning in an equation. In some cases, though, you may want to *microposition* elements—reposition them so they're closer to or farther from other elements in the equation.

$$\sum_{k\,=\,1}^{10} 2k - 7 \qquad \sum_{k\,=\,1}^{10} 2k - 7$$

Before and after micropositioning

You can also control the amount of white space on each side of an element—left, right, above, and below.

A — $A + B$

B — $A \quad + \quad B$

C — $A+B$
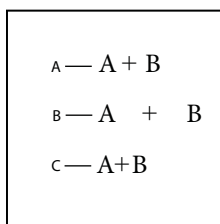
A. *Default spacing* **B.** *Space added to the left and right*
C. *Space removed from the left and right*

You can change the spacing in a math element definition, so the new spacing appears wherever the element appears in the document.

Positioning expressions precisely

When you microposition an element or expression, its position changes with respect to all other elements in the equation. For example, if you microposition the middle expression closer to the one on the left as shown below, it moves farther away from the one on the right.

$(x) \; x - 4 \; (x - 1)$ $x \, (x - 4) \, (x - 1)$
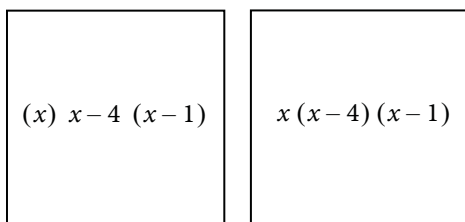
Before and after micropositioning

To position a selected expression:

❖ On the Positioning page of the Equations palette, click a micropositioning arrow. Click as many times as necessary. (Each click moves an expression one pixel on the screen.) Zoom in for greater precision.
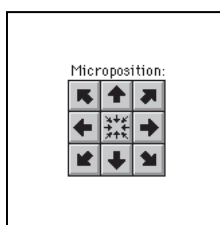
Micropositioning arrows

To remove micropositioning from a selected expression:

❖ On the Positioning page of the Equations palette, click the button at the center of the Microposition area ⊞.

To inspect the position offsets of a selected expression and adjust them numerically:

1 On the Positioning page of the Equations palette, click Position Settings. The exact offsets appear in the Microposition Offset area of the Math Element Position Settings dialog box.

2 To adjust the position, enter values in the Microposition Offset area and click Set.

Changing the spacing around an expression

You can change the amount of white space around elements or expressions. For example, you can force FrameMaker to use larger delimiters around an expression by increasing the amount of white space above and below the expression.

Original spacing and space added below

To add or subtract white space around a selected expression:

❖ On the Positioning page of the Equations palette, click a plus sign (+) to add white space or a minus sign (–) to remove it.
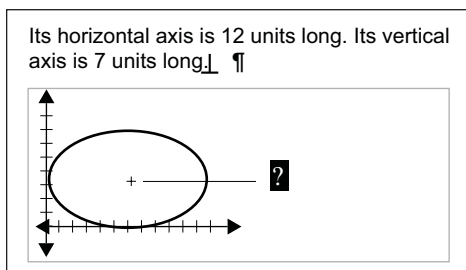
Spacing controls

Click as many times as necessary. Each click adds or subtracts one pixel of space. Zoom in for greater precision.

Note: To change the spacing around a math element of type infix, prefix, postfix, or delimiter, adjust the space around the adjacent math elements instead. For example, to add space on either side of the plus sign in the expression a+b, *select the* a *and add space to the right. Then select the* b *and add space to the left. For a description of math element types, see "Math element types" on page 254.*

To restore the default amount of white space around a selected expression:

❖ On the Positioning page of the Equations palette, click the button at the center of the Spacing area ⊠.

To inspect the spacing values of a selected expression and adjust them numerically:

1 On the Positioning page of the Equations palette, click Position Settings. The exact spacing appears in the Spacing area of the Math Element Position Settings dialog box.

2 To adjust the spacing values, enter values in the Spacing area, and click Set.

Changing the spacing for a math element wherever it appears

You can update some math element definitions—infix, prefix, postfix, large, scripts, and the division bar—with new spacing. When you do, FrameMaker adjusts the spacing around the element wherever it appears in the document and rewraps the equations. For a description of math element types, see "Math element types" on page 254.

You can also change the spread—the space between characters—uniformly in all small, medium, and large equations. For details, see "Changing equation fonts throughout a document" on page 265.

To change the spacing for a math element wherever it occurs:

1 After you adjust the spacing around the element in an equation, select the element.

2 On the Equations palette, choose Update Definition from the Equations pop-up menu.

3 Do one of the following:

• To update the spacing for the element throughout the document, click Update.

• To reset the spacing to the default, click Get Default.

Setting line breaks and aligning equations

You can control when an equation breaks across lines and the alignment of the lines in a multiline equation, or of the items in a list or matrix. You can also align several equations with one another, even if they appear in different anchored frames.

$$
\begin{aligned}
2a + 3b - c &= 2x + 1 \\
3a - b &= 4x \\
2b + c &= 3x - 7 \\
2a - 3b + 7c - 2 &= 2x + 4
\end{aligned}
$$

Aligned along left side of equal signs

You can manipulate equation objects as you do other objects. For information on grouping, aligning, distributing, and rotating objects, see "Editing and arranging objects" on page 326.

Changing an equation's line breaking

When an equation breaks across lines, the entire equation remains in a single anchored frame. You can set where an equation breaks across lines automatically. When you change the line-break width, the equation is reformatted to the new width.

$$(x + 1)^4 = x^4 + 4x^3 + 6x^2 + 4x + 1$$

Original equation

$$
\begin{aligned}
(x + 1)^4 &= x^4 + 4x^3 \\
& + 6x^2 + 4x + 1
\end{aligned}
$$

Equation set to break at 1.25″

You can also force a line break at a specific location in the equation. However, don't use manual line breaks to create separate equations. Instead, insert a vertical list of expressions (see "Inserting horizontal and vertical lists of expressions" on page 243).

To change an equation's automatic line-break width:

1 Click in the equation or select any part of it.

2 Choose Graphics > Object Properties.

3 Edit the value in the Automatic Line Break After text box, and click Set. The value is preset to the width of the equation's frame.

To insert a manual line break:

1 Click where you want the equation to break into two lines.

2 On the Positioning page of the Equations palette, choose Set Manual from the Line Breaking pop-up menu.
A line-break symbol ⟨ appears at the insertion point when text symbols are visible.

$$(x+1)^8 = x^8 + 8x^7 + 28x^6 + 56x^5 + ⟨$$
$$70x^4 + 56x^3 + 28x^2 + 8x + 1$$

Manual line break

To remove a manual line break:

1 Select the part of the equation that contains the line-break symbol.

2 On the Positioning page of the Equations palette, choose Clear Manual from the Line Breaking pop-up menu.

Aligning display equations

The alignment (left, center, or right) of a display equation is controlled by the format of the paragraph that contains the equation.

The ellipse is represented by the following equation¶

$$\frac{(x-x_0)^2}{a^2} + \frac{(y-y_0)^2}{b^2} = 1 \P$$

Paragraph alignment set to Center

To change the alignment of a display equation:

❖ Click in the paragraph that contains the equation (not in the equation itself) and choose the alignment from the Alignment pop-up menu in the formatting bar or in the Paragraph Designer. For details, see "Changing indents and alignment" on page 110.

Aligning items in lists, matrices, and multiline equations

You can automatically align items in a vertical list and lines in a multiline equation along their left or right sides, their centers, or their equal signs. You can also set your own manual alignment points for items in a vertical list and for a multiline equation. Manual alignment points override automatic alignment.

$$C = 2\pi r = \pi d$$
$$A = \pi r^2$$

$$C = |2\pi r = \pi d$$
$$A = \pi r^2$$

Aligned on left side and at manual alignment point

You can align the items in a horizontal list along their tops, bottoms, or baselines.

$$\sum_{k=1}^{5} k \qquad x + y$$

Baseline-aligned

You can also align the cells in each row of a matrix along their tops, bottoms, or baselines. You can align the cells in each column at the right, left, or center, or along equal signs.

$$A \quad \begin{bmatrix} x + y & x \\ x^2 & x_{x-1} \end{bmatrix}$$
$$B$$

Aligned along:
A. Baselines B. Centers

To set automatic alignment for a vertical list or multiline equation:

1 Click in the equation or list.

2 On the Positioning page of the Equations palette, choose an item from the Left/Right pop-up menu. When you choose Left of = or Right of =, the lines are aligned along one side of an equal sign. A line with no equal sign is aligned along its left side.

To set a manual alignment point for a multiline equation or for an item in a vertical list:

1 Do one of the following:

• Click in the first line of a multiline equation where you want subsequent lines to align.

• Click in a vertical list item where you want the item to align with the rest of the list.

2 On the Positioning page of the Equations palette, choose Set Manual from the Left/Right pop-up menu. A manual alignment symbol | appears at the insertion point when text symbols are visible. Subsequent lines of a multiline equation are left-aligned with the manual alignment point. A vertical list item aligns with other items in the list at the manual alignment point.

To clear a manual alignment point:

1 Select the part of the equation that contains the manual alignment point.

2 On the Positioning page of Equations palette, choose Clear Manual from the Left/Right pop-up menu. You can also clear a manual alignment point by setting another.

To align items in a horizontal list:

1 Click in the list.

2 On the Positioning page of the Equations palette, choose an item from the Up/Down pop-up menu.

To align cells in a matrix:

1 Click in the matrix.

2 On the Positioning page of the Equations palette, choose an item from the Up/Down pop-up menu or from the Left/Right pop-up menu. The Left/Right and Up/Down commands affect the whole matrix. To align individual cells, use micropositioning (see "Positioning expressions precisely" on page 258).

To check alignment settings for a horizontal or vertical list, or for a matrix:

1 Do one of the following to select the entire list or matrix:

• Drag through the list or matrix.

• Put the insertion point in the matrix and press the spacebar repeatedly.

2 On the Positioning Page of the Equations palette, click Position Settings.

Aligning several equations

You can align several equation objects with one another in a graphic frame, just as you align other objects. You can also align several equation objects along a manual alignment point, even when they're in separate graphic frames.

$$x + 2^{\ 2} = \left| x^2 + 4x + 4 \right.$$

$$x + 3 \quad x - 2 = \left| x^2 + x - 6 \right.$$

Equations aligned at manual alignment points

FrameMaker maintains the equation objects' alignment as you edit the equations. For example, if two equations are left-aligned, the left alignment is maintained as the equations expand or shrink.

To left-, center-, or right-align equations in a frame with one another:

1 Select the equations to be aligned by control-clicking the first equation; Control+Shift-click the other equations.

Make sure that the last equation you select is the one you want to align with.

2 Choose Graphics > Align.

3 Select the left/right alignment you want, and click Align. For more information, see "Aligning objects" on page 328.

To align equations along a point:

1 Set the manual alignment point in one of the equations you want to align. You do this in an equation just as you set a manual alignment point in a vertical list (see "Aligning items in lists, matrices, and multiline equations" on page 262).

If you don't set a manual alignment point, FrameMaker aligns an equation on the left.

2 Click in the equation and choose Graphics > Object Properties.

3 Choose Manual from the Alignment pop-up menu and specify the location of the alignment point within the frame in the Alignment Point Offset area. The left offset is the distance from the left edge of the frame to the manual alignment point—for example, the right side of an equal sign.

You don't need to specify the top offset precisely. You can move the equation up or down later, just as you do any other object.

4 Click Set.

5 Repeat steps 1 through 4 for each equation you want to align. Use the same distance from the left edge for each equation, but change the top offset to position the equation vertically in the frame. If the equations you're aligning are in different anchored frames, make sure the frames' left edges align with one another.

Changing font settings in equations

A document contains font settings that apply to all equations in it. These settings determine the font sizes and spacing for small, medium, and large equations. They also determine the character format used for Greek characters and for symbols, functions, numbers, strings, and variables.

You can change the preset size of an entire equation, and you can change the character format of individual math elements—for example, to use color or a special font.

$$\frac{(x - x_0)^2}{a^2} + \frac{(y - y_0)^2}{b^2} = 1$$

Font changes

You can also change the font sizes and character formats used for all equations in a document.

Changing the character format in individual equations

You can change the preset size—Small, Medium, or Large—and color of an entire equation, or the character format of just one element or expression. For example, you might want to display an element in a larger point size or in bold.

You can't change the spread, stretch, superscript, subscript, underline, overline, strikethrough, change bar, or pair kerning properties for any element. You also can't change the font family for individual Greek characters and symbols and for some operators. For information on changing the font family for all Greek characters and symbols in a document, see "Changing equation fonts throughout a document" on page 265.

To change the preset size or color of an equation:

1 Click in the equation and choose Graphics > Object Properties.

2 Do one of the following:

• To change the equation's size, choose a size from the Size pop-up menu, and click Set. If the equation is shrink-wrapped, FrameMaker rewraps it.

• To change the equation's color, choose a color from the Color pop-up menu, and click Set.

To change the character format of an element or expression:

❖ Select the element or expression, and use the same method you would use with text. For details, see "Using font commands on the Format menu" on page 106 and "Using a designer to change font properties" on page 107.

To create a superscript or subscript:

❖ Use the appropriate operator. For details, see "Inserting operators" on page 245.

To change the spread of characters:

❖ Microposition them by using the positioning page of the Equations palette. For details, see "Positioning expressions precisely" on page 258.

To put a line over or under an expression:

❖ Use the diacritical marks on the Symbols page of the Equations palette.

Changing equation fonts throughout a document

You can change the font size and spacing for all small, medium, and large equations in a document. When you make global font changes, FrameMaker reformats and rewraps all shrinkwrapped equations in the document.

Greek characters and symbols in equations normally appear in the Symbol font, but you can use fonts such as Mathematical Pi and Universal Greek if these fonts are installed on your system.

Functions, numbers, and strings normally appear in Times New Roman or Times. Variables normally appear in italic. You can change the character format of each of these kinds of elements. For example, you can display all elements in Helvetica, with functions in italic and variables in bold.

Note: Don't delete formats from the Character Catalog if you're using them to specify the character format of math elements. If you delete these character formats from the Catalog, all equations in the document will be reformatted using the default font.

To change equation font size and spacing throughout a document:

1 On the Equations palette, choose Equation Sizes from the Equations pop-up menu.

2 Do one of the following:

• Specify the font sizes and spread, and click Set. Spread is expressed as a percentage of the font size. Positive spread values cause wider spacing around elements; negative values cause narrower spacing.

• Click Get Defaults.

To change the font for Greek characters and symbols:

1 On the Equations palette, choose Equation Fonts from the Equations pop-up menu.

2 Choose one of the available fonts from the Math Symbols pop-up menu, and click Set.

To change the character format for functions, numbers, strings, and variables:

1 Create the character format you want (see "The Paragraph and Character Designers" on page 104).

2 On the Equations palette, choose Equation Fonts from the Equations pop-up menu.

3 Choose the character format from the Functions, Numbers, Strings, or Variables pop-up menu, and click Set. The pop-up menus contain the formats stored in the Character Catalog.

Evaluating equations

After you create an expression or equation, you can transform it by changing its mathematical representation. For example, you can multiply polynomials, factor terms, simplify expressions, and combine fractions.

Original selection
$y = (x+4)^3$
Expanded
$y = (x+4)(x+4)(x+4)$
Multiplied out
$y = (x+4)(x^2+8x+16)$
Multiplied out again
$y = x^3+12x^2+48x+64$

You can also evaluate it by substituting values and performing computations.

Original selection
$x^3\big|_{x=1}^{3}$
Expanded
$x^3\big|_{x=3} - x^3\big|_{x=1}$
Value substituted
$27 - 1$
Result computed
26

To transform or evaluate an expression:

1 Select the expression, or part of it.

2 Choose a command on the Matrices or Functions page of the Equations palette. For example, you might select an expression and then choose Multiply Out from the Multiplication pop-up menu on the Functions page.

For details, see the following sections, which describe the commands on the Matrix Commands pop-up menu of the Matrices page and the commands on the six pop-up menus of the Functions page.

Matrix Commands pop-up menu

Use the Matrix Commands pop-up menu on the Matrices page to create, edit, and evaluate matrices.

This section describes the Matrix Transpose and Matrix Algebra commands. For information on the other commands on the menu, see "Changing matrices" on page 253.

Matrix Transpose Transposes the rows and columns of a selected matrix.

Selected matrix	After transposing
$\begin{bmatrix} a & b & c \\ d & e & f \end{bmatrix}$	$\begin{bmatrix} a & d \\ b & e \\ c & f \end{bmatrix}$

Matrix Algebra Performs matrix multiplication and addition, and evaluates dot and cross products in a selected matrix.

Selected matrix (or matrices)	After matrix algebra
$2\begin{bmatrix} a & b \\ c & d \end{bmatrix}$	$\begin{bmatrix} 2a & 2b \\ 2c & 2d \end{bmatrix}$
$\begin{bmatrix} 2a & 2b \\ 2c & 2d \end{bmatrix}$	$\begin{bmatrix} 2a+bc & 2b+be \\ ac+2cd & bc+2de \end{bmatrix}$
$\begin{bmatrix} 2 & b \end{bmatrix} + \begin{bmatrix} 3 & a \end{bmatrix}$	$\begin{bmatrix} 2+3 & b+a \end{bmatrix}$
$\begin{bmatrix} a \\ b \\ c \end{bmatrix} \cdot \begin{bmatrix} a \\ 2 \\ c \end{bmatrix}$	$aa+b2+cc$
$\begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix} \times \begin{bmatrix} a \\ b \\ c \end{bmatrix}$	$\begin{bmatrix} 2c-3b \\ 3a-1c \\ 1b-2a \end{bmatrix}$

After performing matrix algebra, you can use the Simplify command to combine like terms (see "Other Rewrites pop-up menu" on page 276).

Addition pop-up menu

Use the Addition pop-up menu on the Functions page to add fractions and order polynomials.

Add Fractions Adds selected fractions, expressing the result as a single fraction. This command also combines like terms.

Selected fraction	After adding
$\dfrac{1}{3} + \dfrac{4}{5}$	$\dfrac{17}{15}$
$\dfrac{a}{4} + \dfrac{2a}{3}$	$\dfrac{11a}{12}$
$\dfrac{2x}{y} + \dfrac{3a}{b}$	$\dfrac{2bx + 3ay}{by}$

If the selected expression contains the sum of more than two fractions, Add Fractions adds only the first two. Use this command repeatedly to combine all the fractions.

Selected expression
$\dfrac{2x}{y} + \dfrac{3a}{b} - \dfrac{2a}{3b}$
Added once
$\dfrac{2bx + 3ay}{by} - \dfrac{2a}{3b}$
Added twice
$\dfrac{3b(2bx + 3ay) - 2aby}{3yb^2}$

Order Sum Arranges polynomials in decreasing powers of a selected variable.

Before ordering	After ordering
$x^3 + 2x^5 - 4x^2 + 1$	$2x^5 + x^3 - 4x^2 + 1$

Order Sum Reverse Arranges polynomials in increasing powers of a selected variable. In the following example, you select an x—any x—before choosing Order Sum Reverse.

Before ordering	After ordering
$x^3 + 2x^5 - 4x^2 + 1$	$1 - 4x^2 + x^3 + 2x^5$

Multiplication pop-up menu

Use the Multiplication pop-up menu on the Functions page to factor terms, multiply out expressions, and distribute multiplication and division over addition.

Factor Factors a selected term out of a product.

Before factoring	After factoring
$\blacksquare c + bc$	$a\left(c + \dfrac{bc}{a}\right)$
$\blacksquare^2 + 2a + 1$	$a\left(a + 2 + \dfrac{1}{a}\right)$

Factor Some Factors a selected term from only those terms that contain it.

Before factoring	After factoring
$\blacksquare y + 2x + v$	$v + (y + 2)x$

Multiply Out Simplifies the selected expression, distributes multiplication over addition, and expands a selected term raised to a positive integral power.

Selected expression	After multiplying
$(a-3)(2a+4)$	$2a^2 - 2a - 12$
$(a+2b)^2$	$a^2 + 4ab + 4b^2$

The Simplify command also simplifies the selected expression (see "Other Rewrites pop-up menu" on page 276).

Multiply Out Once Multiplies the first pair of factors on the left side of a selected expression.

Selected expression	After multiplying
$a(b + c)(2a)$	$ab(2a) + ac(2a)$

If you use this command several times, the results appear in a different form.

Distribute Performs a variety of operations depending on the expression you select, as shown in the following examples:

• Distributes division over addition.

Selected expression	After distributing
$\dfrac{a + b}{c}$	$\dfrac{a}{c} + \dfrac{b}{c}$

Use the Add Fractions command to perform the reverse operation (see "Addition pop-up menu" on page 268).

• Distributes multiplication over addition.

Selected expression	After distributing
$a(b + c)$	$ab + ac$

Use the Factor command to perform the reverse operation.

• Transforms products and quotients involving radicals and exponents into a single expression raised to a power.

Selected expression	After distributing
ab^2	$(\sqrt{a}b)^2$
$a^3 b^2$	$(a^{3/2}b)^2$
$a^2 \sqrt{b}$	$\sqrt{a^4 b}$

Use the Simplify command to perform the reverse operation (see "Other Rewrites pop-up menu" on page 276).

Distribute Over Equality Performs the same operation on both sides of an equal sign.

Selected expression	After distributing
$(x = y)z$	$xz = yz$
$(x = y) - 5$	$x - 5 = y - 5$
$(x = y)^2$	$x^2 = y^2$

Division pop-up menu

Use the Division pop-up menu on the Functions page to perform long division, convert division to multiplication, and convert negative exponents to positive.

Long Division. Performs long division in a fraction that contains a polynomial numerator and denominator.

In the following example, you select an x—any x—before choosing Long Division. You would select an x in the fraction of the first result and choose Long Division again to obtain the second result.

Before dividing
$\dfrac{x^2 + 2x + 1}{x + 1}$

Divided once
$x + \dfrac{1 \cdot x + 1}{x + 1}$

Divided twice	
	$x + 1$

Remove Division   Converts division to multiplication in a selected expression by changing positive exponents in a denominator to negative and negative exponents in a denominator to positive.

Selected expression	After removing division
$\dfrac{x}{y^2}$	xy^{-2}
$\dfrac{b + \dfrac{c}{d}}{x}$	$(b + cd^{-1})x^{-1}$

To convert negative exponents to division operators, use the Remove Negative Powers command.

Remove Division 1 Level   Converts division to multiplication, as Remove Division does, but applies only to the first level of operators.

Selected expression	After removing division
$\dfrac{x}{y^2}$	xy^{-2}
$\dfrac{b + \dfrac{c}{d}}{x}$	$\left(b + \dfrac{c}{d}\right)x^{-1}$

To convert the first level of negative exponents into division operators, use the Remove Negative Powers 1 Level command.

Remove Negative Powers   Converts negative exponents to positive in a selected expression by replacing multiplication with division and division with multiplication.

Selected expression	After removing negative powers
xy^{-2}	$\dfrac{x}{y^2}$
$(b + cd^{-1})x^{-1}$	$\dfrac{b + \dfrac{c}{d}}{x}$

Remove Negative Powers 1 Level Converts negative exponents to positive, as Remove Negative Powers does, but applies only to the first level. If the selected expression has no negative exponents at the first level, this command has no effect.

Selected expression	After removing negative powers
$(b+c^{-1})^{-2}$	$\dfrac{1}{(b+c^{-1})^2}$
xy^{-2}	(no effect) xy^{-2}

Evaluation pop-up menu

Use the Evaluation pop-up menu on the Functions page to evaluate expressions numerically.

Number Crunch Changes integers to floating-point numbers in a selected expression and then evaluates the expression.

Selected expression	After number crunch
$\sin\dfrac{3\pi}{2}$	-1
$\lvert -3\rvert$	3
$\log 2e^2 - 1$	2.6230813
$e^2 + 7\pi$	29.380205

Use the Show All Digits command to show up to 15 decimal places in a floating-point number.

Number Crunch displays NaN (Not a Number) for operations that result in undefined values and Infinity for operations that result in a value too large to calculate. Extremely small numbers may be evaluated to zero.

Selected expression	After number crunch
$\dfrac{1}{0} - \dfrac{1}{0}$	NaN
$\dfrac{1}{0}$	Infinity

Show All Digits Shows the full internal accuracy of a floating-point number.

Selected number	After showing all digits
3.1415927 …	3.1415926535897

Evaluate Evaluates the selected expression. The operations performed depend on the type of expression selected, as shown in the following examples:

- Rewrites an expression raised to a power less than 20 as a product.

Selected expression	After evaluating
a^3	aaa

- Computes the factorial of an integer. If the result is too large to calculate, the result appears as Infinity.

Selected expression	After evaluating
$5!$	120

- Computes the determinant of a 1-by-1 or 2-by-2 matrix.

Selected expression	After evaluating
$\left\| \begin{bmatrix} a & b \\ c & d \end{bmatrix} \right\|$	$ad - bc$

- Extracts a term from a sum or product.

Selected expression	After evaluating
$\sum_{x=1}^{5} x^3$	$1 + \sum_{x=2}^{5} x^3$

- Evaluates a substitution just as the Evaluate Substitution command does.

- Rewrites an Evaluate Between operator as a difference.

Selected expression	After evaluating
$x^2 \Big\|_{x=6}^{8}$	$x^2 \big\|_{x=8} - x^2 \big\|_{x=6}$

- Rewrites the logarithm of a product as a sum of logarithms and rewrites a logarithm of a power as a product.

Selected expression	After evaluating
$\log 2xy$	$\log 2 + \log x + \log y$
$\log a^n$	$n \log a$

- Rewrites a logarithm to a base in terms of natural logarithms.

Selected expression	After evaluating
$\log_2 x$	$\dfrac{\log x}{\log 2}$

- Rewrites a choice function in terms of factorials.

Selected expression	After evaluating
$\binom{x}{y}$	$\dfrac{x!}{y!\,(x-y)!}$

Evaluate Substitution Performs a specified substitution and then simplifies the expression. When an Evaluate Between operator is selected, this command rewrites the expression as a difference.

Selected expression	After evaluating
$x^2 \Big|_{x=1}^{6}$	$x^2 \big|_{x=6} - x^2 \big|_{x=1}$
$\sin(2x) \big|_{x=\mathrm{p}}$	$\sin(2\pi)$

Evaluate Integrals Rewrites a selected integral with a polynomial integrand. This command converts a definite integral into an indefinite integral evaluated between the upper and lower bounds. Use Evaluate Integrals several times to integrate a polynomial fully.

Selected expression
$$\int_{1}^{3} x^2\,dx$$
Evaluated once
$$\int (dx)x^2 \Big|_{x\,=\,1}^{3}$$
Evaluated twice
$$\frac{x^3}{3}\Big|_{x\,=\,1}^{3}$$

Evaluate Derivatives Evaluates a selected derivative, applying the chain rule to complex expressions when necessary. This command evaluates a partial derivative only when all dependencies are explicitly written.

This command treats elements in a total derivative as if they depended on the variable of differentiation. Use the Evaluate command to expand an nth derivative before using Evaluate Derivatives to evaluate it.

Before	After
$\frac{d}{dx}(3x^3 - 2x^2 - 3)$	$9\,x^2 \ - \ 4\,x$
$\frac{\partial}{\partial x}\sec xy \tan xy$	$(xy^2\sec^2xy + y\tan xy)\tan xy\tan xy\sec xy\tan xy$

Evaluate Derivatives 1 Level Evaluates only the first level of a selected derivative.

Before	After
$\frac{d}{dx}(3x^3 + 2x^2 + 3)$	$\frac{d}{dx}3x^3 + \frac{d}{dx}2x^2 + \frac{d}{dx}3$

Rules pop-up menu

Use the Rules pop-up menu on the Functions page to store and apply rules that transform expressions.

For example, use Enter Rule to store a rule such as *a = a + 3*. Then use Apply Rule to substitute *a + 3* for *a* in another expression.

Enter Rule Stores a rule for substituting one expression for another. Select the expression you want to store as a rule before you choose Enter Rule. You can store only one rule at a time.

Designate Dummy Designates a selected term to be a dummy variable. A dummy variable in a rule allows you to substitute the expression on the right side of the rule for any variable, not just the variable explicitly named on the left. A dummy variable appears in boldface. For example, if you designate *x* in the rule *x = a – 2* to be a dummy variable, you can substitute *a – 2* for any variable in an expression, not just *x*.

Select the term you want to be a dummy variable before you choose Designate Dummy. Then use the Apply Rule command to replace a selected expression with the expression assigned to the dummy variable.

Apply Rule Substitutes one term or set of terms for another in a selected expression, using the rule stored with the Enter Rule command.

Rule entered	
	$a = a + 3$
Selected expression	
	$a^2 - 2ab + b^2$
After rule is applied	
	$(a+3)^2 - 2b(a+3) + b^2$

Before you apply a rule that contains a dummy variable, select the term you want the variable to replace. In the following example, x is the dummy variable in the rule.

Rule entered	
	$x \leftarrow \sqrt{y}$
Before rule is applied	
	$a^2 - 2ab + b^2$
After rule is applied	
	$a^2 - 2ab + \sqrt{y}^2$

Other Rewrites pop-up menu

Use the Other Rewrites pop-up menu on the Functions page to simplify algebraic expressions and to isolate and expand terms.

Simplify Simplifies the selected expression. To evaluate fractions that involve infinity or division by zero, use the Number Crunch command instead of Simplify (see "Evaluation pop-up menu" on page 272).

The operations performed depend on the type of expression selected, as shown in the following examples:

- Performs integer arithmetic.

Selected expression	After simplifying
$c + 0$	c
$4!$	24
$\frac{1}{3} + \frac{2}{5}$	$\frac{11}{15}$

When the result is too large to calculate, it appears as Infinity.

- Groups terms in a sum or product.

Selected expression	After simplifying
$2ab + 3ab$	$5ab$
$ab(ac)$	a^2bc
$a^x a^{2x+3}$	a^{3x+3}

- Divides out common factors in a fraction.

Selected expression	After simplifying
$\dfrac{(ab)^2}{a^2b}$	$1b$
$\dfrac{2x^3y^2}{6xy^5}$	$\dfrac{x^2y^{-3}}{3}$

Use the Remove Negative Powers command to remove negative powers from the result (see "Division pop-up menu" on page 270).

- Interprets the complex number *i*, represented by the Greek letter iota ι.

Selected expression	After simplifying
$\sqrt{-ab}$	$\iota\sqrt{a}\sqrt{b}$

- Distributes exponentiation across multiplication and division.

Selected expression	After simplifying
$(xy)^2$	x^2y^2
$\left(\dfrac{x}{y}\right)^2$	$\dfrac{x^2}{y^2}$

Note that simplifying $\sqrt{x^2}\,x$ produces x rather than $|x|$.

Simplify Some Simplifies the selected expression, as the Simplify command does, but does not multiply fractions.

Selected expression	After simplifying
$8\dfrac{km}{hr} + 4\dfrac{km}{hr}$	$12\dfrac{km}{hr}$

Isolate Term Isolates a selected expression on one side of the equal sign. This command does not combine terms or solve for the selected expression.

Selected expression	After isolating term
$x^3 + x + 2 = 0$	$x = (-x - 2)^{1/3}$
$bx + by = c$	$x = \dfrac{c - by}{b}$
$\log x = z$	$= e^z$

Expand First Term Expands the first term of a selected summation or product.

Selected expression	After expanding
$\displaystyle\sum_{x=2}^{4} x^3$	$\displaystyle\sum_{x=3}^{4} x^3 + 8$
$\displaystyle\prod_{x=2}^{5} (x^3 - 2)$	$6 \displaystyle\prod_{x=3}^{5} x^3 - 2$

Expand All Terms Expands all terms of a selected summation or product.

Selected expression	After expanding
$\displaystyle\sum_{x=2}^{4} x^3$	$8 + 27 + 64$
$\displaystyle\prod_{x=2}^{5} x^3 - 2$	$6(25)62(123)$

About equation elements in structured documents

An equation element provides a frame with an *equation object* into which you can enter mathematical expressions. Like an anchored frame for graphics, an equation frame is anchored to a specific location in text.

Inline and display equations in structured documents

You can insert an equation element inline with paragraph text or in a separate display paragraph.

A. $x = x_0$. ...

$$\frac{(x-x_0)^2}{a^2} + \frac{y-y_0\ (2)}{b^2} = 1$$
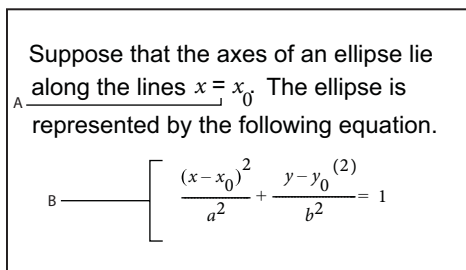
A. *Inline equation* **B.** *Display equation*

An equation element appears in the document's structure where it is anchored to text, regardless of the equation's position on the page. In the Structure View, the element is represented by a square-cornered bubble with the snippet <EQUATION>. The equation itself is not part of the structure.
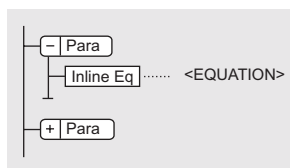
Equation element

If you export to SGML or XML, FrameMaker writes the equation to a separate graphics file and adds an entity reference to it from your SGML or XML file.

Equations in graphic frames in structured documents

You can also put an equation in an anchored frame that's already been inserted for graphics. Do this if you want to combine the equation with graphic objects. If the anchored frame is an element, the element is part of the document's structure, but the frame's contents (including the equation) do not appear in the structure.

An equation in an anchored frame with graphics may produce unwanted results if you export to SGML or XML. In general, if you plan to export to SGML or XML, put only one object in a frame.

Creating equations in structured documents using elements

You create an equation by inserting an equation element and then entering the mathematical expressions for the equation.

For details on the mathematical expressions in equations, or for information on inserting an equation that's not an element, see "Creating equations" on page 238.

Note: In the FrameMaker User Guide, the term "math element" refers to part of an expression, such as an operator. It is not a structural element.

You can use any equation element for both inline and display equations. Some documents may also have a paragraph element defined that provides formatting properties for the display equations.

The format rules for an equation element suggest a set of font sizes for the equation: Small, Medium, or Large. You can change to a different set of font sizes, and the change is not considered a format rule override. (That is, if you remove format rule overrides in the document, the equation does not return to its original font size.)

To display the Equations palette:

❖ Choose Special > Equations, or click the Equations button Σ at the upper right in the document window.

To create an in-line equation using an element:

1 Click in text where you want to insert the equation. If the text is in a rotated text frame, unrotate the frame first by pressing Esc g 0 (zero).

2 Select an equation element in the Element Catalog and click Insert.

You can also use the Equations palette to insert an element. Choose a New Equation command from the Equations pop-up menu in the palette. If more than one equation element is available, choose the one you want from the Element Tag pop-up menu in the dialog box that appears.

A new equation object appears as a question mark in a frame anchored below the line with the insertion point, and a bubble with the text snippet <EQUATION> appears in the Structure View. The first math item you enter replaces the question mark prompt.

Suppose that the axes of an ellipse lie
along the line Σ ¶

?
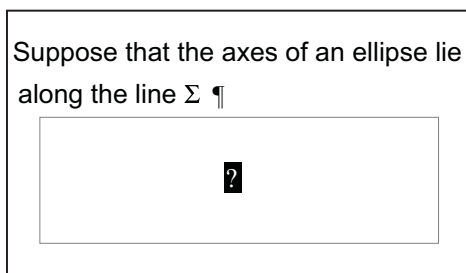
New equation object

3 Enter the equation by typing numerals and other items or by clicking items on the Equations palette (see "Using the Equations palette" on page 237).

4 Choose Shrink-Wrap Equation from the Equations pop-up menu in the palette. This shrinks the frame around the equation and puts the equation in the line of text at the anchor symbol.

Suppose that the axes of an ellipse lie
along the line. $x = x_0$ ¶
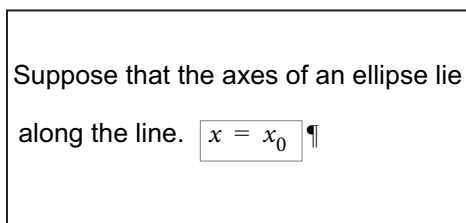
After shrinking a frame around an in-line equation

5 If the equation seems too close to the text on either side, insert a space before or after the frame. FrameMaker treats a frame that contains an inline equation as a character and doesn't provide extra space around it.

If an inline equation is too tall for its line, you may want to turn off fixed line spacing for that paragraph.

To create a display equation using an element:

1 If your document has a paragraph element defined for formatting display equations, click where you want the equation's paragraph, select the paragraph element in the Element Catalog, and click Insert.

This element might define space above and below the equation, alignment in the text column, and an autonumbered caption.

2 Click in an empty paragraph element where you want to insert the equation.

3 Select an equation element in the Element Catalog, and click Insert.

You can also use the Equations palette to insert an element. Choose a New Equation command from the Equations pop-up menu in the palette. If more than one equation element is available, choose the one you want from the Element Tag pop-up menu in the dialog box that appears.

A new equation object appears as a question mark in a frame anchored below the line with the insertion point, and a bubble with the text snippet <EQUATION> appears in the Structure View. The first math item you enter replaces the question mark prompt.

$2a(b)$

New equation object

4 Enter the equation by typing numerals and other items or by clicking items on the Equations palette (see "Using the Equations palette" on page 237).

5 Choose Shrink-Wrap Equation from the Equations pop-up menu. This shrinks the frame around the equation and puts the equation in the empty paragraph.

The ellipse is represented by the following equation¶

$$\frac{(x-x_0)^2}{a^2} + \frac{(y-y_0)^2}{b^2} = 1$$

After shrinking a frame around a display equation

If no equation element is available at the location you want, you might use an invalid element. After inserting the element, talk to your developer about making the element valid at this location.

To use an invalid equation element:

❖ Do one of the following:

• To use an element that is valid in another part of the document, either insert the element in a valid location and then move it, or use the All Elements setting (see "Changing the scope of elements available in a structured document" on page 18) to make the element available everywhere and then insert the element where you want it.

• To insert an invalid equation element with the default tag EQUATION, choose a New Equation command from the Equations pop-up menu in the Equations palette. (The element has a default tag if no defined equation elements are available.)

To create an equation in an anchored frame element:

1 Select an anchored frame or a graphic object in the frame.

2 Choose a New Equation command from the Equations pop-up menu in the palette. Small, Medium, and Large specify the font sizes used in the new equation.

A new equation object appears as a question mark inside the frame. The first math item you enter replaces the question mark prompt. The equation does not appear in the document's structure.

$$\sum_{n=1} \lfloor A x_n$$

New equation object in a frame with graphic objects

3 Enter the equation by typing numerals and other items or by clicking items on the Equations palette (see "Using the Equations palette" on page 237).

To change the font sizes used in an equation:

❖ Click in the equation, choose Graphics > Object Properties, choose a size from the Size pop-up menu, and click Set. (This is not a format rule override.)

Chapter 7: Filter By Attribute

About Filter By Attribute

Elements in a structured document can have one or more attributes associated with them. Using FrameMaker, you can filter a structured document based on the value of these attributes. Other XML applications may also use the same attribute-value pair to filter the documents. Thus, single sourcing workflows can be preserved across other XML applications.

The Filter by Attribute feature simplifies the task of filtering a structured document for complex output scenarios. You define a filter using a Boolean expression containing attribute-value pairs. You can create multiple filters, save them, and use them for filtering a document based on different output scenarios.

When a filter is applied to the document, elements that have filter attributes that do not meet the filter criteria are filtered out. When an element is filtered out, all the child elements are also filtered out. For more information, see "Example of a filter" on page 286.

Note: You can't filter a document based on Conditional Tags and Attribute values simultaneously.

Table 1 - Comparison of the Show/Hide feature using Conditional Text and the Show/Hide feature using Filter By Attribute

Conditional Text	Filter By Attribute
Based on conditional tags	Based on attributes
Must be defined in a document	Already exists in a structured document
Condition indicators are available to visually display the content, based on various conditions	No indicators
Only one expression can be saved at a time	Multiple expressions can be saved at a time
Available in both structured and unstructured FrameMaker	Available in structured FrameMaker only (unstructured documents do not have elements and attributes)
Allows hiding an entire document, resulting in an empty-content document	Does not allow the hiding of the entire document, as it does not allow hiding of the root element
Allows selection of even the smallest portion of a document for hiding	The smallest unit that can be hidden using this feature is an element.
For each condition tag, there are only two options to choose from: SHOW or HIDE	Allows better level of granularity in terms of creating a hide condition, because an attribute can have several values (based on its definition). Hence, each attribute value has a separate SHOW or HIDE possibility.

Note: The conditional indicators are disabled when a filter is used. It can be enabled only when no filter is applied to the document.

Build a filter

A filter is defined by a Boolean expression of attribute-value pairs. You can build a filter using the Build Expression dialog box, which provides a simple interface to build the expression using Boolean operators. You can define attribute-value pairs using the Define Attribute Values dialog box. You can select multiple values for each attribute.

You can save a filter as a named expression. You can build and save multiple filter expressions in a structured document. However, you can apply only one filter at a time. The last filter you apply in a document is the active filter.

Use the Manage Attribute Expressions dialog box to manage the filters.

1 Select Special > Filter By Attribute. The Manage Attribute Expressions dialog box appears.
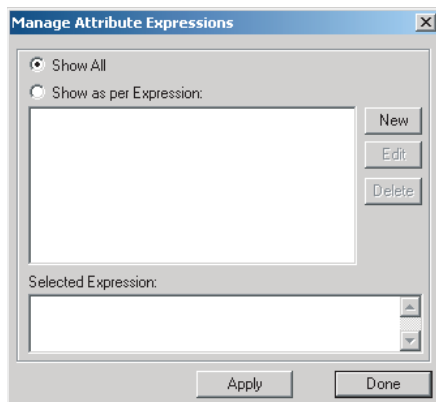
2 Click New. The Build Expression dialog box appears.
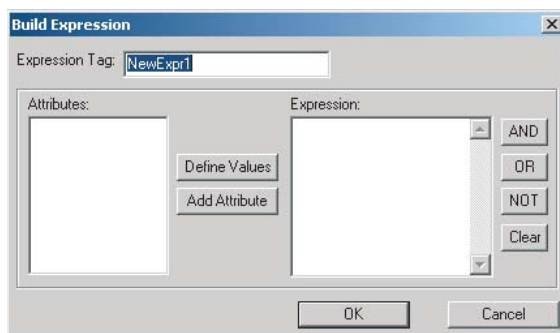
3 Enter a unique name for the filter in the Expression Tag field.

4 Select an attribute from the Attributes list.

5 Do the following to define values for attributes you want to use to build the expression:

a Click Define Values. The Define Attribute Values dialog box appears.
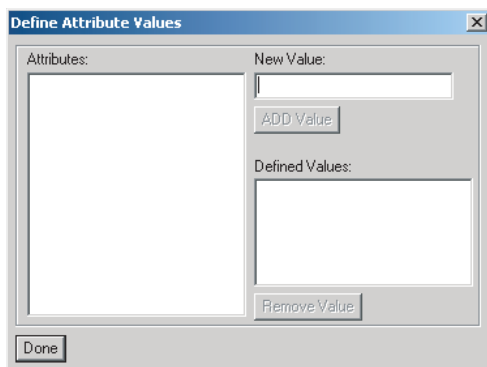
Note: Attribute names are case-sensitive, but attribute values aren't case-sensitive.

b Specify a value in the New Value field, and then click ADD Value. The new attribute value is included in the Defined Values list.

Note: If you want to remove a value, select it in the Defined Values list, and then click Remove Value.

c Click Done.

6 Click Add Attribute to include the attribute in the expression.

7 Click the desired button to insert a Boolean operator in the expression.

Note: Use the Clear button to refresh the Expression area.

8 Click OK.

Note: You can view the contents of a filter in the Selected Expression area by selecting a filter in the list of filters.

9 Click Done to close the Manage Attribute Expressions dialog box.

Keep the following points in mind when building a filter:

• Ensure that you enter valid attributes in the filter. All valid attributes are listed in the Attributes list of the Build Expression dialog box.

• Enclose the value of the attribute in double quotation marks.
  Correct: `(Language="French" OR Language="German" OR Language="Japanese")`
  Incorrect: `(Language=French OR Language=German OR Language=Japanese)`

Note: FrameMaker doesn't support expressions where the attribute value is missing. For example, "(Language="")" is not supported in an expression.

• Enclose all attribute-value pairs within parentheses. While all attribute-value pairs for a specific attribute can be placed within the same pair of parentheses, you can also place the attribute-value pairs for a specific attribute in different pairs of parentheses.
  Correct: `(Language="French" OR Language="German" OR Language="Japanese")`
  Correct: `(Language="French" OR Language="German" OR Language="Japanese") AND (Version="1.0")`
  Correct: `(Language="French" OR Language="German") AND (Language="Japanese")`
  Incorrect: `Language="French" OR Language="German" OR Language="Japanese"`

- Only use the OR operator between attribute-value pairs for an attribute. Do not use the AND operator.
  Correct: `(Language="French" OR Language="German" OR Language="Japanese") AND (Version="1.0" OR Version="2.0")`
  Incorrect: `(Language="French" OR Language="German" AND Language="Japanese") AND (Version="1.0" OR Version="2.0")`

- When the NOT operator is used, ensure that it is placed before the opening parenthesis of an attribute-value group.
  Correct: NOT `(Language="French" OR Language="German" OR Language="Japanese") AND (Version="1.0" OR Version="2.0")`
  Correct: `(Language="French" OR Language="German" OR Language="Japanese") OR NOT (Platform="Windows")`
  Incorrect: `(NOT Language="French" OR Language="German" OR Language="Japanese") AND (Version="1.0" OR Version="2.0")`
  Incorrect: `(Language="French" OR Language="German" OR Language="Japanese") OR (Platform="Windows" NOT Platform="UNIX")`

- If you have multiple attributes in a filter, insert the Boolean operator between two groups of attribute-value pairs.
  Correct: `(Language="French" OR Language="German") AND (Platform="Windows" OR Platform="UNIX")`
  Incorrect: `(Language="French" OR Language="German") (Platform="Windows" OR Platform="UNIX")`

Example of a filter

FrameMaker generates customized output of a structured document after processing the filter you applied to the document.

Consider a scenario in which you want the following elements and attributes to be applied to the various paragraphs in a structured document.

Table 2

Paragraph	Element	Attribute	Value assigned
Paragraph 1	TextContent1	Language	Japanese
		Version	2.0
		Platform	Windows
Paragraph 2	TextContent1	Language	Japanese
		Version	2.0
		Platform	UNIX
Paragraph 3	TextContent2	Language	Japanese
		Version	2.0
Paragraph 4	TextContent2	Language	English
		Version	1.0
Paragraph 5	SysReq	Platform	Windows
Paragraph 6	SysReq	Platform	UNIX
Paragraph 7	LegalContent	Copyright	Condensed

1 Copy the "Sample XML code" on page 291, which is based on this scenario, to create an XML file with the elements, attributes, and attribute values (listed in Table 2).

2 Open the XML file in FrameMaker. These elements, attributes, and attribute values appear in the Structure View window.

3 Type text in the relevant elements.

For example, type Japanese text relevant to version 2.0 on Windows in the TextContent1 element.

4 Create the following filter to generate a Japanese document for the Windows platform:

```
(Language="Japanese") AND (Platform="Windows")
```

Processing of the filter by FrameMaker

FrameMaker matches each attribute-value pair in the filter with every element in the document. The result of matching the attribute-value pair with an element is indicated by one of the following values:

• **True:** The attribute in the filter is an attribute of the element being matched, and the value in the filter matches the value of the attribute of the element.

• **False:** The attribute in the filter is an attribute of the element being matched, but the value in the filter does not match the value of the attribute of the element.

• **Don't-Care:** The attribute in the filter is not an attribute of the element being matched.

The following table demonstrates how the filter is processed:

```
(Language="Japanese") AND (Platform="Windows")
```

Table 3

Paragraph	Element	Attribute	Value assigned	Verification of element based on the filter	Result
Paragraph 1	TextContent1	Language	Japanese	Is Language=Japanese?	True
		Version	2.0	Is Platform = Windows?	True
		Platform	Windows		
Paragraph 2	TextContent1	Language	Japanese	Is Language=Japanese?	True
		Version	2.0	Is Platform = Windows?	False
		Platform	UNIX		
Paragraph 3	TextContent2	Language	Japanese	Is Language=Japanese?	True
		Version	2.0	Is Platform = Windows?	Don't-Care
Paragraph 4	TextContent2	Language	English	Is Language=Japanese?	False
		Version	1.0	Is Platform = Windows?	Don't-Care
Paragraph 5	SysReq	Platform	Windows	Is Language=Japanese?	Don't-Care
				Is Platform = Windows?	True
Paragraph 6	SysReq	Platform	UNIX	Is Language=Japanese?	Don't-Care
				Is Platform = Windows?	False
Paragraph 7	LegalContent	Copyright	Condensed	Is Language=Japanese?	Don't-Care
				Is Platform = Windows?	Don't-Care

Based on the results of filter processing as listed in Table 3, and the rules listed in Table 5, FrameMaker computes the final value of the filter to determine the inclusion or exclusion of elements from the output. The overall computation returns one of the following values:

• **True (or) Don't-Care:** The element is included in the output.

• **False:** The element is excluded from the output.

The operator precedence that FrameMaker uses while processing filters is listed below in the descending order of precedence:

1 Parenthesis

2 NOT

3 AND

4 OR

Additional filter processing in the example

For element TextContent1 in Paragraph 1, the filter is processed as follows:

1 The attribute-value pair `Language="Japanese"` evaluates to True and the attribute-value pair `Platform="Windows"` evaluates to True.

2 The result of computing the filter is True and True, and the final computation of the element based on the rules is True. Hence, Paragraph 1 is included in the output.

Table 4 demonstrates how the entire document is filtered:

Table 4

Paragraph	Element	Attribute-value pair matching against each element		Result based on the rules	Action
Paragraph 1	TextContent1	Is Language=Japanese?	True	True AND True=True	Include in output
		Is Platform=Windows?	True		
Paragraph 2	TextContent1	Is Language=Japanese?	True	True AND False=False	Exclude from output
		Is Platform=Windows?	False		
Paragraph 3	TextContent2	Is Language=Japanese?	True	True AND Don't- Care=True	Include in output
		Is Platform=Windows?	Don't-Care		
Paragraph 4	TextContent2	Is Language=Japanese?	False	False AND Don't-Care=False	Exclude from output
		Is Platform=Windows?	Don't-Care		
Paragraph 5	SysReq	Is Language=Japanese?	Don't-Care	Don't-Care AND True=True	Include in output
		Is Platform=Windows?	True		

Table 4

Paragraph	Element	Attribute-value pair matching against each element		Result based on the rules	Action
Paragraph 6	SysReq	Is Language= Japanese?	Don't-Care	Don't-Care AND False=False	Exclude from output
		Is Platform=Windows?	False		
Paragraph 7	LegalContent	Is Language= Japanese?	Don't-Care	Don't-Care AND Don't-Care=Don't-Care	Include in output
		Is Platform=Windows?	Don't-Care		

Paragraphs 1, 3, 5, and 7 are included in the output, based on the rules listed in "Table 5" on page 290.

Note: When an element is included in the output, the inclusion or exclusion of each of its child elements is determined by processing each child element. However, when a parent element does not satisfy the filter and is excluded from the output, its child element is also excluded from the output even if the child element satisfies the filter. In addition, FrameMaker does not process the root element while running the filter. Hence, the root element is always included in the output.

Apply a filter

Use the following instructions to apply a filter you have created to your structured document.

1 Select Special > Filter By Attribute. The Manage Attribute Expressions dialog box appears.

2 Select Show As Per Expression to preview the elements that satisfy the filter when it is applied to the document.

Note: If you select the Show All option, then the active filter, if any, is disabled, and all elements in the document are available for viewing and editing in FrameMaker. Also, any conditional text that is hidden appears. You can't undo the Show All operation.

3 Select a filter in the list.

4 Click Apply.

Note: You can't undo the Apply command after applying a filter.

Save a document after applying a filter

When you save a document as a FrameMaker 8 or MIF 8 file, all filters using attribute values, including the filter you have applied to the document, are saved. The attribute values you have defined for this feature are also saved.

Note: When you save a document in the XML format, all filters using attribute values, are saved. However, the attribute values you have defined for this feature aren't saved.

Modify a filter

Use the following steps to modify a filter:

1 Select Special > Filter By Attribute. The Manage Attribute Expressions dialog box appears.

2 Select a filter in the list.

3 Click Edit. The Build Expression dialog box appears.

4 Modify the filter in the Expression area.

5 Click OK to close the Build Expression dialog box.

The modified content of the filter appears in the Selected Expression area of the Manage Attribute Expressions dialog box.

Delete a filter

Use the following steps to delete a filter:

1 Select Special > Filter By Attribute. The Manage Attribute Expressions dialog box appears.

2 Select a filter in the list.

3 Click Delete.

4 If the filter you are deleting has been applied to the document, FrameMaker displays a message indicating that the selected expression is currently applied to the document. Click OK.

5 Click OK to confirm the deletion.

6 Click Done to close the Manage Attribute Expressions dialog box.

Note: When you delete an active filter in a document, all elements that were excluded by the filter are again made available for viewing, editing, or generating output.

Additional information

Rules used to process filters

Table 5 lists the rules that FrameMaker uses for processing filters.

Table 5

Rule Description	Operator/Resultant Value
<Don't-care> OR <Don't-Care>	<Don't-Care>
<Don't-care> OR <True>	<True>
<Don't-care> OR <False>	<False>
<True> OR <Don't-care>	<True>
<False> OR <Don't-care>	<False>
<Don't-care> AND <Don't-Care>	<Don't-Care>

Table 5

Rule Description	Operator/Resultant Value
<Don't-care> AND <True>	<True>
<Don't-care> AND <False>	<False>
<True> AND <Don't-care>	<True>
<False> AND <Don't-care>	<False>
NOT <Don't-care>	<Don't-care>
<True> OR <True>	<True>
<False> OR <True>	<True>
<True> OR <False>	<True>
<False> OR <False>	<False>
<True> AND <True>	<True>
<False> AND <True>	<False>
<True> AND <False>	<False>
<False> AND <False>	<False>
NOT <True>	<False>
NOT <False>	<True>

Sample XML code

Copy the following code to a FrameMaker document, and then save it as an XML file.

```
<?xml version="1.0" encoding="UTF-8" ?>

<!DOCTYPE Doc (View Source for full doctype...)>

- <Doc>

    - <Para>

        <TextContent1 Language="Japanese" Version="2.0" Platform="Windows">TextContent1
        with Language="Japanese" Version="2.0" Platform="Windows"</TextContent1>

        </Para>

    - <Para>

        <TextContent1 Language="Japanese" Version="2.0" Platform="UNIX">TextContent1
        with Language="Japanese" Version="2.0" Platform="UNIX"</TextContent1>

        </Para>

    - <Para>

        <TextContent2 Language="Japanese" Version="2.0">TextContent2 with
        Languaue="Japanese" Version="2.0"</TextContent2>

        </Para>
```

```
- <Para>

    <TextContent2 Language="English" Version="1.0">TextContent2with
    Language="English" Version="1.0"</TextContent2>

    </Para>

- <Para>

    <Sysreq Platform="Windows">Sysreq with Platform="Windows"</Sysreq>

    </Para>

- <Para>

    <Sysreq Platform="UNIX">Sysreq with Platform="UNIX"</Sysreq>

    </Para>

- <Para>

    <LegalContent Copyright="Condensed">LegalContent with
    Copyright="Condensed"</LegalContent>

    </Para>

</Doc>
```

Chapter 8: Conditional text

About conditional text

If you're preparing several versions of a document, each with minor differences, you can use one Adobe FrameMaker document for all the versions. The one document contains conditional text and conditional graphics.

You may also need to author different types of content for different output formats using the same FrameMaker document. For example, FrameMaker content that you write for the PDF print version may need to be re-authored and formatted differently for the HTML Help version. In this situation, you can use one document to include content for the various output formats, and tag them differently using condition tags.

You can also use conditional text to include comments to yourself or to your reviewers. You can hide the comments before you print the final copy.

Conditional text differs from one version of a document to another. Unconditional text is common to all versions.

You can make any unit of text conditional, from one character to entire sections. Anchored graphics, tables, cross-references, footnotes, markers, and table rows can be conditional. You make an item conditional by applying *condition tags*.
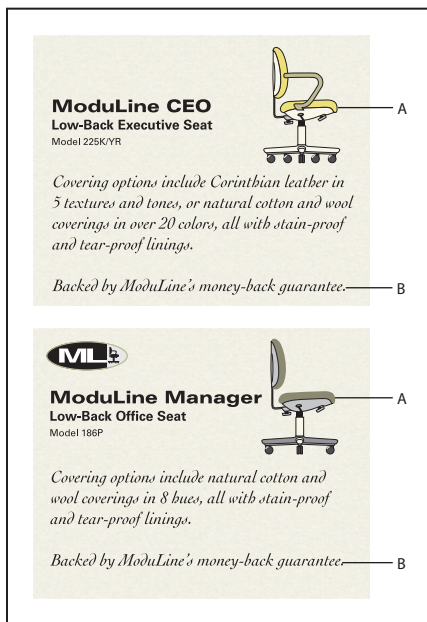
Two versions of a data sheet
Conditional text can be used to create two data sheets in one document. The text and graphics common to both data sheets are unconditional. The text and graphics that appear in only one data sheet are assigned a condition tag that identifies the data sheet.
***A.** The art and first paragraph contain both conditional and unconditional information. **B**. Unconditional text.*

The condition tags of the current selection (or at the insertion point) appear in parentheses in the Tag area of the status bar.

```
(CEO) Flow:A ¶: paragraph
```
Tag area of status bar

You can change the appearance of conditional text so that it's easy to identify by using *condition indicators*—style and color changes.

Covering options include Corinthian leather in 5 textures and tones, or natural cotton and wool coverings in over 20 colors, 8 hues, all with stain-proof and tear-proof linings.

Backed by ModuLine's money back guarantee.
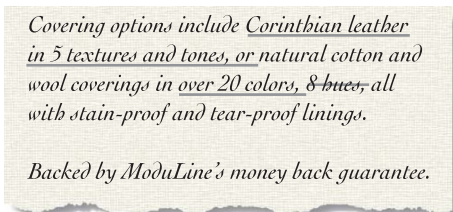
Condition indicators (strikethrough and underline) identify two conditions.

You can view and print conditional text in several ways. For example, you can view all versions of the document or hide selected versions, or you can show or hide condition indicators. Whatever you display appears in the printed document.

Conditional text enhancements

The Conditional Text feature simplifies and enhances single-sourcing documents. You can use the conditional text enhancements to do the following tasks:

• Manage condition tags using the new Manage Condition Tag dialog box.

• Add new condition tags using the new Add Condition Tag dialog box.

• Use the New Color button in the Edit Conditional Tag dialog box to define a new color for a condition tag.

• Visually distinguish text with multiple condition tags, with the color of the text depending upon the set of tags applied to the text. For more information, see "Appearance of text with multiple condition tags" on page 300.

- Build Boolean expressions, using the new Build Expression dialog box, to generate conditional output with complex combinations of condition tags and Boolean operators.

Table 1 - User interface enhancements for the Conditional Text feature in FrameMaker

User interface	Enhancement
Conditional Text dialog box	The Edit Condition button is modified as the Manage Tag button.
Edit Conditional Tag dialog box	• The field name has changed to "Rename Tag" • The New Color button is added.
Show/Hide Conditional Text dialog box	A new Show As Per Expression option, used to create a Boolean expression, is added.
	A new Show If all Conditions Applied option is added in the Show As Per Condition area.
New dialog boxes	• Manage Condition Tag • Add Condition Tag • Build Expression

Planning conditional documents

When planning a conditional document, you should examine the nature of the material and, because others may have to work in or maintain a conditional document you create, look at how several people can take turns working with it. Plan to treat conditional material consistently to make the document easier to use and maintain. Others will need to know the conventions you followed as you applied condition tags.

Use the following guidelines when planning a conditional text project.

Number of versions Define how many versions your finished project will contain. For example, if you're creating a manual that describes a program that runs on both Windows and UNIX platforms, you might want to be able to produce at least two versions: a Windows version and a UNIX version. If you want to produce these versions with editorial comments sprinkled in the text during the review process, you'll want even more versions: UNIX with comments, UNIX without comments, Windows with comments, and Windows without comments.

Number of condition tags required Decide how many condition tags you need to produce the desired versions. A version of a document is defined by a unique set of condition tags. For example, a version of a finished Windows manual might be defined by having a Windows condition tag showing, a UNIX condition tag hidden, and a Comments condition tag hidden. In this example, you would need to decide whether to use one condition tag for Windows comments and another for UNIX comments, or whether to use a single condition tag for both Windows and UNIX comments.

Organization of content Evaluate the extent to which the document can be conditional and how you can organize the material to simplify development and maintenance. For example, you might be able to organize a book so that conditional text is limited to a few documents. Or you might choose to keep versions of a particular chapter in separate files rather than in conditional text, and then use a different book file for each version of the book. Alternatively, in a structured document, you might want to specify entire chapters of a book for printing only.

Graphics If a document will contain graphics imported by reference into a conditional anchored frame, create separate folders for the graphics in each version. This simplifies file management when you need to copy or archive a version of the document with its graphics files.

Variables Words and phrases that are used repeatedly in a document—for example, product and company names—are easier to work with as variables than as conditional text.

Decide whether your conditional documents will need different variable definitions for each version. For example, the data sheet illustrated in "About conditional text" on page 293 may use a variable with the product's name, but the conditional document describes two products. You can create a template for each version of the document. Each template should have only one version visible and should define the variables for that version. You can then use File > Import > Formats to switch the variable definitions from one version to another.

Tagging strategy Determine the smallest unit of conditional text. For example, if a conditional document will be translated to another language, a whole sentence should be the smallest amount of text you make conditional. Because word order often changes during translation, using conditional text for part of a sentence could complicate translation.

Decide whether to make spaces and punctuation conditional. If conditional text begins or ends with punctuation, make the punctuation conditional too. This makes the text easier to read when you're viewing more than one version.

To avoid word spacing problems, such as having an unconditional space followed by a conditional space, set standards for handling spaces following conditional text (either always conditional or always unconditional).

Decide the order in which conditional text will appear and use this order throughout the document. The order can help subsequent authors maintain the document.

Multiple authors If a conditional document will have several authors, follow these guidelines:

• Plan document organization and work flow. For example, you may want to break a document into small files so several people can work on different parts of the document at the same time.

• Decide how you will provide explanatory notes to other authors. To help explain a conditional document, add helpful comments and apply the predefined Comment condition tag to them.

Creating, changing, and deleting condition tags

You can define unique condition indicators for every condition tag that you create in a FrameMaker document. Then, you can distinguish text in one version from text in another. If your conditional document will be used to create more than two versions, use color indicators. In the Add Condition Tag and Edit Condition Tag dialog boxes, you can create a new color and apply it as a condition indicator for a condition tag. You can rename a condition tag in the Manage Condition dialog box. You can modify the name, style, color, and condition indicators of a condition tag.

If another document contains the conditional text settings that you want to use in your current document, import them by choosing File > Import > Formats. For information, see "Importing and updating formats" on page 408 and "Changing the format of files in a book" on page 465.

Note: *Condition Tag names support the Unicode text encoding standard.*

To create a condition tag:

1 Select Special > Conditional Text > Manage Condition. The Manage Condition dialog box appears.
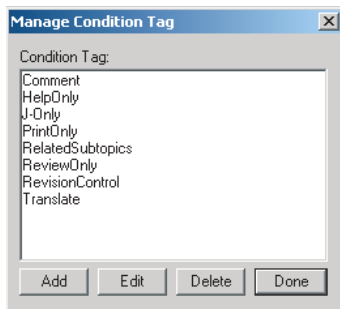
2 Click Add. The Add Condition Tag dialog box appears.
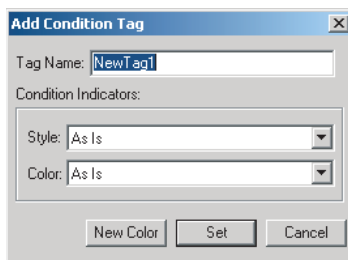
3 Enter a name in the Tag box. Try to use meaningful names that begin with a unique first letter for setting up keyboard shortcuts.

4 Select a style from the Style list.

5 Do one of the following:

• Select a color from the Color list.

• Click New Color. The Color Definitions dialog box appears. Define the required color settings for the new color you are creating, and click Add. For information, see "Defining and modifying colors and tints" on page 361. Click OK to confirm, and click Done. Select the new color preference in the Color list.

6 Click Set.

7 Click Done.

Note: You can also open the Manage Condition dialog box from the Apply Condition Tag dialog box by clicking the Manage Tag button.

To edit a condition tag:

1 Select Special > Conditional Text > Manage Condition. The Manage Condition dialog box appears.

2 Select a tag to edit.

3 Click Edit. The Edit Condition Tag dialog box appears.
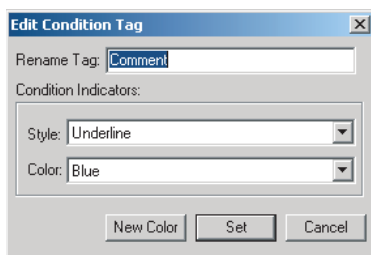
4 Modify the name in the Tag text box.

5 Specify style and color condition indicators.

6 Do one of the following:

• Select a color from the Color list.

• Click New Color. The Color Definitions dialog box appears. Define the required color settings for the new color you are creating, and click Add. For information, see "Defining and modifying colors and tints" on page 361. Click OK to confirm, and click Done. Select the new color preference in the Color list.

7 Click Set.

8 Click Done. The modifications are applied across the current FrameMaker document.

Note: You can also edit a tag name from the Conditional Text dialog box by clicking Manage Tag and modifying the tag name in the Edit Condition Tag dialog box.

To delete a condition tag from a document:

1 Select Special > Conditional Text > Manage Condition. The Manage Condition dialog box appears.

2 Select the tag you want to delete.

3 Click Delete.

4 Click OK to confirm.

5 Click OK again. FrameMaker removes the condition tag from any text that uses it and deletes the tag from the Manage Condition dialog box. If any text is tagged with only the condition tag you are deleting, the Delete Condition Tag dialog box appears. Select the option to make the text unconditional or to delete the text, and click OK.

6 Click Done.

If you want to delete condition tags that aren't used in a document but you're not sure which condition tags are used, use Special > List of > References to generate a list of references that includes condition tags (see "Generating TOCs and other lists" on page 414).

Using Boolean expressions to generate conditional output

You can generate conditional output by building a Boolean expression with combinations of condition tags and Boolean operators.

For example, your document contains the Comment, Print, Help, and PDF condition tags. To show text tagged with the Print and PDF condition tags only, click Build Expression, and define the following expression in the Build Expression dialog box: `"Print" AND "PDF"`. After applying this expression, the document displays only text marked with the Print and PDF condition tags. Alternatively, to include text tagged with either the PDF or Print condition tags in the output, you can modify the expression as follows:

`"PDF" OR "Print"`

To create a Boolean expression:

1 Do one of the following:

• Select Special > Conditional Text > Show/Hide Conditional Text.

• Select Special > Apply Conditional Text. The Conditional Text dialog box appears. Click the Show/Hide button.

2 (Optional) Select the Show As Per Expression option.

Note: All conditional expressions created and applied in the document, are listed in the Expression pop-up menu.

3 Click the Build Expression button. The Build Expression dialog box appears.
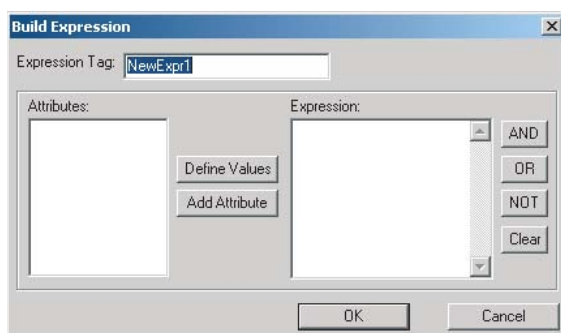
4 Select a tag from the Condition Tag list and click the Add Tag button, or double-click the tag you want to add. The tag appears in the Expression area.

5 Click the AND, OR, or NOT button.

6 Repeat steps 4 and 5 to add tags and build the required expression. Place the cursor in the Expression area to create or edit an expression.

7 Click OK to close the Build Expression dialog box.

8 Click the Set button.

9 Click OK to continue. Only the conditional text that matches the expression is displayed in the output.

Click the Clear button in the Build Expression dialog box to completely clear an expression.

Applying and removing condition tags

To make text conditional, you apply tags using the Conditional Text dialog box or the keyboard, or by copying and pasting condition tag settings. You can apply multiple tags to text in a FrameMaker document.

Appearance of text with multiple condition tags

FrameMaker enables you to distinguish text to which a single condition tag has been applied, from text to which multiple condition tags have been applied.

When you apply a new condition tag to a selected text to which another condition tag has already been applied, the color of the text is changed to a different color. This color is midway of all colors of the condition tags you have already applied to the current text.

You can also use the Find/Change command to paste condition tag settings. For details, see "Searching for conditional text" on page 82 and "Changing items you find" on page 83.

You can merge two versions of a document into one conditional document. When you merge two versions, FrameMaker compares them and creates a composite conditional document. For information on comparing and merging documents, see "Comparing document versions" on page 477.

To apply a condition tag to an item:

1 Select the item you want to make conditional, as described in the following table:

Table 2 - Applying conditional tags to text

To make this conditional	Select
Text in a text frame, table cell, or footnote	Text
Anchored frame and its contents	Frame's border or anchor symbol
An entire table	Table's anchor symbol
Table row	Whole row
Cross-reference or variable	Cross-reference or variable text
Footnote	Footnote reference (the number in the main text)
Marker	Marker symbol

Note: You can make text in text frames conditional, but not text in text lines.

2 Select Special > Conditional Text > Apply Conditional Text. The Conditional Text dialog box appears.
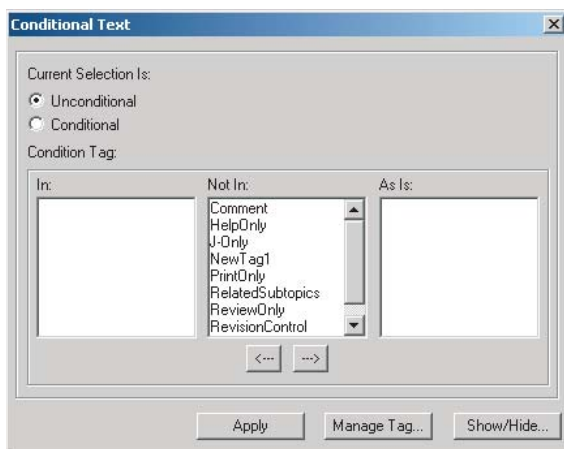
3 To apply a condition tag, move it to the In scroll list. To remove a condition tag, move it to the Not In scroll list. Condition tags in the As Is scroll list will not be applied or removed.

• To move a condition tag between scroll lists, select the tag and click an arrow, or double-click the tag.

• To move all tags from one scroll list to another, select a tag in the list and Shift-click an arrow.

4 Click Apply. FrameMaker applies the settings to the text. If you apply a hidden condition tag, the selected text disappears, unless it is also tagged with a condition that is displayed. For information about viewing hidden text, see "Changing the view of conditional documents" on page 303.

To apply a condition tag by using the keyboard:

1 Select the item to which you want to apply a condition tag, and press Control+4.

2 At the status bar prompt, start typing the tag name. You may need to type only a few characters before the name appears in the Tag area. Type lowercase letters to search forward; type uppercase letters to search backward. You can also use the Up Arrow and Down Arrow keys to scroll through the tags.

3 Press Return to apply the condition tag. If you decide to cancel the operation, click in the document without pressing Return.

To copy and paste condition tag settings:

1 Put the insertion point in text that uses the condition tag settings you want to copy.

2 Choose Edit > Copy Special > Conditional Text Settings.

3 Make a selection or click to place the insertion point.

4 Choose Edit > Paste. If you paste the settings into a different document, the pasted tags appear in that document's Conditional Text dialog box so you can use them again.

Avoiding unresolved cross-references

If you insert a cross-reference to a paragraph (such as a heading), and if the first word in the paragraph is conditional, the Cross-Ref marker that FrameMaker inserts will also be conditional (with the first word's condition tag settings). This means the marker will be hidden when you hide the first word's conditions. As a result, the cross-reference may be unresolved if condition tag settings of the cross-reference and of the cross-reference marker differ.

To avoid this, select just the Cross-Ref marker at the beginning of the source paragraph, and make it unconditional. The marker will always be visible, so the cross-reference will be resolved no matter which version is visible.

Removing condition tags from an item

Removing a condition tag from an item is different from deleting a tag from a document. When you remove a tag from an item, the tag remains in the document so it can be applied again later. When you delete a tag from the document (see "Creating, changing, and deleting condition tags" on page 296), FrameMaker removes the condition tag from any text that uses it and deletes the tag from the Conditional Text dialog box.

To remove a condition tag from an item:

1 Select the item with the tag you want to remove and choose Special > Conditional Text > Apply Conditional Text. The Conditional Text dialog box appears.

2 Do one of the following:

• To remove some condition tags but leave the text conditional, move the condition tags you want to remove to the Not In scroll list. (To move a condition tag between scroll lists, select the tag and click an arrow or double-click the tag.)

• To remove all condition tags and make the text unconditional, select the Unconditional option.

3 Click Apply.

To remove a condition tag from an item using the keyboard:

1 Select the item from which you want to remove condition tags and press Control+5.

2 At the status bar prompt, start typing the tag name. You may need to type only a few characters before the name appears in the Tag area. Type lowercase letters to search forward; type uppercase letters to search backward. You can also use the Up Arrow and Down Arrow keys to scroll through the tags.

3 Press Return to remove the condition tag from the item. If you decide to cancel the operation, click in the document without pressing Return. If the selection contains only the condition tag you're removing, a dialog box appears in which you choose either to make the text unconditional or to delete it.

To remove all condition tags using the keyboard:

❖ Select the item from which you want to remove all condition tags (thus making the item unconditional) and press Control+6.

Working in conditional documents

You can view or print all unconditional and conditional text simultaneously, or you can hide the conditional text of one or more versions. FrameMaker ignores hidden conditional text when formatting a document. When text symbols are visible, hidden conditional text is represented on-screen by a conditional text marker ⊤.

Covering options include natural cotton and wool coverings in 18 hues, all with stain-proof and tear-proof linings.

Backed by ModuLine's money back guarantee.
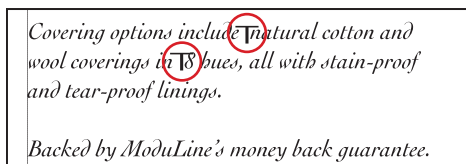
Markers show where conditional text is hidden.

Changing the view of conditional documents

A conditional document can display any number of conditions at a time and can have any of its condition indicators on or off. For example, you can change the view to display the condition tags for one particular version, for several versions, or for all versions. If you're displaying more than one version, or if you're showing one version and want to see which part is conditional, you may want the condition indicators on.

You can view conditional text by selecting one of the following options:

• **Show All:** Select this option to show all text to which condition tags have been applied.

• **Show As Per Condition:** Select this option to show text based on a specific condition tag.

• **Show As Per Expression:** Select this option to show text based on an expression that includes a complex combination of condition tags and Boolean operators. For more information about defining an expression, see "Editing elements in conditional structured documents" on page 306.

To change the view of a conditional document:

1 Do one of the following:

• To change the view of a conditional document, choose Special > Conditional Text and click Show/Hide Conditional Text.

• To use the book window to change the view of conditional documents, select the desired documents, and then choose Special > Conditional Text> Show/Hide Conditional Text.

2 Do one of the following to select the conditional text that you want to show or hide in the document:

• Select the Show All option.

• Select the Show As Per Condition option. Move the desired condition tags between scroll lists by selecting a tag and clicking an arrow, or double-clicking the tag. To move all tags from one scroll list to the other, select one tag in the list and Shift-click an arrow. If any of the condition tags in the Show list is applied to text in your document, the relevant conditional text appears in the document. You can select the Show If All Conditions Applied option to show conditional text only if all condition tags that you have selected in the Show list are applied to that text.

• Select the Show As Per Expression option, and then select an expression from the pop-up menu. For more information about creating an expression, see "Using Boolean expressions to generate conditional output" on page 299.

3 Indicate whether you want to display condition indicators.

Note: Condition indicators are style and color parameters that are used to distinguish conditional text from plain text. For example, you can create a Condition Tag called Private Comment and configure its Style as Double Underline, and its Color as Blue.

4 Click Set.

To switch the view of a document quickly from one version to another, create a template for each version. Each template should have the appropriate Show/Hide settings for a version. You can then use File > Import > Formats to change the view of a conditional document from the template (see "Importing and updating formats" on page 408 and "Changing the format of files in a book" on page 465).

Note: If you select the Show All option, the active expression, if any, is disabled, and all elements in the document are available for viewing and editing in FrameMaker, and for generating the desired output.

Viewing imported conditional text

When you import text containing passages of conditional text, all the condition tags applied to text in the source document are imported so that you can use them to show or hide imported conditional text. Even if the text is imported by reference and appears in a text inset, you can change the view of conditional text in the inset.
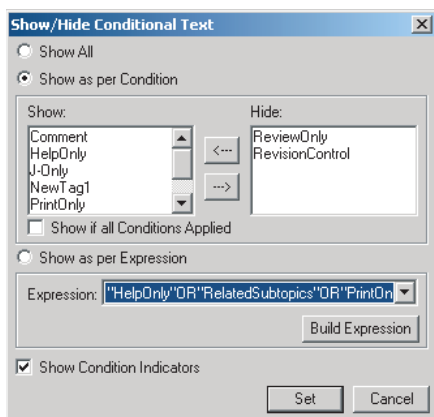
Text is shown or hidden based on the following:

• When the Show All option is selected in the destination document, all conditional text appears.

• When the Show As Per Condition option is selected in the destination document, conditional text matching any of the selected condition tags in the Show list appears in the document. If the Show If All Conditions Applied option is selected in the destination document, all conditional text in the document is displayed only if all the tags that you selected in the Show list have been applied to text in the document.

• When the Show As Per Expression option is selected in the destination document, only conditional text that is based on the selected expression appears. For more information about defining an expression, see "Using Boolean expressions to generate conditional output" on page 299.

Note: If you don't select any of these options, conditional text is initially shown or hidden according to the settings in the destination document. If imported condition tags don't match tags in the destination document, conditional text is initially shown or hidden according to the settings in the source document.

Editing conditional text

When you work in a conditional document, hidden text is generally ignored. This means, for example, that the Find/Change and Spelling Checker commands check only displayed text. However, you can cut, copy, and paste hidden text by selecting the conditional text marker and by using the commands on the Edit menu.

Work with text symbols turned on when you're working in a conditional document. Conditional text markers alert you to text that is in other versions of the document.

To edit conditional text:

❖ Use the Edit menu commands as usual.

When you copy text, FrameMaker copies its conditional text markers and condition tag settings. When you paste text with a condition tag that's not in the destination document, FrameMaker adds the tag to the destination document. When you try to move or delete hidden conditional text, FrameMaker displays an alert message that lets you proceed and delete the text or cancel the command.

To apply format changes to hidden text:

❖ Use Format > Paragraphs > Designer and Format > Characters > Designer.

Paragraph and character format changes you apply to selections don't update conditional text hidden within the selection. To apply a format change to all paragraphs or characters, including hidden conditional text, click Update All in the designer or choose Update All from the Paragraph Format pop-up menu on the formatting bar.

Applying format changes with Import > Formats also updates hidden conditional text.

To spell-check or search through all text:

❖ Show all conditional text (see "Changing the view of conditional documents" on page 303) before using Edit > Spelling Checker or Edit > Find/Change.

Finding conditional text

You can search for items tagged with a visible condition tag. FrameMaker will find conditional text in text frames, graphic frames, and table cells, but will not find conditional table rows. For details, see "Searching for conditional text" on page 82.

Finalizing conditional documents

Before you produce a finished version of a conditional document, follow these guidelines:

- Change your view of the document to include only the version you want to print, and turn off condition indicators.

- If your document contains variables, make sure the variable definitions are correct for the version you're printing.

- Spell-check the document. This will catch double spaces and punctuation problems caused by incorrectly tagged conditional text.

- Update cross-references. If the document contains unresolved cross-references, they may refer to Cross-Ref markers in hidden conditional text. Show the version and update the cross-references again. For information on resolving cross-references, see "Resolving cross-references" on page 207. Also see "Avoiding unresolved cross-references" on page 301.

- Create a copy of the document for each version before manually adjusting line and page breaks. Use the copy for each version for making the adjustments and for printing. These adjustments will differ with each version. Use the original document for future edits.

- If the document is part of a book, update the book and its generated files. If the book contains documents with different condition indicators for the same tag, or if some condition tags are displayed in one document but are hidden in another, FrameMaker displays an alert message. If this occurs, click Cancel to stop generating and correct your documents' conditional text settings.

- After generating an index, check it for double question marks (??), which indicate missing or incorrect index markers. For information, see "Troubleshooting indexes" on page 430.

Editing elements in conditional structured documents

You can insert, wrap, merge, and split elements in conditional structured documents as you can in other documents. FrameMaker applies the following conditions as needed:

• When you insert an element, the new element takes the condition tags of the location of the insertion point.

• When you wrap an element, the new element generally takes the condition tags of the location of the selection. But if the selection crosses boundaries, see the following two items.

• When you wrap a selection that crosses the boundaries of two conditions, the new element does not take any condition tags but the contents of the element keep their tags.

• When you wrap a selection that crosses the boundary of conditional and unconditional text, the new element does not take any condition tags and the contents are still partly conditional and partly unconditional.

• When you merge two or more elements that have different condition tags, the new element does not take any condition tags but the contents of the element keep their tags.

• When you split an element, the two elements have the same condition tags as the original element.

Each version in a conditional document should be valid, so you need to validate the document showing only one version at a time. Validity is usually not important when several versions are showing.

Note: If a filter is applied to a structured document, this expression overrides all conditional text in the document. When you apply a filter to a structured document to generate output, conditional indicators are disabled. If you switch back to using conditional text to generate the output, you may need to re-enable the conditional indicators. For more information, see "Filter By Attribute" on page 283.

Chapter 9: Graphics and anchored frames

About Graphics

In Adobe FrameMaker, you can draw rectangles, ovals, and polygons, as well as straight and curved lines. You can create complex illustrations by combining several objects, and include text in illustrations. You can also specify object properties (such as fill pattern, line width, and color), and you can resize, reshape, rotate, and rearrange objects.

You can also place illustrations directly on the page, in anchored graphic frames that move with the text, or in unanchored graphic frames that crop the edges of the illustration. For information on anchored frames, see "About Anchored Frames" on page 342. For information on unanchored graphic frames, see "Cropping or masking graphics" on page 340. For information on importing graphics, see "Importing, linking, and exporting" on page 494.

Displaying the Tools palette

You use the Tools palette to select drawing tools and to apply properties. The Tools palette contains the following:

- Selection tools that control how you select text and objects

- Drawing tools for drawing objects

- Pop-up menus for changing an object's drawing properties
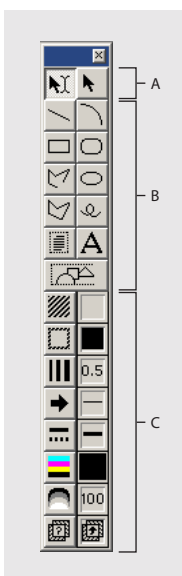
A. Selection tools
B. Drawing tools
C. Drawing properties

On UNIX systems, a large Tools palette includes some commands from the Graphics menu. The properties appear in areas where you can click to apply them rather than choosing them from a pop-up menu.

To display the Tools palette:

❖ Click the Tools button ◢ on the right side of the document window.

To toggle between the small and large Tools palettes (UNIX):

❖ Click the Tools palette toggle ▣➝▣ in the lower left corner of the Tools palette.

Using grids

Two grids help you draw and align objects:

• The visible grid appears as horizontal and vertical lines on-screen, but not on the printed page. A graphic frame contains its own visible grid, which begins at the upper left corner of the frame.

• The invisible snap grid attracts objects to it. As you draw, rotate, resize, or drag objects (and when you drag indent and tab stop symbols on the ruler), they snap to the invisible grid.

Note: If Snap and Gravity are both selected in the Graphics menu, gravity takes precedence. For information on Gravity, see "About gravity" on page 330.

To show or hide the visible grid:

❖ Choose View > Grid Lines. If the visible grid doesn't appear in a text frame, change the frame's fill pattern to None (see "Applying and changing drawing properties" on page 315).

To turn the snap grid on or off:

❖ Choose Graphics > Snap.

To change the grid spacing:

1 Choose View > Options.

2 Do any of the following:

• To set the space between lines in the visible grid, choose the spacing from the Grid Lines pop-up menu.

• To set the interval for the snap grid, enter the interval in the Grid Spacing text box.

• To set the snap interval for rotating objects, enter the number of degrees in the Snap Rotate text box.

If you intend to use the grids together, make the visible grid spacing a multiple of the snap grid interval. For example, if the snap grid spacing is 0.125 inch, you could make the visible grid spacing 0.125 inch, 0.25 inch, or 0.5 inch.

3 Click Set.

Drawing objects

The Tools palette contains tools for drawing objects.
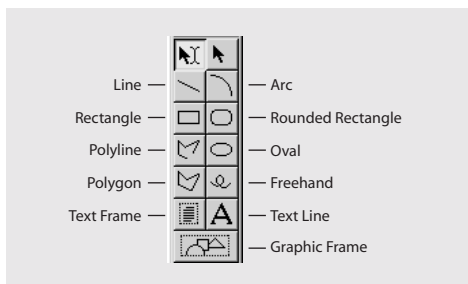
Drawing tools

Use the Line, Polyline, Arc, and Freehand tools to create various types of lines. Use the Rectangle, Rounded Rectangle, Oval, and Polygon tools to create closed shapes. You can also use the Rectangle or Oval tool and the Graphics > Set # Sides command to create a regular polygon (a polygon with equal sides and equal angles).

Use either the Text Frame tool or the Text Line tool to add text to a graphic, and use the Graphic Frame tool to crop objects. For an overview of text frames and graphic frames, see "About frames" on page 319. For information on cropping objects, see "Cropping or masking graphics" on page 340.

About paths

An object's path is an imaginary line through the center of the object's border. The path appears as an outline when you draw an object.
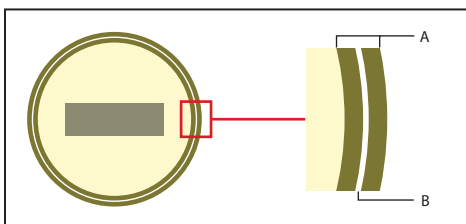
A. Border B. Path

FrameMaker uses the path to position objects. For example, when you use the Align command to align objects, the objects are aligned along their paths, not along the outside of their borders. When the snap grid is on as you draw, FrameMaker aligns the path with the snap grid.
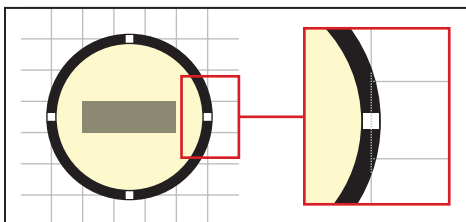
Objects are aligned along their paths.

Using the drawing tools

Drawing an object is a simple series of clicks or drags. As you draw, you see the outline of the object.

When you draw an object, the pointer is a cross hair ✛. After you draw, the pointer normally changes back to an arrow ⬉ so you can select objects, or to an I-beam I so you can select or type text. To draw another object, you usually have to click a drawing tool again.

When you draw an object directly on a page, it doesn't move with the text, although text can run around the object. If you want the object to be "anchored" to surrounding text (that is, to move as you edit the text), you can draw the object in an anchored frame, or draw it on a page and then move it into an anchored frame.

When you draw an object, it uses the drawing properties that are selected on the Tools palette. The object is also selected, to make changing these properties easier. For information on applying properties, see "Applying and changing drawing properties" on page 315.

To draw a straight line:

1 Click the Line tool ╲.

2 Click at the start and end of the line. You can also drag from the beginning to the end of the line. To draw a horizontal or vertical line, or a line at a 45-degree angle, Shift-click or Shift-drag.

💡 *To draw several lines that touch one another, use the Polyline tool to draw several connected lines as a single object (see "About gravity" on page 330). You can also use the Line tool to draw the lines and then use the Gravity feature to make sure they touch one another.*

To draw a polyline or polygon:

1 Click the Polyline tool ⋎ or the Polygon tool ⋎.

2 Click at each vertex in turn. To draw a horizontal or vertical segment, or a segment at a 45-degree angle, Shift-click.

3 Double-click at the last vertex.
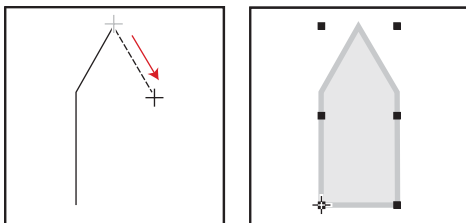
Click at each vertex and then double-click to end.

To draw an arc:

1 Click the Arc tool ⟍.

2 Put the pointer where you want to start the arc and drag along the path of the arc. To draw a circular arc, Shift-drag.
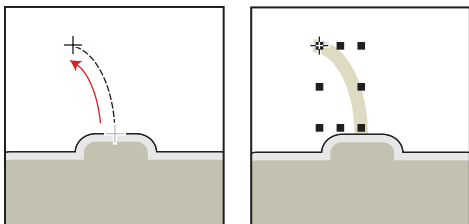
Drag and then release.

If the arc isn't the shape you want (for example, if it's concave rather than convex), don't release the mouse button. Drag the cross back to the starting point and draw the arc again, dragging along the path you want the arc to trace.

Initially, the angle of the arc will be 90 degrees. For information on changing the angle, see "Reshaping objects" on page 338.

To draw a freehand curve:

1 Click the Freehand tool ↺ .

2 Put the pointer where you want to start the freehand curve, and drag along the path of the curve. The snap grid is ignored for all but the first point of a freehand curve; however, you may want the snap grid to be off when you draw the curve.
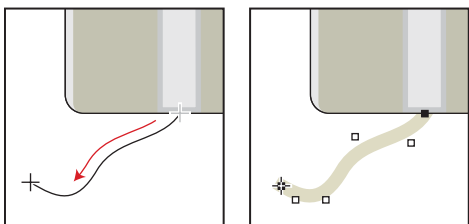
Drag and then release.

When you release the mouse button, FrameMaker approximates a curve along the path you drew and displays reshape handles and control points so you can reshape the curve. For information, see "Resizing and reshaping objects" on page 335.

💡 *For more precise control over the shape of a freehand curve, create a curve by drawing polylines or polygons and then smoothing them. For information on smoothing, see "Smoothing and unsmoothing objects" on page 337.*

To draw a rectangle, a rounded rectangle, or an oval:

1 Click the Rectangle tool ☐, the Oval tool ◯, or the Rounded Rectangle tool ☐.

2 Drag diagonally across the area in which you want the object to appear. To draw a square or circle, Shift-drag.
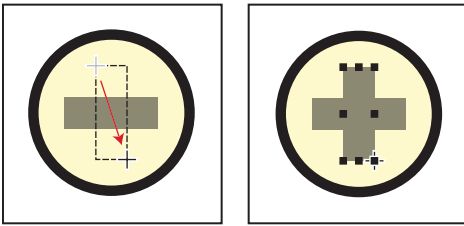
Drag and then release.

💡 *To draw a border around a graphic, draw a rectangle with a fill pattern of None around the graphic.*

To draw a regular polygon:

1 Draw a circle or square that is slightly larger than the regular polygon you want to create. If you draw a rectangle or an oval, the polygon you create won't be regular.

2 Select the object and choose Graphics > Set # Sides.

3 Specify the number of sides and the start angle of the polygon, and click Set.
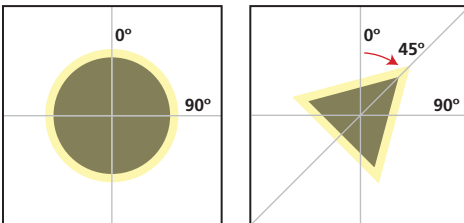
Original object and regular polygon, with number of sides = 3 and start angle = 45°

To draw several objects of the same type without clicking the tool each time:

❖ Do one of the following:

- For all objects except text lines, Shift-click the tool. To stop using the tool, click another drawing tool or one of the selection tools ⌖, ➤ on the Tools palette.

- For text lines, press Return at the end of a text line and continue typing. For information on creating text lines, see "Using text with graphics" on page 320.

Selecting objects

You select objects to change their properties or to edit them. When an object is selected, handles appear around it.
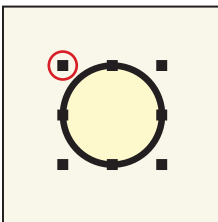
Selection handle

You can select several objects at the same time, or you can add objects to an existing selection. However, all the objects must be on the same page or in the same graphic frame. When you select a graphic frame, any selected objects are deselected.

The following tools are available for selecting:

- The Smart Selection tool �ⓘ allows you to place an insertion point or select text when the pointer is over text, and to select objects when the pointer is over an object. When the Smart Selection tool is active, the pointer changes shape as you move it—to an I-beam Ⓘ over text or to a hollow arrow ⓚ over objects. In general, use the Smart Selection tool as you work.
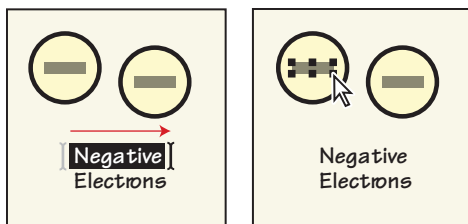
With an I-beam pointer, you can select only text. With a hollow arrow pointer, you can select only objects.

- The Object Selection tool ⓚ always selects objects. Use the Object Selection tool when you're working with text lines and text frames as objects—for example, when you want to move or resize a text frame. When you click in text with the Object Selection tool active, you select the text line or text frame as an object rather than put an insertion point in the text.

To activate a selection tool:

❖ Click the Smart Selection or Object Selection tool on the Tools palette.

To keep the Object Selection tool active after drawing an object:

❖ Shift-click the tool on the Tools palette. Otherwise, FrameMaker reverts to the Smart Selection tool after you draw an object.

To select an object:

❖ Click the object. If the object is transparent—that is, if it has a fill pattern of None—click its border. When you click overlapping objects, FrameMaker selects the object in the foreground.

To select a text line or text frame when the Smart Selection tool is active:

❖ Control-click the text line or text frame.

To select several objects in the same area:

❖ Point outside the objects and drag diagonally to draw a selection border around them. All objects you want to select must be completely within the selection border.
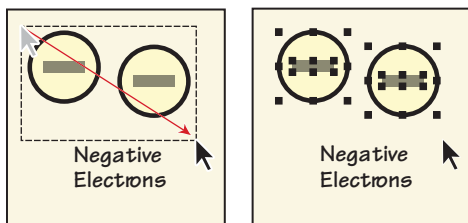
Drag to select several objects.

Note: If you move the object rather than draw a selection border (because the pointer was over an object), immediately choose Edit > Undo. Then draw a selection border in the way described in the following procedure.

To force FrameMaker to draw a selection border:

❖ Control-Shift-drag.

To add an object to a selection:

❖ Shift-click the object. You can also Control-click the object.

To add a text line or text frame to the selection when using the Smart Selection tool:

❖ Control-click.

To add several objects in the same area to a selection:

❖ Shift-drag diagonally to draw a selection border.
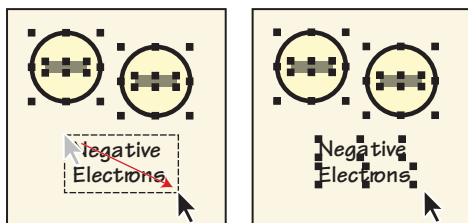
Shift-drag to add objects to the selection.

If any objects within the selection border were selected when you began dragging, they are deselected.

To select all objects in a graphic frame or on a page:

❖ Do one of the following:

• To select all objects in a graphic frame, select the frame or any object in the frame, and then choose Edit > Select All in Frame.

• To select all objects on a page, click outside any objects or text on the page and choose Edit > Select All on Page.

To deselect objects:

❖ Do one of the following:

• To deselect an object, click outside it.

• To deselect one of several selected objects, Shift-click the object (not a handle). You can also Control-click the object.

• To deselect all selected objects, click on the page away from any objects.

• To deselect several objects in the same area, point outside all the objects and Shift-drag diagonally to draw a selection border around the objects. When you release the mouse button, all the objects completely within the selection border are deselected. If any objects within the selection border were not selected when you began dragging, they are selected.

Applying and changing drawing properties

An object's drawing properties include the fill pattern, pen pattern, line width, line ends, color, and whether the line is solid or dashed. You change drawing properties from pop-up menus on the Tools palette.
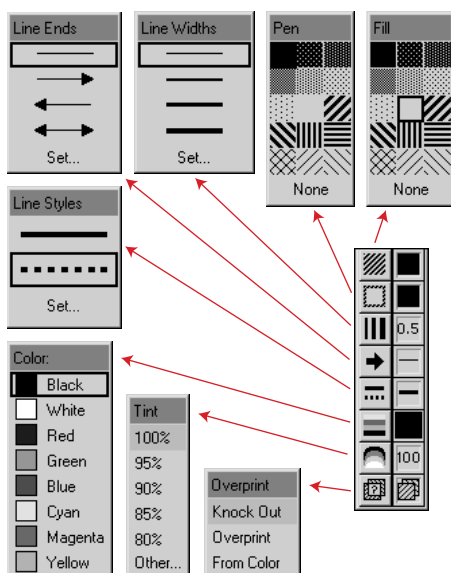
Pop-up menus on the Tools palette

You can change drawing properties before you draw an object, or you can select objects that you've already drawn and then change their properties. After you change a property, it becomes the *current property*—that is, it will be applied to any object you draw. For example, if you choose a line width of 1 point, this is applied to all newly drawn objects until you choose another line width or exit FrameMaker.

You can also make objects look alike by applying one object's properties to another object.

You can customize the choices that appear on the Tools palette. For information on changing the line widths, line ends, or line styles, see "Changing line properties" on page 317. For information on changing the colors in the Color pop-up menu, see "Defining and modifying colors and tints" on page 361. For information on changing the pen or fill patterns you can choose on UNIX systems, see the online manual *Customizing FrameMaker* on the Adobe website: www.adobe.com/devnet/framemaker/pdfs/Customizing_Frame_Products.pdf.

To apply a fill pattern or pen pattern to a selected object:

❖ Choose the pattern from the Fill pop-up menu ▨ or Pen pop-up menu ⬚. You can fill any objects except lines, text lines, and equations.
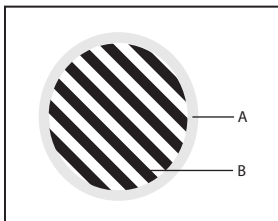
A. Pen pattern *B.* Fill pattern

The eight gray fill and pen patterns have the following percentages: 100, 90, 70, 50, 30, 10, 3, and 0 (no ink, typically white).

💡 *To make an object transparent (so objects in back of it show through), choose a fill pattern of None. If you don't want the object to have a border, choose a pen pattern of None. To see the border of an object that uses both a pen and a fill pattern of None, choose View > Borders.*

To choose a line width for a line or an object's border:

❖ Choose a width from the Line Widths pop-up menu ⦀. You can change the line width of any object except text lines.

To change the ends of an arc, a line, a polyline, or a freehand curve:

❖ Choose the line end from the Line Ends pop-up menu ➡. You can use no arrowhead or place an arrowhead at the beginning, at the end, or at both ends.

To make a line or object's borders solid or dashed:

❖ Choose a solid or dashed style from the Line Styles pop-up menu ⋯.

To assign a color to an object:

1 Choose the color from the Color menu.

2 To use a tint of the color, choose a tint value from the tint menu. If the value you want doesn't appear on the menu, choose Other from the menu, enter a tint value, and click Set.

If an object isn't visible after you assign it a color, make sure that the color isn't in the Invisible scroll list in the Define Color Views dialog box for the current view (see "Viewing colors" on page 363).

You can also assign the same color to all objects in a document (see "Applying colors and tints" on page 359).

Note: To control whether an object overprints or knocks out objects beneath it, use the Overprint pop-up menu. For information, see "Knocking out and overprinting" on page 364.

To change the color of text in a text frame:

❖ Use the Character Designer or the Paragraph Designer. For details, see "Using a designer to change font properties" on page 107.

To inspect an object's drawing properties or apply them to other objects:

1 Select the object that has the properties you want to inspect or copy.

2 Hold down Shift and choose Graphics > Pick Up Object Properties. The properties of the selected object become the current properties on the Tools palette. Any object you draw picks up those properties.

3 To apply the properties to existing objects, select the objects you want to change. In the Tools palette, click the current drawing properties you want to apply to the selected objects.

Current drawing properties

Changing line properties

You can change the following line properties that appear on the Tools palette:

• The values assigned to the line widths that appear in the Line Widths pop-up menu. (For information on changing the line widths that appear on UNIX systems when you start FrameMaker, see the online manual *Customizing FrameMaker* on the Adobe website: www.adobe.com/devnet/framemaker/pdfs/Customizing_Frame_Products.pdf).

• The cap style, which determines the appearance of any line ends that don't have an arrowhead.

• The pattern that FrameMaker uses when you choose the dashed line style from the Line Styles pop-up menu. (The pattern that appears in the pop-up menu doesn't change, but FrameMaker uses the new pattern.)

In Windows, the new line width settings remain until you change them. The other new settings remain until you change them or exit FrameMaker. On UNIX systems, the new settings remain until you exit FrameMaker.

None of the changes described here are applied automatically to existing objects. However, you can apply the new settings to both new and existing objects.

Note: Dashed lines and polylines may appear solid on-screen and in print if the lines are especially thick and contain acute angles or have round or projecting caps. To make the lines print correctly, change the Line Ends Options setting to Butt, use a smaller line width, or redraw the object using separate lines.

To change line width settings:

1 Choose Set from the Line Widths pop-up menu on the Tools palette.

2 Do one of the following:

• To change the line widths, enter the new line widths and click Set. You can enter the values in any order. When you click Set, the line widths are sorted from smallest to largest. The widths that appear in the pop-up menu don't change.

• To revert to the line widths you had when you started FrameMaker, click Get Defaults.

To change the line cap style:

1 Choose Set from the Line Ends pop-up menu on the Tools palette.

2 Select a line cap style and click Set.
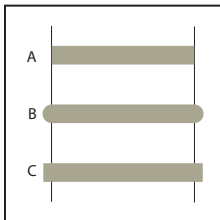
A. Butt B. Round C. Projecting

To change the dashed line style:

1 Choose Set from the Line Styles pop-up menu on the Tools palette.

2 Click one of the patterns and click Set.

You can also create custom dashed line styles. For information, see the online manual *Customizing FrameMaker* on the Adobe website: www.adobe.com/devnet/framemaker/pdfs/Customizing_Frame_Products.pdf.

To create a dotted line that uses round dots, use a dashed line style of short dashes with a round line cap.

Changing the arrow style

You can choose from among several preset arrow styles. Arrow styles are determined by their base angle, tip angle, and length.
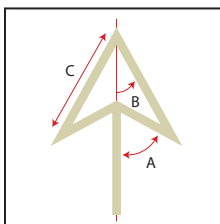
A. Base angle B. Tip angle C. Length

None of the changes described here are applied automatically to existing objects. However, you can apply the new arrow style to both new and existing objects.

To change or customize arrow styles:

1 Choose Set from the Line Ends pop-up menu on the Tools palette.

2 Do one of the following:

• Click a preset arrow style and click Set.

- Fill in a custom base angle, tip angle, length, and style, and then click Set. You can use the following values for the custom options.

Option	Values
Base Angle	Between 10 and 175 degrees (and at least 5 degrees greater than the tip angle)
Tip Angle	Between 5 and 85 degrees
Length	Between 0 and 255 points
Style	Filled
	Hollow
	Stick

FrameMaker ignores the Base Angle option when you use Stick. The length you specify applies to objects that have a line width of 1 point. When you use a thicker line width, the arrowhead is longer.

The following table contains sample custom arrows and their settings.

Arrow	Base Angle	Tip Angle	Length
	70 degrees	30 degrees	10 points
	80 degrees	30 degrees	10 points
	70 degrees	15 degrees	10 points
	70 degrees	30 degrees	5 points
	120 degrees	30 degrees	5 points

About frames

Text and graphics appear in rectangular *frames*. *Text frames* control placement of the document text. *Graphic frames,* which can be anchored or unanchored, control the position and look of graphics.

hold graphics related to specific text and move along with the text as you edit it. For information, see "About Anchored Frames" on page 342.

Unanchored frames are used to crop graphics that stay in the same place on the page. You can also use unanchored frames to hold reference art. You draw unanchored graphic frames with the Graphic Frame tool on the Tools palette. For details, see "Cropping or masking graphics" on page 340, and "Using reference frames on reference pages" on page 399.

Note: Graphics placed in unanchored frames will not be exported to HTML, Microsoft Word, or RTF.

If you want the graphic to appear at a specific location on a page (for example, for a logo or a bleed tab), draw or import the graphic directly on the page. If you need to crop a graphic or include it as reference art on a reference page, you place it in an unanchored graphic frame.
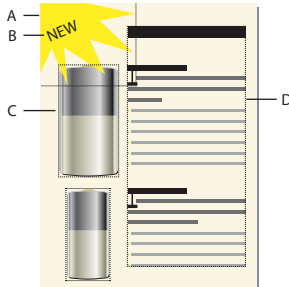
A. Graphic drawn on page B. Text line C. Anchored frame D. Text frame for document text

You can use text frames along with graphics—for example, as callouts or captions. You can also use text frames in anchored frames to create effects such as sidebars. For single lines of text in graphics, you can also use the Text Line tool. For details, see "Using text with graphics" on page 320.

Using text with graphics

You can add single lines of text or text frames to a graphic.
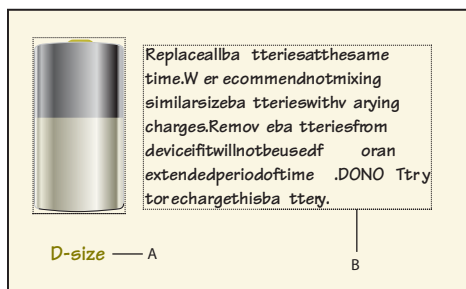
A. Text line B. Text frame

A *text line* is a single line of text that FrameMaker treats independently from other text. Text lines grow or shrink in length as you edit them, but they don't wrap to the next line. You typically use text lines for single-line callouts and for text you want to resize in the same way that you resize other objects.

You can assign character formats and a spell-checking language to text lines. However, text lines can't have paragraph formats, and they can't contain anchored frames, markers, variables, cross-references, or conditional text.

Unlike a text line, a *text frame* can contain more than one line of text. You use text frames for multiline callouts, paragraphs of text, and any other text you want FrameMaker to wrap automatically from line to line. When graphics overlap text in a text frame, you can run the text around the graphics.

When you resize a text frame created with the Text Frame tool ▤, the font size remains the same. However, when you resize a text line created with the Text Line tool A *, the font height and width change proportionally. See "Resizing objects" on page 336.*

To add a text line to a graphic:

1 Click the Text Line tool A. The pointer changes to a crossed I-beam ƚ when you move it to the document window. The small horizontal line across the pointer indicates the baseline position of the text.

2 Click in the document to place an insertion point, and then type the text. FrameMaker uses the last character format you typed or selected in the document.
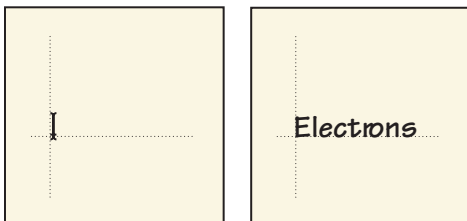
Click and then type.

The text line is left aligned on its alignment point (where you clicked). For information on changing the alignment of a text line, see "Changing indents and alignment" on page 110.

3 To create several text lines, press Return at the end of one text line to create another. You can then select the text lines independently and move them as needed.

💡 *To change the character format of text in a text line, use the font commands on the Format menu or the Character Designer (see "Changing font properties" on page 106). To change the font of several text lines at the same time, select the text lines as objects and change their format.*

To add a text frame:

1 Click the Text Frame tool ▦.

2 Drag diagonally where you want to add the text frame.
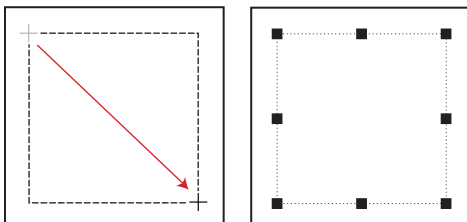
Drag and then release.

3 Specify the number of columns and the gap between them, and then click Set.

4 Double-click in the text frame to place an insertion point in it, and then type the text.
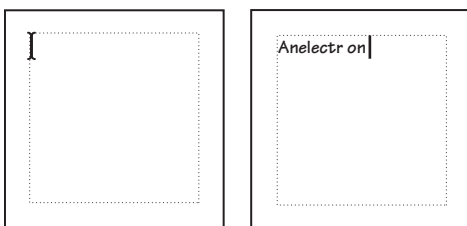
Double-click and then type.

Fixing text frames that overflow

When the text you type overflows the text frame, the insertion point moves below the bottom of the frame and the new text doesn't appear. The bottom border of the text frame appears as a solid line when borders are visible.

An electron is an
elementary particle
consisting of a
charge of negative
electricity equal to
about 1.602 X 10^{-19}
coulomb and having
a mass when at rest
of about 9.107 X 10^{-28}
gram or 1/1 837 that
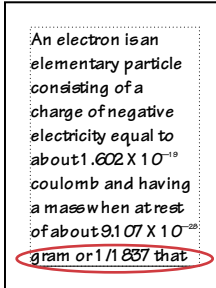
Overflowing text frame

You can enlarge the frame so the text fits, or you can connect the flow of the text frame to another frame (see "Disconnecting text frames" on page 395). You can also decrease the font size of the text.

To enlarge a text frame:

1 Control-click the text frame to select it.

2 Drag a handle to enlarge the frame.

Creating reverse text

You can create reverse text (text that appears in a light color on a dark background) for special emphasis. The reverse text can be in a text frame or a text line.

To create a reverse text frame:

1 Set the desired fill pattern and color of the text frame.

2 Set the text frame's pen pattern to None.

3 Change the color of the text with the Character Designer or the Paragraph Designer (see "Using a designer to change font properties" on page 107).
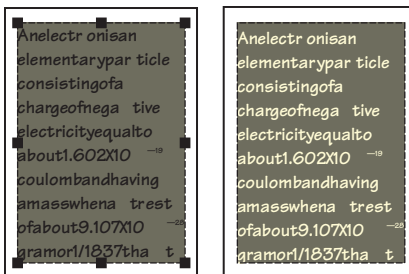
Set color of text frame and then change color of text.

4 If necessary, change the indentation and alignment of the text with the Paragraph Designer ("Changing indents and alignment" on page 110).

Anelectr onisan
el ementarypar ticle
co nsistingofa
ch argeofnega tive
el ectricityequalto
ab out1.602X10 $^{-19}$
co ulombandhaving
am asswhena t
r estofabout
9. 107X10 $^{-28}$gram
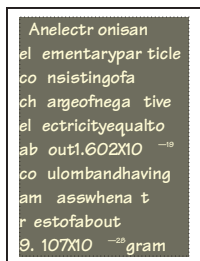
Centered between equal left and right indents

To create a reverse text line:

1 Draw an object to act as the background for the text. Generally, it's best to use a nearly black fill pattern for the object.

2 Outside the background object, add a text line and type its text.

3 Control-click the text line to select it.

4 Move the text line so part of it disappears into the background object.

Electrons

Electrons
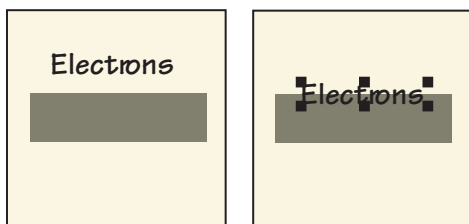
Draw object and text line and then move line part of the way.

5 Choose a light color from the Color pop-up menu on the Tools palette. The text appears partially cut out of the background object.

If the text doesn't appear in front of the object, choose Graphics > Bring to Front. If you still have trouble, make sure the current color view of the document shows the text line's color as Cutout. For details, see "Viewing colors" on page 363.

6 Move the text line so all its letters appear cut out of the background object.

Electrons

Electrons
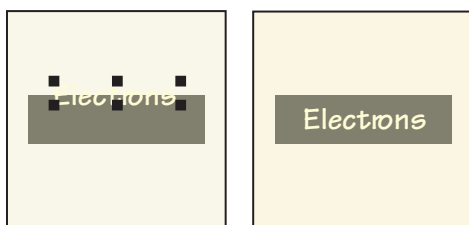
Choose a light color and then move the text line all the way.

Adding titles to illustrations

You can include a text line or text frame in a graphic as a title. You can also use a paragraph above or below an anchored frame as a title for the frame's graphic. However, you may find it easier to use table commands instead.

D, C, AA and AAA size batteries
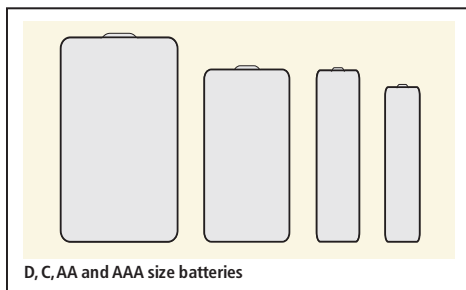
Single-cell table with table title below

You can also use multicell tables to achieve various effects with graphics and text. For example, the next example is a two-cell table. The first cell contains several autonumbered paragraphs; the second cell contains the figure.
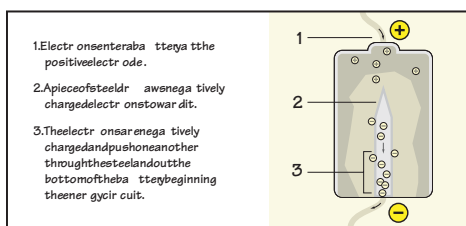
One-row table containing two cells

Use the guidelines provided here for setting up the paragraph formats, table formats, and anchored frames you'll need if you want to use single-cell tables and their titles for illustrations and their captions.

To use a table for an illustration and its title:

1 Use the Table > Insert Table command to create a single-cell table wide enough for your figure.

2 Use the Table > Table Designer command to specify the location of the title (see "Adding or removing table titles" on page 158).

3 Type the text of the title.

4 Format the table title.

5 Store the format for the table title in the Paragraph Catalog (see "Creating new formats" on page 135).

6 Change the cell's paragraph format to turn off fixed line spacing so that the size of an anchored frame can affect the paragraph's line spacing. For details, see "Changing spacing" on page 114.

7 Create an anchored frame in the cell, anchored at the insertion point (see "Creating anchored frames" on page 343). If necessary, the cell grows vertically to accommodate the frame's height.

8 Put the graphic in the anchored frame and resize the frame.

9 If the frame is wider than the cell, change the column's width. You can select the table cell and drag a handle to change the width, or you can use the Table > Resize Columns command (see "Resizing columns" on page 169).

10 Store the table format in the Table Catalog (see "Creating table formats" on page 183).

11 The next time you add a table for a figure and its title, either use the Table > Insert Table command or copy and paste the table.

Running text around graphics

You can make the text in a text frame run around a graphic that overlaps the text. (However, text will not run around a text line or an equation.) When a graphic is placed directly on a page or in an unanchored frame, the text can follow the contours of the graphic, or it can align vertically at the edge of an imaginary box bounding the graphic.
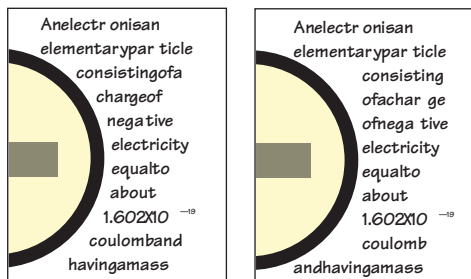
Text run around contour and run around bounding box

You can also run text around anchored frames—for example, to set a small graphic or a drop cap at the beginning of a paragraph. For information on running text around an anchored frame positioned in this way, see "Anchored frames run into paragraph text" on page 349.

When text in a text frame runs around a graphic, FrameMaker does not feather text in that frame. See "Feathering text to the bottom of text frames" on page 388.

To set runaround properties for a graphic:

1 Draw or place the graphic on a page. When you place the graphic on a master page, it appears as a background graphic on all associated body pages. You can then make the text on all the associated body pages run around the graphic.

Make sure you click in the page margin before importing or pasting the graphic. Otherwise, the document may contain an insertion point, which will cause the graphic to be placed in an anchored frame.

2 Select the graphic. If the graphic is made up of several objects, select all the objects.

3 If you want to run text around the contour of an imported graphic, make sure the graphic is behind the text frame. To do so, select the graphic and choose Graphics > Send to Back.

4 If the graphic's runaround properties aren't set as you want them, choose Graphics > Runaround Properties, and do one of the following:

• To make text run around the graphic, click a runaround style and enter a gap.

• To prevent text from running around the graphic, click Don't Run Around.

Note: If the Style setting is As Is when you display the Runaround Properties dialog box, you selected several graphics that have different runaround properties.

5 Click Set.

If the settings don't produce exactly the results you want, add an object (with a pen and fill pattern of None) near the graphic to create the desired contour for the text to run around.

Editing and arranging objects

You can edit and arrange objects in a number of ways:

• You can move, duplicate, and delete objects.

• You can connect objects as you draw, resize, or reshape them.

• You can rearrange objects in relation to one another by changing their stacking order, aligning them, and spacing them apart.

• You can join individual lines and curves to create complex outlines, which you can then fill or color.

Cutting, copying, pasting, and deleting objects

You can use the Edit menu commands to cut, copy, and paste objects to and from the Clipboard. When you use Edit > Cut or Edit > Copy, the cut or copied objects remain on the Clipboard until you choose Cut or Copy again.

You can also duplicate or delete objects quickly without using the Edit menu commands.

To cut, copy, and paste an object by using the Clipboard:

1 Select the object and choose Edit > Cut or Edit > Copy.

2 Do one of the following:

• To paste the object on a page, click in the margin of the page.

• To paste the object in an existing graphic frame, click the frame's border to select the frame.

• To paste the object in text, click in the text where you want to paste the object.

3 Choose Edit > Paste. When you paste the object in a graphic frame or on a page that is the same size as the one from which you copied or cut the object, FrameMaker puts the object in the same relative location. Otherwise, FrameMaker centers the object.

When you paste an object into text, FrameMaker creates an anchored frame to hold the object, and centers the object in the frame. An anchor symbol ⊥ appears at the insertion point when text symbols are visible.

To copy an object by dragging:

1 Select the object.

2 Point on the object (not on a handle), and do one of the following:

• (Windows) Alt-drag the duplicate of the object, or right-drag the object and then choose Copy Here from the shortcut menu that appears. To constrain the duplicate's movement to either a horizontal or vertical direction, hold down Shift while you drag.

• (UNIX) Control-drag the duplicate of the object with the middle mouse button. To move the duplicate in any direction, release the Control key and the mouse button after you make the duplicate. Then drag the duplicate where you want it. Holding down Shift constrains the duplicate's movement.

To delete an object:

❖ Select the object and press Delete.

Moving objects

You can quickly move an object by dragging it, or you can make small position adjustments by moving the object with the arrow keys. You can also specify its exact position by using a dialog box. To move an object by dragging it, you must drag its border (not a handle).

To move an object by dragging:

1 Select the object.

2 Do one of the following:

• Drag in the direction you want to move the object.

• To move the object horizontally or vertically, Shift-drag.

• To move an object into a graphic frame, drag it until the pointer is in the frame.

• To move an object out of a graphic frame, drag it until the pointer is outside the frame. As you drag, the frame's border may temporarily crop the object.

When you drag the object, the status bar shows the distance from the upper left corner of the object to the upper left corner of the page (or frame, if the object is in a graphic frame). When rulers are visible, lines in the rulers show you the object's position. If the snap grid is on, objects snap to the invisible grid as you drag them.

If your screen does not redraw properly when moving an object, press Ctrl+l (lowercase L) to redraw the screen.

To move an object in small increments:

❖ Select the object and do one of the following:

• (Windows) Hold down Alt and press an arrow key to move 1 point, or hold down Alt+Shift and press an arrow key to move 6 points. However, do not use an arrow key on the numeric keypad.

• (UNIX) Hold down Control and press an arrow key to move 1 point, or hold down Shift+Control and press an arrow key to move 6 points.

The preceding distances assume a 100% zoom setting. The actual distance moved depends on the current zoom setting, so you can do finer work when you're zoomed in closer. For example, at 200% zoom, the distance is halved. At 50% zoom, the distance is doubled.

To specify the exact position of an object:

1 Select the object and choose Graphics > Object Properties.

2 Do one of the following:

• For all objects except text lines and equations, specify the offset from the top and left edges of the page or graphic frame in the Offset From area.
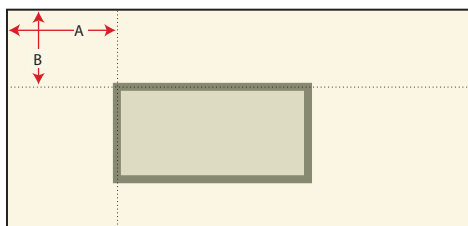
A. *Offset from left* **B.** *Offset from top*

- For text lines and equations, specify the offset in the Alignment Point Offset area.
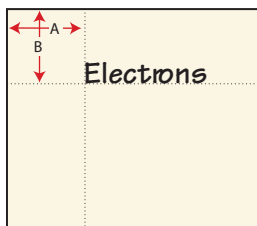
Left-aligned text line
A. *Offset from left* **B.** *Offset from top*

3 Click Set.

Changing the stacking order of objects

When you draw or paste an object, FrameMaker places it in front of all other objects on the page or in a graphic frame. You can control how objects overlap by putting them in front of or in back of other objects.
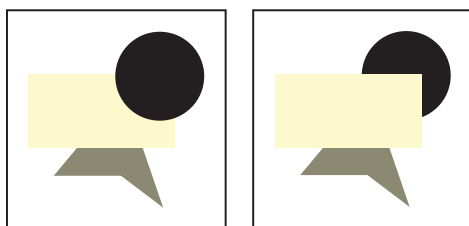
Circle in front and circle in back

To change the stacking order of objects:

❖ Select one of the objects and do one of the following:

- To put an object in front of other objects, choose Graphics > Bring to Front.

- To put an object in back of other objects, choose Graphics > Send to Back.

To create a drop shadow, stack two objects and offset them slightly.

Aligning objects

You can align objects (except graphic frames) with one another in the following ways:

- You can align objects along a horizontal line by specifying the top/bottom alignment.
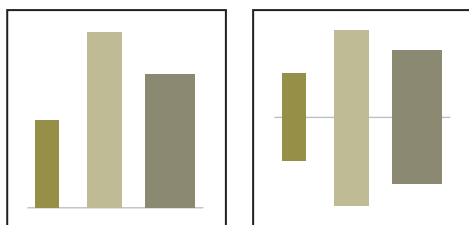
Bottoms aligned and top/bottom centers aligned

• You can align objects along a vertical line by specifying the left/right alignment.
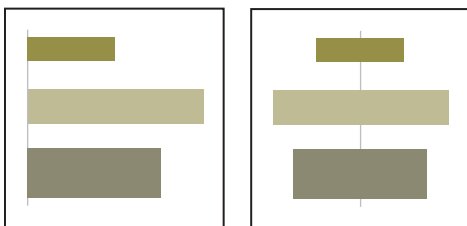
Left sides aligned and left/right centers aligned

To align objects:

1 Select the objects and choose Graphics > Align. To align a single object in a graphic frame or on a page—for example, along the left side of a graphic frame—select only the object you want to align.

2 Choose the alignment you want and click Align. To align objects in only one direction, set the other direction to As Is.

FrameMaker aligns the objects—along their paths—with the last object you select. For example, "Top Align" will align selected objects with the last selected object and may not be the object that is currently highest in the anchored frame.

If you selected objects by dragging a selection border, FrameMaker aligns the objects with the object in the foreground.

Aligning text lines

When you create a text line, it is left aligned on its alignment point (where you clicked). You can change the alignment to centered or right aligned. FrameMaker then maintains the text line's alignment when you insert text.
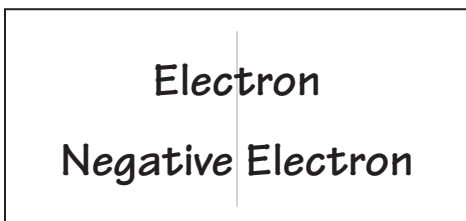
Centered text line remains centered as you type.

To change the alignment of a text line:

1 Select the text line and choose Graphics > Object Properties.

2 Choose a new alignment from the Alignment pop-up menu and click Set.

Distributing objects

You can move objects—distribute them—so they have an equal amount of space between them. You can distribute objects horizontally and vertically.
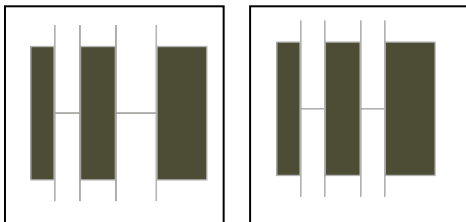
Objects before and after distributing (with zero edge gap)
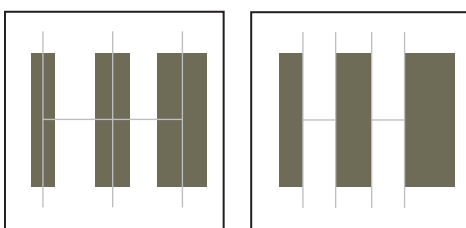
Equidistant centers and equidistant edges

If you specify the exact space between the objects (the edge gap), FrameMaker moves all objects except the one at the left or top. If you specify that the objects' centers or edges should be equidistant, FrameMaker leaves the left and right, or top and bottom, objects where they are and moves the others.

To distribute objects:

1 Select the objects and choose Graphics > Distribute.

2 Choose the spacing you want and click Distribute. To distribute objects in only one direction, set the other direction to As Is.

When you specify a large edge gap, objects may move off the page and disappear from sight. If they do, immediately choose Edit > Undo.

About gravity

With Gravity on, an object attracts the pointer as you draw, resize, or reshape a nearby object. Gravity has no effect when you move objects.

Objects have gravity along their paths and at their corners. Rectangles and ovals also have gravity at their centers. Some points on an object exert a greater pull than others. For example, the corners of a triangle attract the pointer more than its sides do.

Gravity extends the same distance on the screen regardless of the zoom setting. When you zoom in, objects and the space between them appear larger, so you can drag a handle or draw closer to an object without the object attracting the pointer.

Making objects touch

It's easier to make objects touch when you use "gravity." If Gravity and Snap are both selected in the Graphics menu, gravity takes precedence. For information on the snap grid, see "Using grids" on page 308.

To make two objects touch each other:

1 If Gravity isn't already on, choose Graphics > Gravity.

2 Drag a handle of an object, or draw an object, close to the object to which you want to connect. As you drag, the handle jumps so the two objects touch each other.
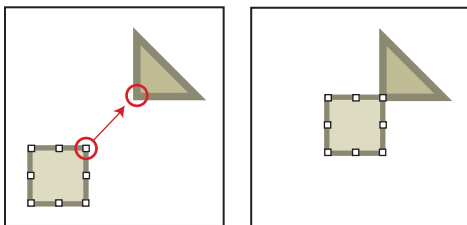
Gravity ensures perfect alignment.

Making lines intersect cleanly

Depending on their properties and the angle between them, two connected lines may appear not to intersect cleanly. For example, lines intersect cleanly when they are the same thickness, meet at right angles, and use a projecting cap; lines don't intersect cleanly when they use a projecting cap but don't intersect at right angles. Notice the different intersections created by using the three line cap styles.
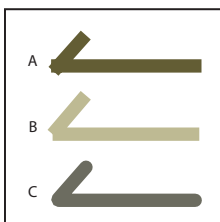
A. *Projecting* **B.** *Butt* **C.** *Round*

To make lines intersect cleanly:

❖ Do one of the following:

• If the lines don't meet at a right angle, try a round cap for both lines.

• If the lines aren't the same thickness, try a butt cap for the thinner line when the lines meet at their endpoints and for the stem of a *T* when they meet in a *T*.

For information on changing the line cap style, see "Changing line properties" on page 317.

Grouping and ungrouping objects

When several objects (except graphic frames) are part of the same graphic, you can group the objects. You can then edit and arrange them as a single object.

You can combine a group of objects with other objects to form an even larger group. Because FrameMaker groups and ungroups objects hierarchically, the first set of grouped objects is maintained as a set when you group other objects with it.

For information on joining objects to create a single continuous object, see "Joining lines and curves" on page 332.

To group objects:

❖ Select the objects and choose Graphics > Group. One set of handles appears around the group.
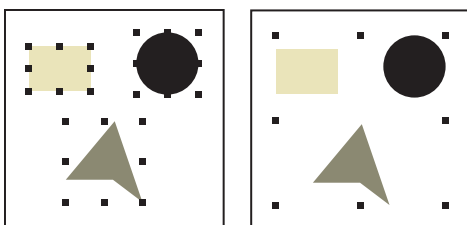
Objects selected and then grouped

To ungroup objects:

❖ Select the group and choose Graphics > Ungroup. Handles appear on each object in the group. When a group has been grouped with other objects, you must choose Ungroup more than once to ungroup all objects.

Joining lines and curves

You can create complex outlines by joining individual lines, polylines, arcs, and smoothed polylines that were created with FrameMaker drawing tools. Joining creates a single continuous curve. You can then change the new curve's properties, such as its line width, pen and fill patterns, and color.
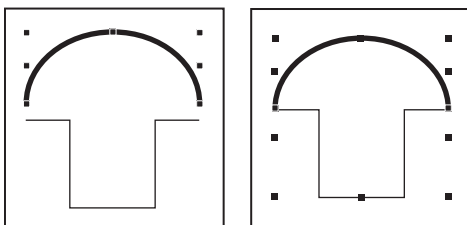
Objects drawn, and then positioned and selected
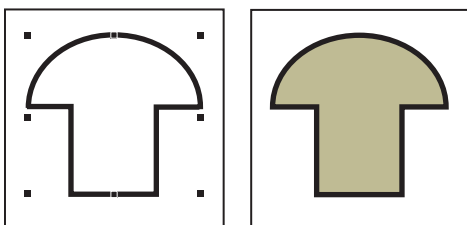
Objects joined, and then fill pattern added

To join lines and curves:

1 Position the objects so that their endpoints touch. The ends of the lines or curves must be within 1 point of each other and the objects cannot be grouped. If necessary, choose Graphics > Gravity and zoom in.

2 Select the objects and choose Graphics > Join. The new curve takes on the properties of the last object selected before joining—for example, the object's line width, pen pattern, or color. (In the preceding illustration, the last object selected before joining was the arc.)

Note: If you join lines or curves by mistake, immediately choose Edit > Undo. Joining creates a single continuous object that cannot be "unjoined" at a later time in the way that grouped objects can be ungrouped.

Flipping objects

You can create a mirror image of an object by flipping it up and down or left and right.
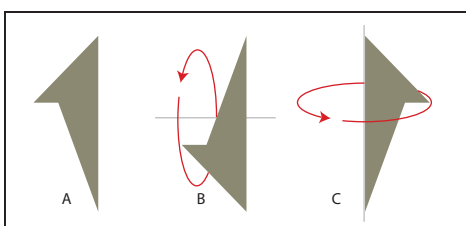
A. Original   B. Flipped up/down   C. Flipped left/right

To flip an object:

❖ Select the object and choose Graphics > Flip Left/Right or Graphics > Flip Up/Down. If the object contains text, the text isn't flipped. For example, the text in a flipped text line doesn't appear flipped, but the alignment point of the text line is flipped.

To create a symmetrical object:

1 Draw one half of the object and copy it.
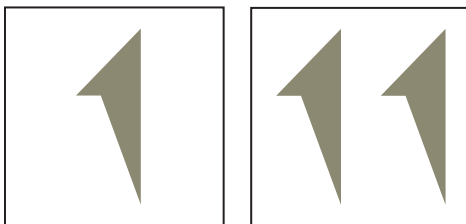
Draw and then make a copy.

2 Flip the copy and move it until it touches the original.
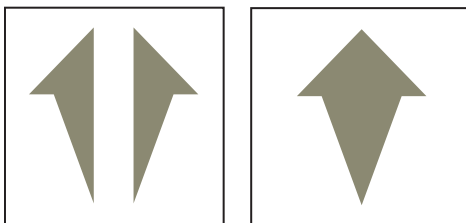
Flip and then move.

Rather than move the duplicate to the original, you can use the Distribute command with an edge gap of zero (see "Distributing objects" on page 330) to ensure exact alignment of the objects.

Rotating objects

You can rotate all objects (except equations and graphic frames) any number of degrees. You can rotate graphic frames and equations in 90-degree increments.

All objects (except equations and text lines) rotate around their centers.
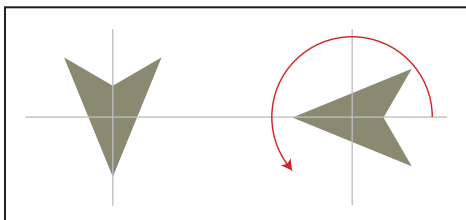
Rotating objects

Equations and text lines rotate around their alignment points.
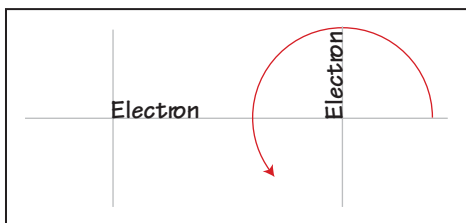
Rotating text

You may find it easier to edit objects—for example, to align and distribute them—in their unrotated position. After you edit an object, you can rerotate the object to restore it to its rotated position.

Note: If you rotate an imported PICT image or a page containing an imported PICT image, the image may print poorly. To improve printing, convert the image to TIFF or EPS and reimport the image.

To rotate an object by dragging:

1 Select the object.

2 Do one of the following:

• (Windows) Hold down Alt and drag a handle.

• (UNIX) Hold down Control and drag a handle with the right mouse button.

When the snap grid is on, the object snaps to multiples of the angle specified in the View Options dialog box (see "Using grids" on page 308). To constrain the rotation to 45-degree increments, also hold down Shift while you drag.

To rotate an object precisely from its current position:

1 Select the object and choose Graphics > Rotate.

2 Specify the direction and amount of rotation and click Rotate. If you rotate several ungrouped objects in this way, each object rotates around its center.

To rotate an object precisely from its unrotated position:

1 Select the object and choose Graphics > Object Properties.

2 Enter the angle in the Angle text box and click Set.

To quickly unrotate or rerotate an object:

❖ Do one of the following:

• To unrotate an object (change it to its unrotated position), press Esc g 0 (zero).

• To rerotate an object (after unrotating it), press Esc g 1 (one).

To reset the rotation of a polygon, polyline, freehand curve, or grouped object to zero:

❖ Select the rotated object and press Esc g 9. The object's rotation doesn't change, but its handles are repositioned around the object so that they are parallel to the window borders.

To rotate an equation or graphic frame:

1 Select the object and choose Graphics > Rotate.

2 Click the rotation angle you want (in 90-degree increments) and click Rotate. You specify the rotation from the equation's or frame's unrotated position.

To inspect the rotation angle:

❖ Select the object and choose Graphics > Object Properties. For equations and graphic frames, you can also choose Graphics > Rotate. The rotation angle appears in the dialog box.

Resizing and reshaping objects

As you refine a graphic, you can change the size and shape of objects. Reshaping possibilities are unlimited. For example, you can add a corner to a polyline or polygon, move a corner to change its shape, and smooth a polyline to create a freehand curve.
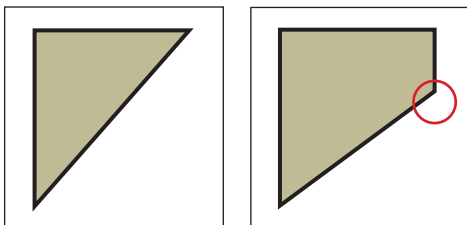
Original polygon and then with corner added
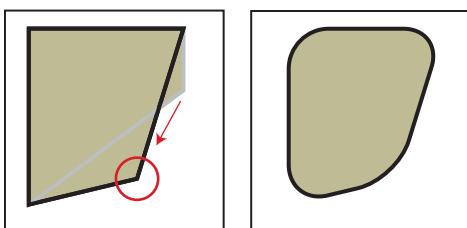
Corner moved and then smoothed

Resizing objects

You can resize all objects, including text lines. When you resize a text frame created with the Text Frame tool ▦, the text remains the same size. When you resize a text line created with the Text Line tool A, the font height and width change proportionally.
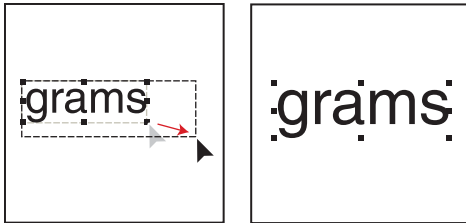
Before and after resizing a text line (not a text frame)

To resize an object by dragging:

❖ Select the object and do one of the following:

• To change either the width or the height, drag a side handle.

• To change both the width and the height, drag a corner handle.

• To increase or decrease the dimensions proportionally, Shift-drag a corner handle.

The object's dimensions appear in the status bar as you drag.

To resize an object precisely:

1 Select the object and choose Graphics > Scale.

2 Do one of the following:

• To increase or decrease the height and width proportionally, enter a scale factor and click Scale. The scale factor is always relative to the object's current size (100% means no change).

• To specify the exact dimensions you want, enter the dimensions and click Scale. The dimensions shown when you display the dialog box are the object's current (unrotated) dimensions.

Resizing imported graphics

You can resize imported graphics back to the original size.

To resize your imported graphics back to 100%:

1 Select the object and choose Graphics > Object Properties.

2 For Scaling Percent, type100%, and click Set.

Smoothing and unsmoothing objects

You can smooth polylines, polygons, rectangles, and rounded rectangles. When you smooth a polyline, polygon, or rectangle, you change its angles to smooth curves. When you unsmooth a curve, you restore its angles.
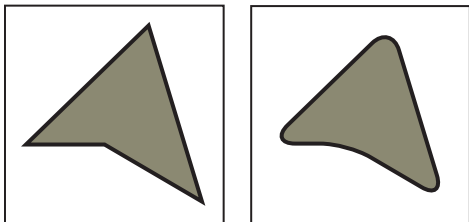
Before and after smoothing

Each time you smooth a rounded rectangle, you increase the curvature of its corners (its corner radius).

To smooth an object:

❖ Select the object and choose Graphics > Smooth. After smoothing a polygon or polyline, reshape handles and control points appear so you can reshape the curve (see "Reshaping objects" on page 338).

To unsmooth an object:

❖ Select the object and choose Graphics > Unsmooth. If you later smooth the object, its shape may be somewhat different from the original.

Changing the corner radius of a rounded rectangle

You can define the curvature of the corners of a rounded rectangle by specifying the radius of an imaginary circle drawn in the corner of a rectangle. The longer the radius, the more curved the corners.
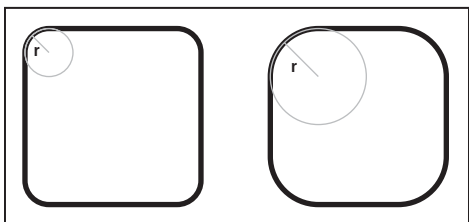
Radius (r) = .125″ and radius (r) = .25″

When you specify a corner radius, you also change the current drawing properties. New rounded rectangles you draw have this corner radius until you change it with the Object Properties command or until you exit FrameMaker.

To change the corner radius of a rounded rectangle:

1 Select a rounded rectangle and choose Graphics > Object Properties.

2 Enter the corner radius and click Set. The largest meaningful radius is one-half the length of the shortest rectangle side. For example, if the rectangle is 2 inches by 4 inches, the largest meaningful radius is 1 inch (one-half of 2 inches).

Reshaping objects

You can change the shape of lines, polylines, polygons, curves, and arcs as follows:

• Reshape a line, polyline, or polygon by moving its corners one at a time. You can also add and remove corners.

• Reshape a curve by changing the position of its reshape handles (which define the curve and control its location) and its control points (which adjust the curvature). You can also add and remove reshape handles to change the number of points that define the curve.
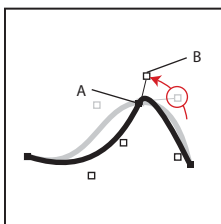
A. *Reshape handle* **B.** *Control point*

• You reshape an arc by dragging its endpoints or by changing the percentage of a circle that the arc represents.

To move a corner of a polyline or polygon:

1 Select the object and choose Graphics > Reshape. Reshape handles appear on the object, replacing the selection handles.

2 Drag a handle. To move the handle horizontally or vertically, Shift-drag.
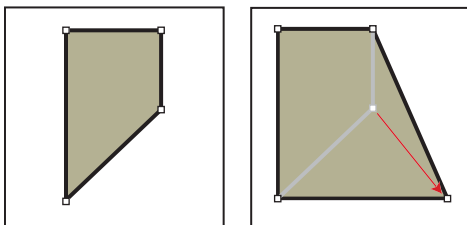
Choose Reshape and then drag.

To add or remove a corner or reshape handle:

1 Select the line, polyline, polygon, or curve, and choose Graphics > Reshape.

2 Do one of the following:

• (Windows) Control-click where you want to add a reshape handle (or corner), or Control-click the handle you want to remove.

• (UNIX) Middle-click where you want to add a reshape handle (or corner), or middle-click the handle you want to remove.

To reshape a curve:

1 Select the curve and choose Graphics > Reshape. Reshape handles appear at the locations that define the curve. Control points also appear around one of the handles.

2 If the control points aren't the ones you want, click the handle where you want to change the curve. Control points appear around the handle that you click—the two control points that correspond to the handle and the next closest one on each side of the handle.

3 Drag a handle to change the position of the curve at the handle, or drag or rotate a control point to change the curvature. When you begin to drag, a lever appears that touches the curve at the handle. You can achieve different effects by dragging along the lever or by rotating it.
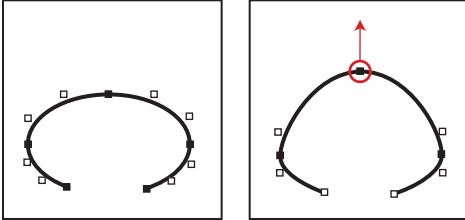
Choose Reshape and drag handle.
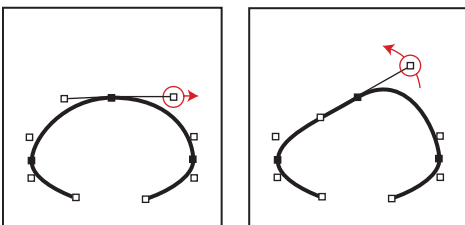
Drag a control point.

As you drag a reshape handle, the control points move as well, so the result is a smooth curve. As you drag a control point, the curvature changes on both sides of the handle, so the result is also a smooth curve.

To crimp a curve:

1 Select the curve and choose Graphics > Reshape.

2 If the control points aren't the ones you want, click the reshape handle where you want to change the curve.

3 Do one of the following:

• (Windows) Drag a handle or control point with the right mouse button.

• (UNIX) Control-drag a handle or the control point.
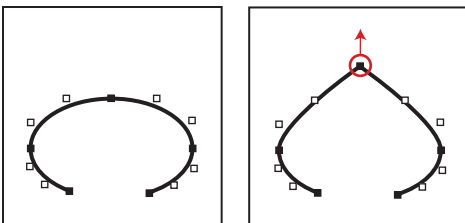
Crimping a curve.

To reshape an arc by dragging:

1 Select the arc and choose Graphics > Reshape. Reshape handles appear on the object, replacing the selection handles.

2 Drag a handle. As you drag, the start and end angle of the arc and the percentage of a circle that the arc represents appear in the status bar.
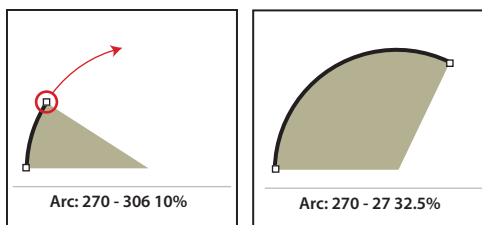
Drag to reshape an arc.

To reshape an arc precisely:

1 Select the arc and choose Graphics > Object Properties.

2 Enter a new Start Angle and End Angle, and click Set.

Cropping or masking graphics

When you want to crop the edges of a graphic, place the graphic in an anchored or unanchored graphic frame. An anchored graphic frame moves with the surrounding text. An unanchored graphic frame stays wherever you place it on a page, even when the text around it moves as the result of editing.
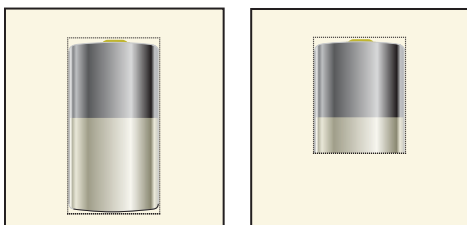
Uncropped and cropped graphics in graphic frames

When you want to mask an area of a graphic, particularly if the part you want to mask is in the middle of a graphic, you can cover the area with nonbordered objects.

To crop the edges of a graphic:

1 Do one of the following to create a graphic frame:

• To create an unanchored frame, click the Graphic Frame tool on the Tools palette and then drag to draw the frame. To draw a square frame, Shift-drag.

• To create an anchored frame, use Special > Anchored Frame (see "Creating anchored frames" on page 343).

2 Do one of the following to put the graphic in the frame:

• Drag the graphic into the frame.

• Select the graphic, choose Edit > Copy or Edit > Cut, select the frame border, and then choose Edit > Paste.

3 Resize the frame around the graphic.

To mask an area within a graphic:

❖ Put graphic objects (such as rectangles and polygons) with a white fill and pen pattern in front of the parts you want to mask.

Measuring objects

As you arrange and resize objects in an illustration, you may want to know an object's dimensions and exact position.

The size of an object is the size of the rectangle that encloses its path. The position is the distance from the top and left edges of the page or graphic frame.
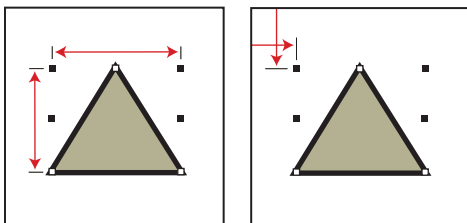
Object size and object position

To measure an object:

❖ Do one of the following:

• Select the object and choose Graphics > Object Properties. The width and height of the object appear in the Size area of the Object Properties dialog box.

• With Snap off, select the object, point on one of its handles, and hold down the mouse button. The dimensions appear in the status bar. If you move the mouse by mistake and resize the object, immediately choose Edit > Undo.

To view the position of an object:

1 Select the object.

2 Choose Graphics > Object Properties. For all objects except equations and text lines, the distance from the upper left corner of the page or graphic frame to the object's topmost and left-most point appears in the Offset From area. For equations and text lines, the distance from the upper left corner of the page or graphic frame to the alignment point at the baseline of the text line or equation appears in the Alignment Point Offset From area.

To view the position of an object as you move it:

❖ Look in the status bar. The distance between the object and the upper left corner of the page or graphic frame appears in the status bar. When rulers are visible, guidelines in the rulers also show the position of the object.

To measure any distance on the page:

1 Point where you want to start measuring.

2 Shift+Control-drag to force a selection border to appear, but don't release the mouse button.

3 When the selection border encompasses the area you want to measure, look in the status bar for the dimensions.
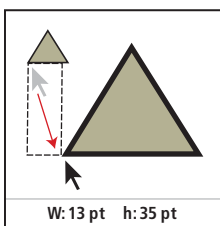
Dimensions appear in the status bar.

In the example, the important dimension is the height (35 points between the bases of the triangles).

About graphic elements in structured documents

When working with structured documents, you use special elements to place graphics. A graphic element provides an *anchored frame* for holding graphic objects. The frame is anchored to a specific location in text. As you edit the text, the frame and its contents move in the document along with the text. The element appears in the document's structure, but the graphic or equation itself is not part of the structure.

For information on anchored frames, see "Creating anchored frames" on page 343. For information on importing graphic elements into structured documents, see "Using structured documents in FrameMaker" on page 58.

Types of graphic elements in structured documents

A new graphic element is either an empty anchored frame or an anchored frame with an imported graphic. When you insert the element, its format rules determine whether you see a dialog box for setting up a frame or for importing a graphic file:

• For an element that is an empty anchored frame, you specify the size of the frame, its anchoring position, and some formatting properties such as alignment. You can fill in the frame by drawing, pasting, or importing graphic objects in it.

• For an element that is a frame with an imported graphic, you specify the file to import. The graphic appears below the line with the anchor symbol, in a frame just large enough for it.

After you've inserted a graphic element, you can put different contents in the frame, resize the frame, change the anchoring position, and edit the frame in other ways. These changes are not considered to be format rule overrides.

About Anchored Frames

You often need to keep an illustration with particular document text. In FrameMaker, you do this by putting the illustration in a graphic frame anchored to the text—an anchored frame. When you edit the text, the frame and its contents move along with the text automatically.

You can use an anchored frame for an illustration in a column of text—below the line that contains the anchor symbol ⊥, or at the top or bottom of the column. You can use an anchored frame for small graphics that appear in line with paragraph text or for art that appears between columns or in the page margin.

You can also use an anchored frame to achieve special effects such as positioning an anchored frame in the top corner of a paragraph with the paragraph text running around the graphic.
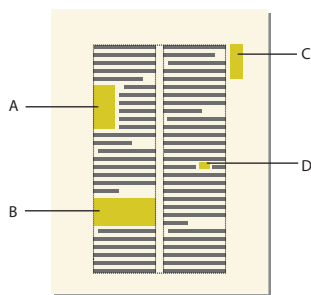
A. Graphic in the top corner of a paragraph
B. Illustration in a column of text *C. Margin art*
D. Small graphic in a line of text

If you want an illustration to stay at a specific place on the page—for example, as a logo on letterhead stationery—don't use an anchored frame. Instead, draw, paste, or import the illustration directly onto a body or master page without placing an insertion point in the text. Then move the illustration to the desired position. (For information on working with master pages, see "Displaying master pages" on page 376.)

By default, an anchored frame has no pen or fill pattern, which makes it invisible on the page unless borders are visible.

Creating anchored frames

An anchored frame is created automatically when you paste or import a graphic at an insertion point. You can keep the properties assigned to the frame, or you can change them.

When you create an anchored frame using the Special > Anchored Frame command, you specify the location of the frame and its size and position. You can also specify other properties that depend on the frame's position. For example, when the frame is placed in the line at the insertion point, you can specify its distance from the baseline of the text. When the frame is placed in a column of text, you can specify its alignment. You can change any of the properties, including the frame's position, at any time.

When you create an anchored frame, you can use Object Properties to set unique tags to your anchor. These tags simply create a structure for the layout of your document. You can uniquely define an element for your frame that maps to tags in your PDF format.

When you tag your document, you name each document property. This will allow you to easily change the look and feel of your document without changing the content.

For details, see "Editing anchored frames" on page 353.

To create an anchored frame automatically:

❖ Do one of the following:

- Paste an object into text at the insertion point by cutting or copying the object, clicking in text where you want to insert the anchor symbol, and choosing Edit > Paste.

- Import a graphic into text by clicking in text, choosing File > Import > File, and selecting the graphic file you want to import. You can also import a graphic in other ways, depending on the platform. (See "Choosing the right method for importing and linking" on page 494.

The pasted or imported object appears in an anchored frame that is centered below the current line. Once the frame is created, you can change its properties. For details, see "Editing anchored frames" on page 353.

To create an anchored frame with specific options:

1 Click in text where you want to place the anchor symbol and choose Special > Anchored Frame. You can create an anchored frame in a text frame or in a table cell, but not in a text line.

2 Choose the frame's anchoring position and specify its properties. The properties that appear in the Anchored Frame dialog box depend on the anchoring position.

3 Click New Frame. An anchor symbol ⊥ appears at the insertion point when text symbols are visible.

To create a tag for an anchored frame:

1 Select your anchored frame, and choose Graphics > Object Properties.

2 For Tag, type the desired name, and click Set.

In-line anchored frames

To position an anchored frame in line with paragraph text—for example, to hold a small graphic such as a picture of a keycap—choose the At Insertion Point anchoring position in the Anchored Frame dialog box. When you put a space on either side of the anchored frame, the frame moves along from one line to another as you edit the document, as if it were a word (rather than being attached to the preceding or following word).

You can adjust the frame's position up or down relative to the baseline of text by dragging the frame or by specifying a value for the Distance above Baseline option in the Anchored Frame dialog box. A value of zero aligns the bottom of the frame with the baseline of the text. A positive number moves the frame up; a negative number moves it down.
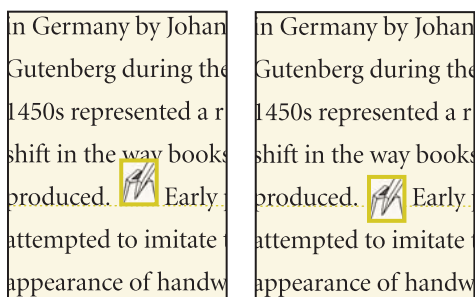
Zero distance and negative distance

If the frame obscures text in the line above or below, turn off fixed line spacing to allow the line height to change with the contents of the line (see "Changing spacing" on page 114).
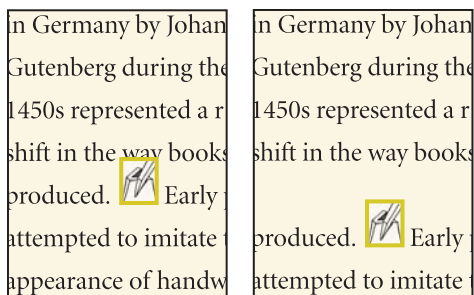
Fixed line spacing on and off

💡 *To shrink an anchored frame to the dimensions of its contents and place it in the line at the anchor symbol, select the frame or an object in the frame and press Esc m p. To enlarge a frame and place it below the line that contains the anchor symbol, select the frame or an object in it and press Esc m e.*

Anchored frames in a column of text

To position an anchored frame in a column of text, choose the Below Current Line, At Top of Column, or At Bottom of Column anchoring position in the Anchored Frame dialog box.

Below current line and at top of column

An anchored frame positioned at the top or bottom of the column moves only when its anchor symbol moves to another column.

Important: *To place an anchored frame below a line that contains a run-in head, place the anchor symbol in the body paragraph, not in the run-in head. Otherwise, the anchored frame obscures the text below the run-in head.*

When you choose the Below Current Line, At Top of Column, or At Bottom of Column anchoring position, you can set the following properties.

Horizontal alignment Choose the frame's horizontal alignment from the Alignment pop-up menu. You can align the frame at the left, center, or right. In a double-sided document, you can also align the anchored frame closer to or farther from the binding edge.
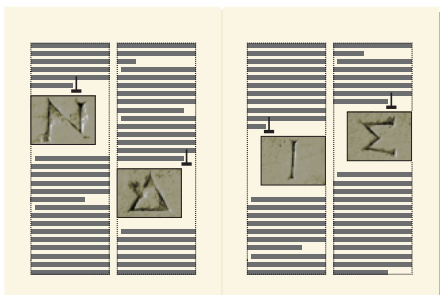
Farther from binding

Cropping To prevent a wide frame from extending beyond the edge of the column, use the Cropped option.

Cropped off and on

For information on how cropping works in a multicolumn layout, see "Anchored frames in multicolumn layouts" on page 347.

Floating Use the Floating option to let the frame float to the next column that can hold it if the frame and its anchor symbol won't fit in the same column.

Floating off and on

When Floating is off, both the frame and anchor symbol move to the first column that can hold them. White space remains at the bottom of the column. When Floating is on, the anchor symbol doesn't move, but the frame floats to the next column that can hold it. Text from the next column fills the space between the anchor symbol and the frame.

Anchored frames in multicolumn layouts

An anchored frame in a multicolumn text frame can straddle columns, and its position may be affected by straddle paragraphs.

In a straddle paragraph When a frame is anchored in a straddle paragraph, the frame straddles columns just as the paragraph does.

Wider than a column An uncropped anchored frame that extends into a second column of the body area straddles columns in the body area. A frame that extends into the side-head area straddles the side-head area as well.
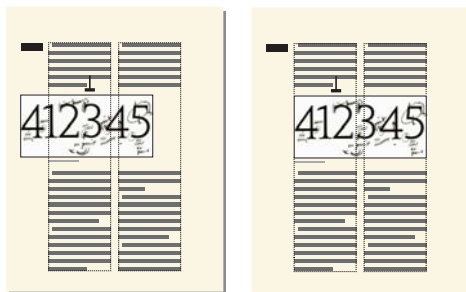
Straddling side-head area and all columns, and straddling only columns

A cropped anchored frame straddles columns only when it's anchored in a straddle paragraph.

At top or bottom of column When the anchor symbol for a top-of-column anchored frame appears below a straddle paragraph, the frame appears in the column just below the straddle paragraph rather than at the top of the column.
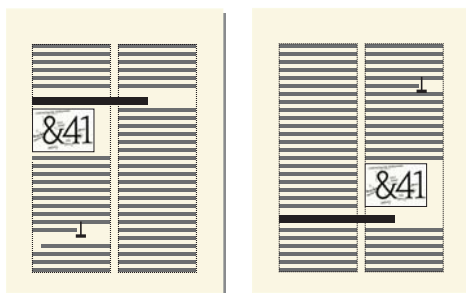
Anchored at top of column and at bottom

A bottom-of-column anchored frame is positioned similarly when the anchor symbol appears above a straddle paragraph.

You can force the anchored frame to appear at the top or bottom of the column (above or below a straddle paragraph) by making the frame straddle the columns. To do so, turn off Cropped in the Anchored Frame dialog box and resize the anchored frame until it extends into another column.

Anchored frames outside a column of text

To position an anchored frame outside a column of text, choose the Outside Column anchoring position in the Anchored Frame dialog box. For information on positioning an anchored frame so it always appears in the page margin, even in a multicolumn document, see "Anchored frames in the page margins" on page 349.

When you choose the Outside Column anchoring position, you can set the following properties.

Side of column You can position the anchored frame at the left or right side of the column, or along the side that's closer to or farther from the edge of the page.

Anchored at left and at right

For a double-sided document, you can also position the frame closer to or farther from the binding edge.
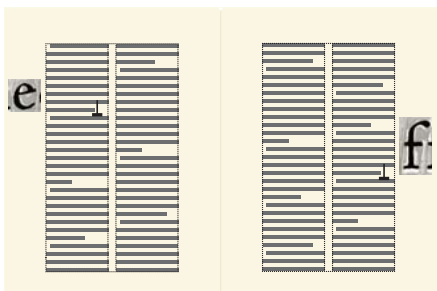
Farther from binding

Distance above baseline You can adjust the frame's position up and down relative to the baseline of text by dragging the frame or by specifying a value for the Distance above Baseline option in the Anchored Frame dialog box. A value of zero aligns the bottom of the frame with the baseline of the text. A positive number moves the frame up; a negative number moves it down.
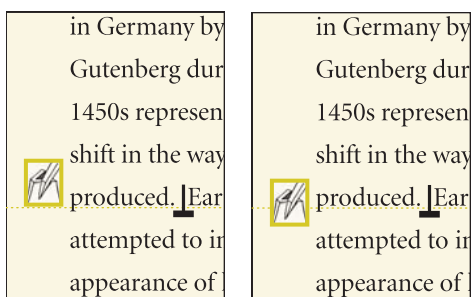
Zero distance and negative distance above baseline

You can't position the anchored frame above the top or below the bottom of the text frame. If the setting would place the anchored frame above or below the text frame, FrameMaker puts it as high or as low as possible. If you later edit the text so that the anchor symbol moves away from the top or bottom of the text frame, FrameMaker adjusts the anchored frame's position.

Distance from column You can adjust the frame's position left and right relative to the edge of the column by dragging the frame or by specifying a value for the Distance from Column option in the Anchored Frame dialog box. A value of zero aligns the edge of the frame with the edge of the column. A positive number moves the frame away from the column; a negative number moves it into the column.
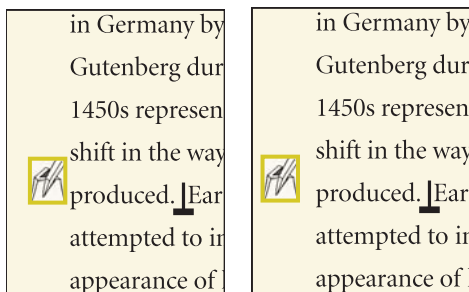
Zero distance and positive distance from column

The distance is always relative to the edge of the column, so the frame may appear between columns on a multi-column page. If you need to widen the gap between columns to make room for the frame, see "Changing the page margins and number of columns" on page 375 and "Changing margins and column layout on specific pages" on page 380. Or, if you're working in a structured document, see your developer to widen the gap between columns to make room for the frame.

Anchored frames in the page margins

To position an anchored frame so it always appears in the margin (even in a multicolumn layout), choose the Outside Text Frame anchoring position in the Anchored Frame dialog box. You can then specify the options described in the previous section. However, the distances you specify are from the edge of the text frame, which may differ from the edge of the text column on multicolumn pages.

Closer to page edge and farther from page edge

In a single-column layout, the Outside Text Frame option has the same effect as the Outside Column option.

Anchored frames run into paragraph text

To position an anchored frame in the top corner of a paragraph (with the paragraph text in that column running around the frame), choose the Run into Paragraph anchoring position in the Anchored Frame dialog box. For example, you can set a small graphic or a drop cap at the beginning of a paragraph.

When the anchored frame is taller than the paragraph, the text from subsequent paragraphs runs around the frame unless the paragraph that contains the anchor symbol is a straddle paragraph.
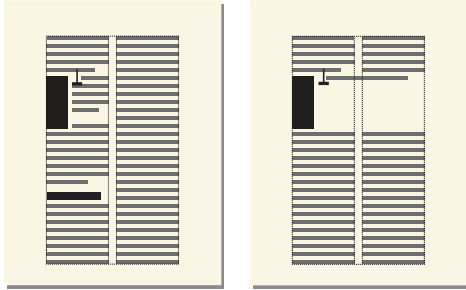
Frame spanning paragraphs and in a straddle paragraph

When you choose the Run into Paragraph anchoring position, you can set the following properties:

Alignment You can align the anchored frame on the left or right side of the paragraph. For a double-sided document, you can also choose Side Closer to Binding or Side Farther from Binding.

Closer to binding

The frame is aligned with the paragraph's left indent when it appears at the left side of the paragraph, and with the right indent when it appears at the right side. When the paragraph has a first-line indent, the anchored frame does not change the position of the indent.
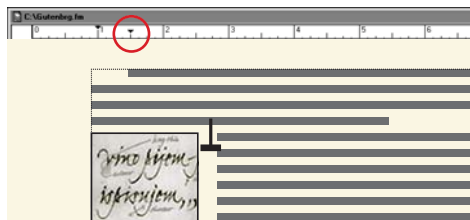
Graphic extending beyond first-line indent
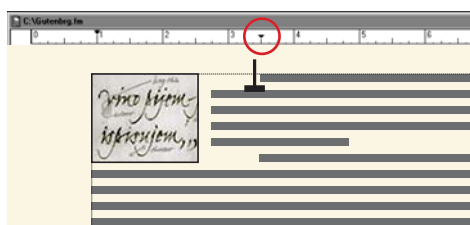
Larger first-line indent

When you want to preserve a first-line indent, make the first-line indent setting for the paragraph larger than the width of the anchored frame (see "Changing indents and alignment" on page 110).Or, if you're working with a structured document, see your developer about making the first-line indent setting for the paragraph larger than the width of the frame.

Gap You can specify the gap between the anchored frame and the paragraph text that runs around it.

Filling anchored frames

You can draw graphics in an anchored frame, drag or paste graphics from another part of the document, or import or paste graphics from another document or application. Use these methods to put graphics and text in unanchored graphic frames as well as in anchored frames.

You can position a graphic in an anchored frame and then use a text frame or text line inside the anchored frame for the figure title. But you might find it easier to position and number the title consistently if you put the figure in a single-cell table and then set up the table title as a figure title. For information, see "Adding titles to illustrations" on page 324.

An anchored frame's contents are clipped when they extend into or beyond the frame's border.
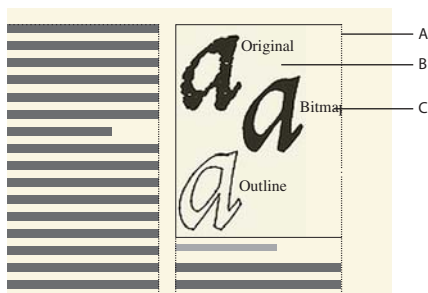
A. Frame border B. Cropped graphic C. Cropped callout

To select a graphic frame:

❖ Click the frame's border. If the border isn't visible, choose View > Borders.

To put graphics or text in a graphic frame:

❖ Do one of the following:

• To draw a graphic or add text, use one of the tools on the Tools palette. For details, see "Drawing objects" on page 309 and "Using text with graphics" on page 320.

Important: Be sure to start drawing the object inside the frame. Otherwise, the object will be on the page and not in the frame.

• To move a graphic into a frame, drag the graphic until the pointer is within the frame's borders. The object jumps into the frame when you drag across the frame's border.

• To paste a graphic into a frame from the Clipboard, select the frame and choose Edit > Paste.

• To import a graphic into a frame, select the frame and choose File > Import > File. You can also import a graphic in other ways, depending on the platform.

Note: If a graphic looks as though it's in the anchored frame, but it doesn't move with the frame as you edit the surrounding text, the graphic is probably in front of the frame rather than in the frame—perhaps because you pasted it on the page rather than in the frame. Drag the graphic completely away from the frame and then drag it back into the frame.

To prevent an anchored frame from clipping its contents:

❖ Do one of the following:

• If there's room outside the anchored frame, make the frame larger.

• If there's room inside the anchored frame, move the object away from the edge of the frame. For details, see "Moving objects" on page 327.

• If the contents are clipped only by the width of the border, use the Tools palette to make the anchored frame's border narrower or to change the pen pattern to None (see "Applying and changing drawing properties" on page 315).

• If a frame and its contents are clipped by the edge of a column of text, choose Special > Anchored Frame, turn off Cropped, and then click Edit Frame.

Editing anchored frames

You can change the size of an anchored frame, its anchoring position, and the properties you set when you created the frame. When working with a structured document, these changes do not affect the structure of the document and are independent of the element's format rules.

You can also manipulate anchored frames as you do other objects. For example, you can change a frame's drawing properties (such as pen width), and you can duplicate, delete, move, or resize it.

To change a frame's anchoring position and related properties:

1 Select the frame and choose Special > Anchored Frame.

2 Change the settings and click Edit Frame.

To resize an anchored frame:

❖ Do one of the following:

- To resize the frame quickly but approximately, select the frame and drag one of its handles. The size appears in the status bar as you drag.

- To resize the frame precisely, select the frame and specify its size with the Graphics > Object Properties, Graphics > Scale, or Special > Anchored Frame command.

- To resize an anchored frame to fit the object in the frame, press Esc M P.

- To resize a graphic within an anchored frame, see "About frames" on page 319.

To change the drawing properties of an anchored frame:

❖ Select the frame and use the Tools palette to specify the properties you want. For example, you can change a frame's pen pattern to make the frame's border printable or change its fill pattern to shade the interior of the frame.

To copy or move an anchored frame:

1 Select the frame and choose Edit > Copy or Edit > Cut. You don't need to select the anchor symbol.

2 Click in text where you want to insert the frame and choose Edit > Paste. The anchor symbol appears at the insertion point when text symbols are visible. When working with a structured document, look at the Element Catalog before pasting to verify that the location is valid for graphic elements.

In some cases (for example, when a frame is positioned at the top or bottom of a column), the frame does not change position even though the anchor symbol moves. If you find it difficult to reposition a frame anchored to the outside of a rotated text frame or column, unrotate the text frame, position the anchored frame, and then rerotate the text frame. See "Rotating objects" on page 334.

If you're working with a structured document, you can also drag a frame's bubble in the Structure View to move the frame, or Alt-drag (Windows), or Control-middle-drag (UNIX) the bubble to copy the frame. For details, see "Copying elements" on page 43.

To delete an anchored frame:

❖ Select the frame and press Delete.

To move a frame's anchor symbol:

1 Select the frame. You don't need to select the anchor symbol.

2 Choose Edit > Cut, click in text where you want to insert the anchor symbol, and choose Edit > Paste. The anchor symbol appears at the insertion point when text symbols are visible.

In some cases—for example, when the frame is positioned at the top or bottom of a column of text—the frame may not change position even though the anchor symbol moves.

To move an anchored frame without moving its anchor symbol:

❖ Do one of the following:

- For quick but approximate repositioning, drag the frame.

- For more precise repositioning, move the frame in small increments with the arrow keys (see "Moving objects" on page 327).

- For greatest precision, specify the location of the frame with the Special > Anchored Frame command.

Some anchored frames cannot be moved without moving their anchor symbols. However, you can move a frame vertically when it's anchored at the insertion point, outside the column of text, or outside the text frame. When a frame is anchored outside the column or text frame, you can't move it above the top or below the bottom of the text frame.

Note: When you move a frame into a column, the text in the column doesn't adjust to accommodate the frame. Use the Run into Paragraph anchoring position to move the frame completely inside the column and to run the text around the frame automatically. You can also change the paragraph indents to make room for the frame.

Preparing anchored frames for tagged PDF

If you plan to export your document to a tagged PDF or to XML, you can include object attribute information for your anchored frames.

Alt text is different than graphics or standard text. Alt text is typically used for describing an image so that screen readers can read it aloud. Actual text is for reading aloud the actual text, as in the case of a drop cap. For example, if the author is using a drop cap for the letter A in the word "Adobe" but still wants the screen readers to read the word as "Adobe" and not as "dobe," this can be done by filling in actual text. The attribute will be saved to alt text and actual text in tagged PDF and XML.

When you provide alternate text attribute on an anchored frame, the corresponding figure elements in PDF and graphic elements in XML get an "alt text" attribute. Actual Text attribute is processed only for tagged PDF. XML export ignores this attribute.

Note: Object attributes support the Unicode text encoding standard.

To add object attributes:

1 Select the frame and choose Graphics > Object Properties.

2 Click Object Attributes.

3 In the Text Attributes section, add your alt text and actual text, and then click Set.

Note: Screen readers may ignore actual text when alt text is present.

Anchored frames in structured documents

In a structured document, a graphic element provides an *anchored frame* for holding graphic objects. The frame is anchored to a specific location in text. As you edit the text, the frame and its contents move in the document along with the text.

How frames are anchored in structured documents

When inserting a graphic element, you specify where you want to anchor the element's frame. For example, you might anchor the frame in a Para element (and the graphic will be a child element to the Para), or you might anchor it in a Section element (as a sibling to Para and other elements in the Section). It depends on how the elements are defined for your document.

In the document window, an anchor symbol ⊥ appears at the anchor location in text when View > Text Symbols is turned on. The frame can appear in a variety of positions on the page—including in-line with text, next to or below a paragraph, or in a page margin. You specify an anchoring position relative to the anchor symbol.
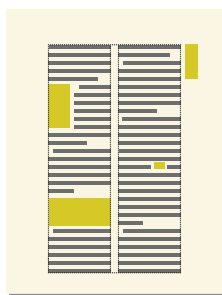
Several positions for anchored frames

A graphic element appears in the document's structure where it is anchored to text, regardless of the frame's position on the page. In the Structure View, the element is represented by a square-cornered bubble with the snippet <GRAPHIC>.
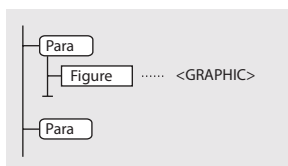
Graphic element

Inserting anchored frame elements in structured documents

You use an anchored frame element to insert an anchored frame in a structured flow. You specify the location of the frame relative to the insertion point, the size of the frame, and several formatting properties. The formatting properties you set are independent of the element's format rules, not overrides to them.

For information on inserting an anchored frame that's not an element (which you can do only in an unstructured flow), see "Creating anchored frames" on page 343.

To insert an anchored frame element:

1 Click where you want to anchor the frame.

2 Select an anchored frame element in the Element Catalog and click Insert.

You can also use Special > Anchored Frame to insert an element. If more than one frame element is available, choose the one you want from the Element Tag pop-up menu in the Anchored Frame dialog box.

3 Choose the frame's anchoring position and specify its size and formatting properties. The properties that appear in the dialog box depend on the anchoring position you choose. See "In-line anchored frames" on page 344 for details.

4 Click New Frame. The anchored frame appears in the document window, with an anchor symbol ⊥ at the insertion point when View > Text Symbols is turned on. A bubble with the text snippet <GRAPHIC> appears in the Structure View.

If no anchored frame element is available at the location you want, you might use an invalid element. After inserting the element, talk to your developer about making the element valid at this location.

To use an invalid anchored frame element:

❖ Do one of the following:

- To use an element that is valid in another part of the document, either insert the element in a valid location and then move it, or use the All Elements setting (see "Changing the scope of elements available in a structured document" on page 18) to make the element available everywhere, and then insert the element where you want it.

- To insert an invalid anchored frame element with a default tag, choose Special > Anchored Frame, and choose GRAPHIC from the Element Tag pop-up menu. (This option appears in the menu if no defined frame elements are available.)

Filling anchored frames in structured documents

In a structured document, you can draw graphics in an anchored frame, drag or paste graphics from another part of the document, or import or paste graphics from another document or application. Although the graphic element is part of the document's structure, the contents you put in the frame are not.

You can even use an anchored frame to hold text, such as text in a sidebar. To do this, draw a text frame in the anchored frame. Keep in mind, though, that the text is not part of the document's structure.

A frame's contents are generally preserved when you export to XML or SGML. FrameMaker writes the contents to a separate file and adds an entity reference to it from your XML or SGML file.

Important: To prepare for export to XML or SGML, put only one graphic in each frame for the best results. If your graphics are bitmaps, do not use a display bit depth of 1 bit or 24 bits; reset your display to 8 bits. Ask your application developer for other advice to be sure your frames' contents will be fully preserved.

After filling a frame with graphics, you can edit the graphics in many ways—for example, by changing line widths, applying fill colors, and aligning, stacking, or grouping several objects.

For instructions on filling an anchored frame, see "Filling anchored frames" on page 351.

Chapter 10: Color

About Color

Color adds excitement to any document. With Adobe FrameMaker, it's easy to apply color to text and objects. Once color is in place, you can print to a color printer or create color separations for a service bureau or commercial printer. You can also print to a PostScript file and deliver the file to a commercial printer for postprocessing in another application.

You can define your own colors and tints, using any of several color models or libraries.

Color models

When you use a *color model* to define colors, you build the color you want by manually adjusting its components, such as the amount of pure red or the amount of saturation.

You can choose from three color models: CMYK, RGB, and HLS.

CMYK Use the CMYK model when you plan to create color separations for four-color process printing. Colors are created by combining cyan, magenta, yellow, and black (CMYK) inks. When you color separate your document, each color component is printed on a separate plate, in a different concentration, depending on how much is needed to create the desired color. For information, see "Separating colors" on page 366.

RGB Use the RGB model to create colors that will be seen on a monitor (for example, for online documentation). Colors are created by combining red, green, and blue (RGB) light.

HLS Use the HLS model if you are familiar with color wheels. This model is most like the one artists use to mix colors and is often used in software color pickers. Colors are created by adjusting hue, lightness, and saturation (HLS). *Hue* controls the amount of red, green, yellow, blue, and so on. *Lightness* controls the lightness or darkness of a color. *Saturation* controls the amount of gray in the color.

Planning to use color

As you plan to use color, consider these tips:

Identify how the color will be printed or viewed Knowing and understanding the final output of your color document can greatly affect your color decisions:

- For online output, use the RGB or HLS color models. Your guide to correct color is how your documents look on your monitor.

- For desktop printing, use the CMYK model to define your colors and test them on the printer you'll be using. Your guide to correct color is how your documents look on your printer.

- For commercial printing, use colors from a library supported by your commercial printer. Don't rely on the on-screen versions of library colors; use a swatch book. (A computer monitor can't show you exactly how a color will look when printed.) Many sections in this chapter apply only to commercial printing, such as the sections on spot colors, overprinting, trapping, and color separating.

Learn the limits of the medium Become familiar with the range of colors available on your monitor or printer. For example, a system set to display 256 colors cannot display tints below 16% accurately in FrameMaker.

Learn the limits of your system (Windows only) FrameMaker for Windows converts all color values to RGB when printing or saving as Adobe PDF. This is because FrameMaker uses the Windows Graphical Device Interface (GDI) commands to communicate with printer drivers. GDI only accepts RGB color values.

However, FrameMaker retains whatever color values are specified within Encapsulated PostScript (EPS) graphic objects, including CMYK colors, RGB colors, grayscale, spot colors, device-independent colors (such as CIE L*a*b color). The graphical information within an EPS file is passed directly into the output PostScript stream, bypassing any Windows GDI processing. EPS graphic objects can be created from text, vector graphics, or images of any type supported by Adobe PostScript. Because of this capability, EPS graphics can be saved or exported from Adobe Acrobat, Adobe Illustrator˚, Adobe Photoshop˚, Adobe Streamline˜, and Adobe InDesign˚, as well as many other third-party application programs.

Note that FrameMaker also creates separations in equivalent RGB values. EPS graphics, however, are separated according to the color values specified within the EPS graphic itself.

Talk to your commercial printer Find out whether your commercial printer has any special requirements or suggestions for efficient color production.

Consult a professional designer The advice of a designer can make the difference between good color and great color results.

Use formats to apply color Using paragraph and character formats to assign colors to text ensures that similar passages are the same color. It also makes it easier to change colors throughout your documents.

Using color libraries

When you use a color matching system—a *color library*—you choose from colors defined by a color vendor. The advantage of using a "premixed" library color is that you're assured that commercial printers can precisely match the formula represented by the vendor's swatch book. For this reason, don't change the definition of a color from a library if you plan on printing commercially.

Every color from a library is defined as either a spot color or a process color. A *spot color* is printed on a printing press with premixed inks by using a single printing plate. A *process color* is printed on a press by overlapping dots of cyan, magenta, yellow, and black (CMYK) on separate plates.

Before choosing a color from a color library, ask your commercial printer for a list of supported libraries. For best results, choose colors from a swatch book, rather than relying on the on-screen representation of the color.

FrameMaker includes the following libraries:

Crayon Adobe developed the Crayon library to provide access to common RGB colors using everyday names in alphabetical order. Do not use Crayon colors as spot colors.

DIC The DIC Color Guide provides spot colors. It is used mostly in Japan.

FOCOLTONE The FOCOLTONE˚ Colour System provides 860 process (CMYK) colors.

Greys The Greys library, developed by Adobe, provides both process and spot shades of gray in 1% increments.

MUNSELL The Munsell System provides colors defined on the RGB model.

Online The Online color library provides 216 "Web-safe" colors that have a consistent appearance on all platforms when viewed with a Web browser.

PANTONE Most of the libraries in the PANTONE® MATCHING SYSTEM are for spot colors. Only the two PANTONE process libraries are for selecting process colors. Separate PANTONE libraries are available for colors that will be printed on coated and uncoated paper. The PANTONE ProSim Euro library uses color definitions that match the printing systems prevalent in Europe.

TOYO The TOYO Color Finder provides over 1000 colors based on the most common printing inks in Japan.

TRUMATCH The TRUMATCH® 4-Color Selector provides over 2000 process colors that cover the CMYK visible color spectrum in even steps.

To get information on a color library:
❖ Choose View > Color > Definitions, choose a library from the Color Libraries pop-up menu, and then click About.

To choose a color using a color library:
❖ Follow the steps in "Defining and modifying colors and tints" on page 361.

Important: When you choose a color from a library, its predefined name appears as its Ink Name in the dialog box. If you change the definition of the library color, the Ink Name disappears, indicating that the color no longer matches the formula defined by the vendor. Changing the definition of a library color is not ordinarily recommended. To restore the original definition, choose the color again from the library and click Change.

To add a color library for use in FrameMaker:
1 Place the library file into the following folder:

• (Windows) The Fminit\Color folder

• (UNIX) $FMHOME/fminit/color

2 Restart FrameMaker.

You can add any library file formatted in the ASCII Color Format (.acf), version 2.1 or earlier, or in the Binary Color Format (.bcf), version 2.0. You can't use FrameMaker to save a .bcf library file.

Applying colors and tints

The method you use to apply a color or a lightened version of a color (a *tint*) depends on the current selection. Any entry in a Color pop-up menu can be applied to FrameMaker text or objects. FrameMaker supplies a set of sixteen standard colors that you can add to (see "Defining and modifying colors and tints" on page 361, for details).

You can apply two types of tints:

• *Color-level tints* are tints you define and name by using View > Color > Definitions (see "Defining and modifying colors and tints" on page 361). These tints appear in the Color pop-up menus in dialog boxes and designers.

• *Object-level tints* are tints you apply to an object whereby the object's original color is lightened by a specified percentage. You apply an object-level tint by using the Tint pop-up menus on the Tools palette or in an object's Object Properties dialog box.

Note: You can't colorize TIFFs in Windows or UNIX.

To apply a color or tint to text or an object:

❖ Use a paragraph format, character format, or the Tint and Color pop-up menus to assign a color or a tint.

To apply color or tint to	Use
Paragraphs	A Paragraph Catalog format, or the Color pop-up menu on the Tools palette or in the Paragraph Designer
A selected word or phrase in a paragraph	A Character Catalog format, or the Color pop-up menu on the Tools palette or in the Character Designer
A text line	A Character Catalog format, or the Color pop-up menu on the Tools palette or in the Character Designer
Objects or imported graphics	The Color pop-up menu or the Tint pop-up menu on the Tools palette
A text frame	The Fill pop-up menu on the Tools palette to change the frame's fill pattern from None, and then the Color pop-up menu or the Tint pop-up menu to assign a color
Text in a table	A Paragraph Catalog or Character Catalog format, or the Color pop-up menu on the Tools palette or in a designer
Cells in a table	The Color pop-up menu in the Custom Ruling and Shading dialog box, or in the Table Designer
Change bars	The Color pop-up menu in the Change Bar Properties dialog box
Conditional text	The Color pop-up menu and the New Color button in the Edit Condition Tag dialog box
Equations or math elements in an equation	A Character Catalog format, or the Color pop-up menu on the Tools palette, or in the Character Designer

To apply a tint to an object by using a fill pattern:

1 Select the object you want to tint.

2 Choose one of the first eight fill patterns from the Fill pop-up menu on the Tools palette. The fill patterns apply the following percentages to the object's current color.

Fill Pattern	Tint Percentage
	100%
	90%
	70%
	50%
	30%
	10%

Fill Pattern	Tint Percentage
	3%
	0% (color of paper)

To apply the same color to all drawn objects and text:

❖ Do one of the following:

• (Windows) Hold down Shift+Alt and choose a color from the Color pop-up menu on the Tools palette.

• (UNIX) Hold down Shift+Control and choose a color from the Color pop-up menu on the Tools palette.

Defining and modifying colors and tints

You create or modify colors and tints (percentages of a specified color) by adjusting the color components in the model you're using or by choosing a predefined ink from a color library. New colors and tints appear in all Color pop-up menus and scroll lists.

You can also use the New Color button in the Add Condition Tag and Edit Condition Tag dialog boxes to select unique colors for condition tags, which lets you distinguish one tag from another.

You can't change the sixteen standard colors, except for their overprint and Print As properties. However, you can define your own colors using lowercase versions of these names (black, blue, and so on). Also, the Crayon library has its own versions of these colors, which you can use or redefine under another name.

To define or modify a color or tint:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Choose View > Color > Definitions.

3 Do one of the following:

• To define a new color, enter a new name in the Name text box.

• To modify an existing color (or base color), choose its name from the pop-up menu to the right of the Name text box (or type its name until the color definition appears).

4 Specify how to print the color by choosing one of the following options from the Print As pop-up menu:

• To define a tint, choose Tint. A tint is always displayed and printed in the same manner and on the same plate as its base color. The base color also determines the color components.

• To define a spot color, choose Spot.

• To define a color printed with CMYK inks, choose Process.

• To define a color that is not printed, choose Don't Print.

5 To change the color model, choose from the Model pop-up menu. For details, see "Color models" on page 357 and "Planning to use color" on page 357. (The color model of the tint is determined by the base color.)

6 Adjust the color components by dragging the sliders or entering values. If you're defining a tint, choose a color from the Base Color pop-up menu and set the percentage. To reset any changes you've made, click the Current color box.

Note: Your monitor may not be able to accurately display the color or tint that you define. For example, a tint value of less than 10% of the base color will probably not be displayed accurately on-screen (or on some printers). Also, UNIX systems that use 8-bit color may have problems displaying colors that are not in their color maps (For information, see the online manual Customizing FrameMaker on the Adobe website: www.adobe.com/devnet/framemaker/pdfs/Customizing_Frame_Products.pdf).

7 To make this color print on top of other colors when printing separations, choose Overprint from the Overprint pop-up menu; see "Knocking out and overprinting" on page 364.

8 To create a new color, click Add (or click the New color box); to modify the current color, click Change.

9 Define or modify additional colors as needed, and then click Done.

To define a color from a color library:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Choose View > Color > Definitions.

3 Choose a library from the Color Libraries pop-up menu. For information, see "Using color libraries" on page 358.

4 Choose a color from the library of predefined colors. If you know the name, you can quickly scroll to it by starting to type its name.

5 Click Done. The color you choose appears as the Ink Name in the Color Definitions dialog box.

Note: Colors from color libraries often have a preferred color model and type. When you choose a color, the color model or type may change automatically. Under normal conditions, you should not change these settings. Similarly, you won't ordinarily want to change the color definitions of a library color. If you do, the Ink Name disappears and the color no longer matches the formula defined by the vendor.

6 To make this color print on top of other colors when printing separations, choose Overprint from the Overprint pop-up menu; see "Knocking out and overprinting" on page 364.

7 Click Add.

8 Define additional colors as needed, and then click Done.

If you want to use the operating system's color picker to define a color, choose Common Color Picker (Windows). You use these color pickers just as you do in other applications.

To delete a color or tint:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Choose View > Color > Definitions.

3 Choose a color or tint from the Name pop-up menu. (You can't delete the basic sixteen colors.)

4 Click Delete. If the color is in use, an alert message asks whether you want to change items that use this color to black. If you delete the base color of a tint, the tint becomes a percentage of black.

5 Repeat the process to delete more colors. When you're finished, click Done.

Note: Color definition names support the Unicode text encoding standard.

Viewing colors

A color view specifies which colors are visible. For example, if your document uses black and a spot color, one view could display both colors and another view could display only the spot color.
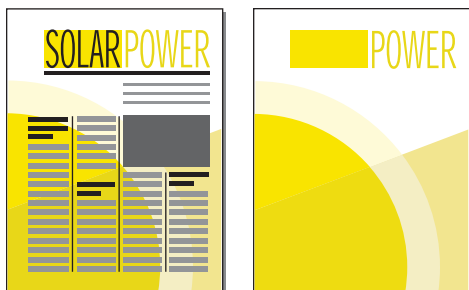
Both colors visible and only one color visible

For each view you set up, specify which colors you want to display, which to display as cutouts (shown as white when overlapping different colored objects), and which not to display at all.

To set up a view:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Choose View > Color > Views.

3 Click a view number and move the color names to the appropriate scroll lists. Tints do not appear in this dialog box; they appear along with the color they were based on.

To move a color, select it and click an arrow, or double-click it. To move all colors, select a color and Shift-click an arrow. To reset any changes you've made, click Get Default.

The name of the color may be clipped in the scroll boxes, but the full name of the selected color appears below the scroll boxes.

Leave View 1 unmodified, with all colors (except white) in the Normal scroll list. When you draw an object in a color that is invisible in the current view, FrameMaker automatically switches to View 1.

4 Repeat step 3 for each view you want to set up, and then click Set. The currently selected view is displayed.

To use a color view:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Do one of the following:

• Choose View > Color > Views, select the view you want to display, and click Set.

• Press Esc v *number,* where *number* is the number of the view (1 through 6) you want to display.

Printing color documents

You can print each page of a document as a *composite*. A composite page contains all the colors that are used on the page. You print a composite color document when printing to a desktop color printer.

Alternatively, you can print each page of a document as a series of color *separations*—where color images are split into several pages, each of which contains one component color. A commercial printer uses the separations to make printing plates, one for each color.

You can also print mirror and negative images, which may be required when commercially printing to film.

If color objects overlap in your document, you can *overprint,* which prints an object (most often a dark one) on top of another color object, or you can create a *knockout,* in which the top color is printed but colors behind it are not. You can also use trapping to ensure that there is no gap between objects.

To print composite pages:

1 Choose File > Print.

2 Make sure Print Separations is unselected.

3 Set the remaining print options as necessary and click Print. For information on the other options, see "Print options" on page 28.

Knocking out and overprinting

When one color object overlaps another, FrameMaker normally knocks out the overlapped portion so that it does not print in a color separation (it appears as the color of the paper). If you're producing color separations and printing commercially, registration errors may occur, and you may see small gaps between colors.
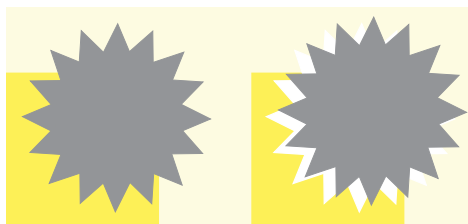
Accurate and inaccurate registration

To avoid gaps between colors, you can apply overprinting to the top object so that the overlapped portion is not knocked out.
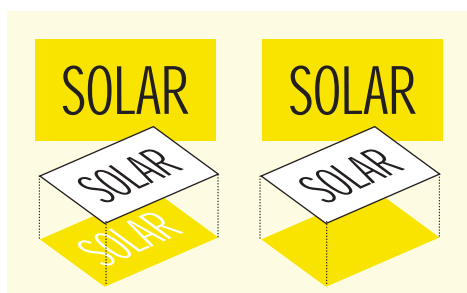
Knocked out and overprinted
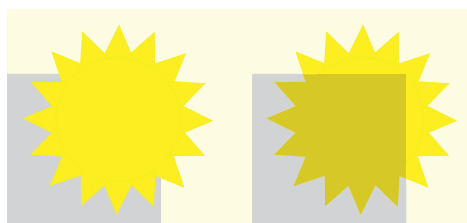
You can also use overprinting to combine two colors for special effects.

To knock out or overprint all objects of a particular color:

1 Define a color. (See "Defining and modifying colors and tints" on page 361.)

2 To make this color print on top of other colors when printing separations, do one of the following:

• To have any object that uses this color overprint, choose Overprint.

• To have any object that uses this color knock out, choose Knock Out.

To apply knocking out or overprinting to objects:

1 Select the object and open the Tools palette or choose Graphics > Object Properties.

2 Choose one of the following from the Overprint pop-up menu:

• To have this object overprint objects beneath it, choose Overprint.

• To have this object knock out objects beneath it, choose Knock Out from.

• To have this object use the overprint setting defined for the color, choose From Color. This is the recommended setting.

Overprinting images created in other applications

If you want images created in other applications to overprint other objects when printed from FrameMaker, note the following special cases:

• CMYK TIFF files overprint objects on spot color plates under all of the following conditions: if printed as separations, if their Overprint attribute is set to True, and if their Fill property is set to None.

• EPS files do not overprint other objects when printed as separations.

Trapping

In commercial printing, overprinting to compensate for registration errors may produce unacceptable color mixing. If this happens, the object may need to be *trapped* instead of overprinted. A trap is a line bordering the object on top that is just wide enough to fill the color gap and to overprint the other object along the border of its cutout.
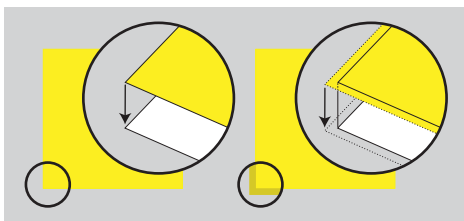
Without trapping and with trapping

Having a commercial printer trap your documents for you saves you the effort of hand-trapping each object individually. Also, manual trapping may have to be undone if you later decide to have a commercial printer do the trapping.

To trap an object:

1 Create a border for the object on top by duplicating the object and setting the duplicate's fill pattern to None. Be sure the duplicated object is exactly over the original.

2 Set the line width of the border as appropriate for the size and contour of the object, the type of printing paper, and the accuracy of the printing press. Consult your commercial printer for information on suitable line widths for trapping.

Also, because the stroke of a line is always centered on an object's edge, you will have to double the line width specification that the commercial printer gives you.

3 Select the border and choose Overprint from the Tools palette.

Separating colors

When you print color separations within FrameMaker, you choose which colors you want to print as spot colors, which to print as process colors, and which not to print at all. Text and graphic objects are printed in black for each separation, with shades of gray indicating the percentages of color saturation. The color name of each separation is printed outside of the registration marks (if registration marks are on and if there's room on the page).

Note: For best results, print CMYK colors as process rather than spot-color inks. You can check plate assignments in the Separations Setup dialog box (File > Print and click Separations Setup).
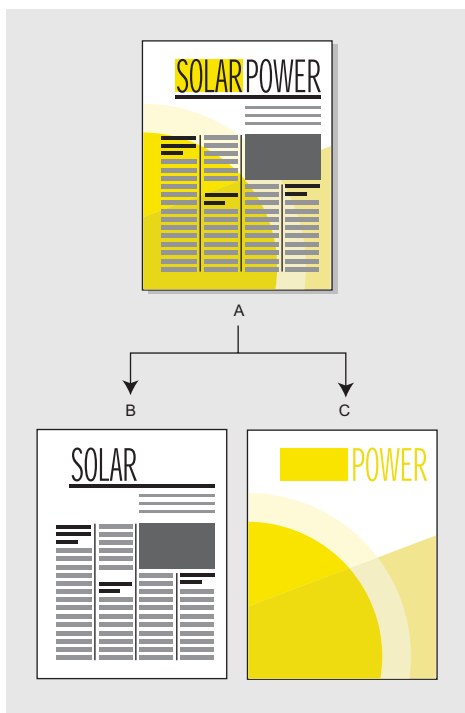
A. Composite image **B.** Black separation **C.** Spot color separation

Imported color graphics are separated if they are in CMYK, TIFF, DCS, or EPS line art format. Also, bitmap images in EPS graphics can be separated as long as they can also be separated in Adobe Illustrator.

You can also separate a document by printing to a single PostScript file and then having a commercial printer separate the file for you. For details, see "Postprocessing color documents" on page 369.

(Windows) Make sure spot colors with identical definitions have the same names. Spot colors with the same definition but with different names appear on different plates when you print color separations. (For UNIX, spot colors with the same definition and different names print on the same plate.)

To create color separations from within FrameMaker:

1 Make sure you have not set colors to print as black and white instead of shades of gray, as described in "Print options" on page 28.

2 Choose File > Print.

3 Choose an option from the Registration Marks pop-up menu. You can choose between Western and Tombo (Japanese) crop marks.

4 To print all pages for one plate and then all pages for the next plate, deselect Collate. Select Collate to print all plates for one page before printing all plates for the next page, and so on.

5 Click Separations Setup. If necessary, move the color names to the appropriate scroll lists and click Set. To move a color, select it and click an arrow, or double-click the color. To move all colors, select a color in the list and Shift-click an arrow.

Tints do not appear in this dialog box; they print on the same plate as the base color.

If your printer can't print process color separations, the dialog box contains only the Print As Spot and Don't Print scroll lists. The scroll list where each color appears by default depends on how the color was defined on its Print As setting. For information, see "Defining and modifying colors and tints" on page 361.

6 Specify halftone screen settings. (See "Setting up halftone screens" on page 368.)

7 In the Print dialog box, make sure Print Separations is selected, set the remaining print options as necessary, and then click Print.

For information on specifying emulsion and image exposure, see "Printing negative and mirror images" on page 368.

Minimizing the number of color separations

Because commercial color printing can be costly, you should consider how to print your documents with the fewest number of separations. For example, if your commercial printer uses a six-stage press, you could print four-color process separations and two spot colors. If your printer uses a four-stage press, you could use four-color process separations to simulate the spot colors.

If a document contains two differently named colors with the same color values, FrameMaker prints two identical separations, one for each color name, and both colors will print on each separation. To avoid this, name colors consistently across documents and applications. If a document contains inconsistently named colors, print duplicate separations and then manually remove one of the duplicates.

You can reduce the cost of printing color separations by not printing blank sheets. Select Skip Blank Pages in the Print dialog box (Windows), or Skip Blank Separation Pages in the Set Print Separations dialog box (UNIX).

Setting up halftone screens

Process color separations are printed using grids of black dots for each color—the larger the dots, the more color is printed. The halftone screen settings control how close together the dots appear, the orientation of the grid (the screen angle), and the dot shape. For information, consult your printer documentation and your commercial printer.

To change halftone screen settings:

❖ Do one of the following:

• (Windows) Choose File > Print, click Separations Setup, and then click Halftone Screens. Adjust the settings as needed and click Set.

• (UNIX) Edit the beginning of the ps_prolog file, located in $FMHOME/fminit. This file contains full instructions for changing print settings. Changes to the file take effect immediately. To make changes without affecting other users, save your changes to ~/fminit/ps_prolog.

Printing negative and mirror images

If your commercial printer requires you to print files to film, you may be instructed to print negative images in which all text and objects are inverted. Or you may need to print flipped images with the emulsion side down, which mirror the pages' normal appearance. *Emulsion* is the photosensitive substance on the film surface.

Note: The settings may differ depending on the printer driver you're using, and they may not be available with non-PostScript printer drivers.

To print negative and mirror images:

❖ Do one of the following:

• (Windows) Choose File > Print Setup. Click Properties to access the printer driver options. Locate and set the options that control negative and mirror images.

• (UNIX) Follow the steps for printing color separations in "Separating colors" on page 366, but for step 5 choose Plate Imaging settings before clicking Set in the Set Print Separations dialog box. (Clicking Emulsion Down creates a mirror image.)

Postprocessing color documents

You can have a document color separated or have all objects in a document or book trapped by printing to a PostScript file, and then having a commercial printer process the file for you. Creating a PostScript file in this way embeds instructions in the file. These instructions conform to the Adobe Document Structuring Convention (DSC). DSC enhances the performance of postprocessing products that perform trapping and imposition. DSC also lets you take full advantage of products that support Open Prepress Interface (OPI) version 1.3. OPI reduces the hardware overhead for working with high-resolution color images.

Having a commercial printer trap your documents for you saves you the effort of hand-trapping each object individually.

For information on preparing PostScript files for postprocessing tasks, see "Creating PostScript files" on page 30.

Note: Before beginning, ask your commercial printer for any special instructions for producing PostScript files.

To use OPI with high-resolution images:

1 Ask your service bureau or commercial printer to make high-quality scans of your artwork, keep the high-resolution images, and give you OPI-ready low-resolution EPS or TIFF versions of the images to work with.

2 Import (by reference or by copying) the low-resolution images into your document (see "Using the Import command to import graphics" on page 501).

3 Create a print file, or a series of print files for a book. (See "Creating PostScript files" on page 30.)

OPI-enhanced PostScript files contain information that the commercial printer's software uses to match the placeholder images with the high-resolution ones at print time.

Printing to typesetters (Windows)

Here are some tips for printing to Linotronic typesetters in Windows:

• Some Linotronic typesetters automatically put registration marks on the page. Check with your service bureau to see if you need to use the Registration Marks setting when you print.

• Not all Linotronic models support thumbnails. Test various thumbnail settings to find the optimum setting. Some Linotronic models will print 1 x 2 thumbnails correctly, but not 2 x 2 thumbnails.

• Some Linotronic drivers fail to let you enter a custom paper size even after you have chosen User Defined Size in the Paper Size pop-up menu. To enter a custom paper size, right-click the Linotronic driver and choose Properties. Click the Paper tab, and then select the custom paper size icon from the scrolling list of icons.

Chapter 11: Page layout and templates

About page layout

When you use templates designed for the types of documents you create, the page layout is already set up for you in the templates. You may occasionally need to assign a custom master page to a body page (for example, for a first page), but you usually won't need to make the page layout changes discussed here.

When you design a template, you'll probably require several types of page layout. For example, you might create special layouts for the first page of a chapter, a rotated page, or a page with a different number of columns. You might also create layouts for documents that contain multiple text flows.

FrameMaker documents contain three types of pages that help you set up your page layout:

• Master pages specify the page layout and the background text for document pages (for example, page headers and footers).

• Body pages show the background text and graphics from the corresponding master page and contain a document's content.

• Reference pages hold boilerplate graphics that you can use throughout a document.
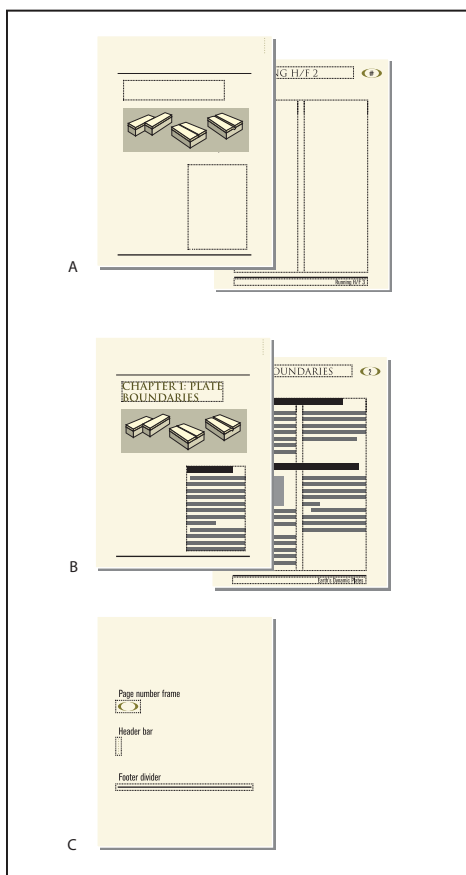
A. *Master pages: first and right*
B. *Body pages: first chapter page and right page*
C. *Reference page*

About master pages

FrameMaker uses *master pages* to keep track of a document's page layout. A double-sided document contains at least two master pages, one for left pages and one for right pages. A single-sided document uses the right master page only. Documents can also contain custom master pages, which you can use for special types of pages. You can also create layouts directly on *body pages* for one-time-only use.

The basic layout of a document includes its page size and margins, the number of columns on each page, whether the document is single-sided or double-sided, and how pages are numbered. If your document's layout is symmetrical (that is, if facing pages have matching top, bottom, inside, and outside margins), and if it uses no master pages other than the standard left and right pages that FrameMaker provides, you can change the basic layout without displaying the master pages.

If your page layout is more complex, or if you need to create other design components such as page headers and footers, you must work with the components directly on the master pages. You can draw or import graphics—such as lines, boxes, or company logos—anywhere on a master page, as well as type text on them. Graphics and text appear on the corresponding body pages exactly as they appear on the master page, as part of the body page's background.
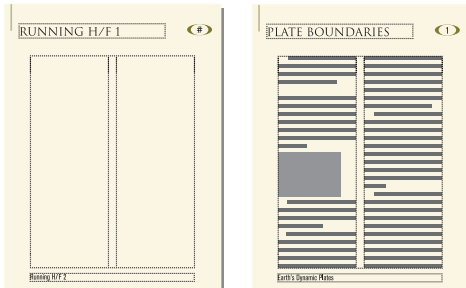
Master page and body page

Master pages can contain the following types of text frames:

• A *template text frame* contains a tagged text flow—a flow with a name. When you add a body page, the template text frame is copied to the new body page. You then type the document's text in this text frame on the body page. You can type text in a template text frame on a master page, but the text won't appear on body pages.

• A *background text frame* contains an untagged text flow—a flow with no name. Its contents appear on corresponding body pages, but you can edit them only on the master pages. Background text frames are typically used for page headers and footers.
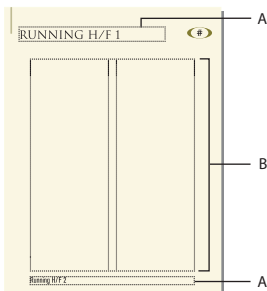
Master page
A. Untagged background text frame
B. Template text frame

When you add text and illustrations to your document on body pages, FrameMaker adds body pages as necessary and automatically uses the page layout from the left or right master page.
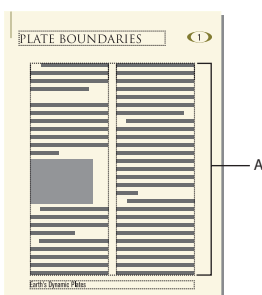
A. On body pages, you type in a text frame copied from the template text frame.

About text flows and flow tags

A *text flow* is a series of connected text frames through which the text flows in a document. Most documents have a single text flow, from the first page to the last, in which FrameMaker handles the text frame connections automatically. You make the text frame connections yourself only for documents in which you need to weave several text flows together—for example, with a newsletter in which you need to continue a front-page article on the back page, skipping over other articles on the intervening pages (see "About multiflow documents" on page 390).

The current text frame's flow tag appears in the Tag area of the status bar. In new, blank documents, the tag for the text flow is A.

Flow: A ¶: Body   1 of 1
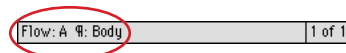
Tag area of status bar

Changing the basic page layout of a document

You can make changes to a document's basic page layout—its page size, column layout, and whether it is single-sided or double-sided—directly from a body page. When you make one of these changes, FrameMaker automatically updates both the left and right master pages, and updates the layout of any body pages that use those master pages. If any of these body pages contain layout overrides (see "About layout overrides" on page 380), you are asked to confirm that you want to make the updates.

If your document uses another master page—for example, for the first page of the document—you must make any layout changes on that master page. For details, see "Changing page layout on specific pages" on page 380, "Creating and editing custom master pages" on page 382, and "Assigning master pages to body pages" on page 385.

Changing the page size

You can change a document's page size by choosing a standard page size or by specifying a custom size. FrameMaker will then resize the text frames on the left and right master pages (but not on any custom master pages) to maintain the current page margins.
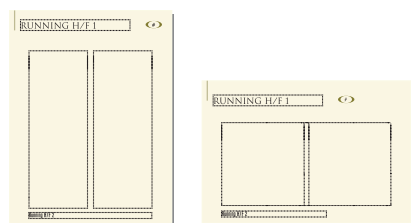
Margins are maintained when you change page size.

If the document contains custom master pages, FrameMaker won't let you change to a page size that can't accommodate the text frames on those master pages.

To change the page size:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Choose Format > Page Layout > Page Size.

3 Do one of the following:

• Choose a standard size from the Page Size pop-up menu. The correct dimensions appear in the Width and Height text boxes.

• Enter dimensions in the Width and Height text boxes. *Custom* appears in the pop-up menu. The custom page size you specify can be very small, depending on the document's margin settings, or as large as 216 inches by 216 inches (approximately 548 centimeters by 548 centimeters).

4 Click Set.

Changing the pagination

You can change a single-sided document to double-sided or the reverse. When you set up a double-sided document, you specify whether the first page is a left or a right page.
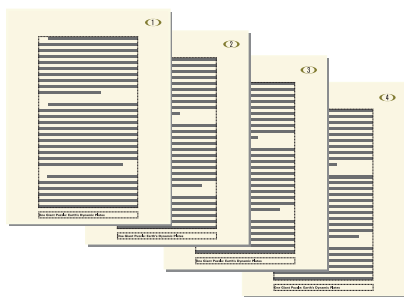
Single-sided document
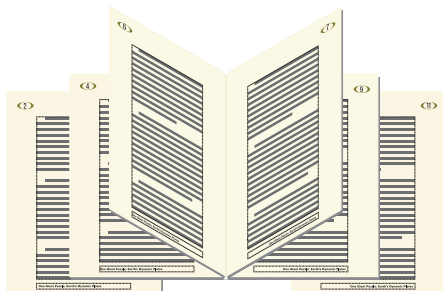
Double-sided document

To change the pagination:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Choose Format > Page Layout > Pagination.

3 Select one of the options in the Pagination area. If you select Double Sided, also specify whether the first page is a left or right page. If you are applying pagination in a book, you can choose Read from File to use the page side specified in the file, or you can choose Next Available Side to avoid a blank page.

Depending on which option you selected, a blank page may be added to the previous file in the book so that the document can start on the page you specified. See also "Adding and deleting empty pages" on page 375.

4 Click Set. If the document contains custom master pages or page layout overrides, an alert message asks how you want to proceed.

Adding and deleting empty pages

You can specify that you want a document to have an even or odd number of pages. If necessary, FrameMaker adds a blank page at the end of the document to achieve the correct pagination.

Conversely, a document may contain unwanted blank pages at the end, left there because you deleted or reworked text. You can tell FrameMaker to delete these empty pages whenever you save or print the document.

FrameMaker deletes a blank page only if it uses the left or right master page, doesn't contain the start of a flow, and has no layout overrides. (For information on layout overrides, see "About layout overrides" on page 380.) FrameMaker doesn't delete a page if it contains an empty paragraph but is otherwise blank.

If you use the document window to change the pagination of a document that is part of a book, the settings may be overridden when you update the book. You can make sure the book pagination is correct by changing a document's setup from the book window.

To add or delete a blank page when saving and printing:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Choose Format > Page Layout > Pagination.

3 From the Before Saving & Printing pop-up menu, choose an option and click Set.

If blank pages are not added or deleted as expected, make sure that all pages in the document are autoconnected (see "About the Autoconnect setting" on page 393).

Changing the page margins and number of columns

The margin is the distance between the page edge and the text frame. For a single-sided document, you set margins for the top, bottom, left, and right sides of the text frame. For a double-sided document, you set the top, bottom, inside, and outside margins for a symmetrical look.

Symmetrical layout

To set up asymmetrical left and right margins, you change the text frames directly on the master pages. For example, you could make the text frames on both the left and right pages appear on the right side of the page, leaving an area of white space on the left. For information on working directly with master pages, see "Changing page layout on specific pages" on page 380.
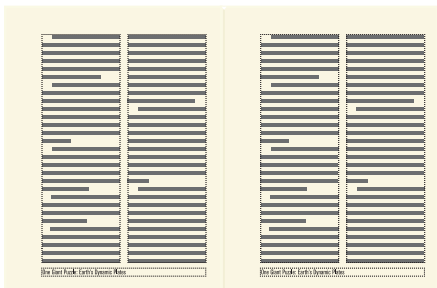
Asymmetrical layout

You can divide a text frame into two or more equally spaced columns of equal widths. To create a multicolumn layout with unequal column widths or gaps, use one text frame for each column of text and position the text frames one by one. Draw the text frames or set up one text frame the way you want it and then duplicate it. For information, see "Adding template text frames on master pages" on page 381 and "Adding text frames on body pages" on page 381.

To change the margins and number of columns:

1 Place the insertion point in the main text flow or click in the page margin. If a book window is active, select the documents you want to affect.

2 Choose Format > Page Layout > Column Layout.

If the layout is asymmetrical (for example, with a different number of columns, or a different inside or outside margin on the left and right master pages), an alert message asks whether you want to proceed. To retain the asymmetry, change the layout directly on the master pages (see "Changing page layout on specific pages" on page 380).

3 To change the margins, enter the values in the Margins area. The margins and the gap (space) between columns determine the individual column width.

4 To change the number of columns or the gap between columns, enter new values in the Columns area.

All columns will be the same width and will be separated by a uniform gap. To create a multicolumn layout that contains columns (or gaps between columns) of differing widths, see "Adding template text frames on master pages" on page 381.

5 Click Update Entire Flow. If the new column width is too narrow to accommodate some anchored frames or tables in the document, an alert message asks whether you want to proceed. If you click OK, you can manually resize the tables and frames.

Displaying master pages

When working with master pages, you move back and forth between them and the body pages. When a master page is visible, its name and the number of master pages in the document appear in the Page Status area of the status bar.

Page Status area of status bar

To display master pages:

❖ Choose View > Master Pages. The master page used by the current body page appears, with the text frame and column borders visible.

To view other master pages when a master page is visible:

❖ Do one of the following:

• Click the Next Page ⬇ or Previous Page ⬆ button.

• Press the Page Up or Page Down key.

• Use the scroll bar.

To return to body pages while master pages are visible:

❖ Choose View > Body Pages. The most recently displayed body page appears. If FrameMaker detects any layout overrides on body pages (see "About layout overrides" on page 380), an alert message asks how you want to handle them.

Using headers, footers, and other background text

You set up headers and footers by displaying master pages and typing text in background text frames. The contents of background text frames appear on body pages, but you can only edit them on master pages.
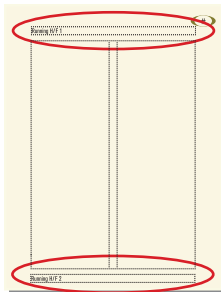
Header and footer text frames on master page

The headers and footers might include the page number, date, chapter number and title, section number and title, author, revision number, and draft release (such as preliminary and final).

You create and edit header and footer text as you do any other paragraph text. You can apply paragraph and character formats, add and move tab stops, and add graphics such as a line above or below the text. In addition, you can add system variables for information such as the page number or the current date, and you can change the size and placement of the header and footer text frames. When you modify these text frames on a master page, FrameMaker automatically updates any body pages that use that master page.

You can also add other background text on master pages. For example, in the FrameMaker fax template, the informational headings are in a background text frame on the master page.
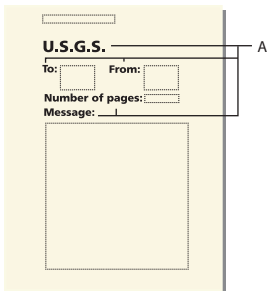
A. *Informational headings*

For more information on creating headers and footers, see "Entering header or footer information" on page 378 and "Including volume and chapter numbers in headers or footers" on page 464.

Creating and modifying background text frames

When you create a new, blank document, FrameMaker creates background text frames for headers and footers on the left and right master pages. To make it easy to add centered and right-aligned information in headers and footers, FrameMaker automatically adds center and right tab stops at the center of the text frame and at the right margin. You can draw background text frames for additional header and footer information or for other background text.

Note: You can create single lines of background text by using the Text Line tool, but you can't apply paragraph formats to the text or insert variables in it. For information on creating text lines, see "Using text with graphics" on page 320.

To add a background text frame on a master page:

1 Draw the text frame by using the Text Frame tool (see "Using text with graphics" on page 320).

2 In the Add New Text Frame dialog box, click Background Text and click Add. The new text frame, like all text frames for background text on master pages, is untagged.

3 Double-click in the text frame to place the insertion point, and then insert the header, footer, or other background text.

To resize or move a background text frame:

1 Select the text frame by control-clicking the text frame.

2 Do any of the following:

• To resize the text frame, drag a handle. For other methods, see "Resizing objects" on page 336.

• To move the text frame, drag its border (not a handle). For other methods, see "Moving objects" on page 327.

Entering header or footer information

You can create simple headers and footers by typing text in the header and footer text frames on the master pages. In addition, you can specify items such as the current chapter and page numbers, the document's total page count, and the current date. FrameMaker displays a system variable in the header or footer on the master page and replaces it with the correct value on each body page that uses that master page.

You can also create running headers and footers in which the text changes from page to page. In the following figure, the running header contains the current section heading; the footer contains the page number and some text typed directly into the background text frame.
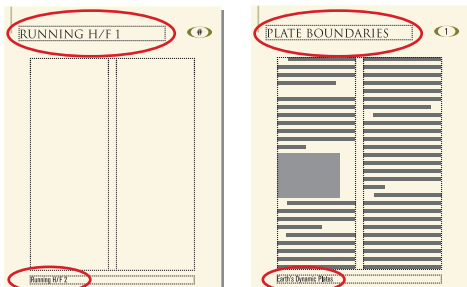
Running headers and footers

To create running headers and footers, you insert running header/footer variables in background text frames on master pages. For information on setting up these variables, see "Creating variables for running headers and footers" on page 232.

To enter text, page numbers, dates, and other information:

1 On a master page, click in the header or footer where you want to add information.

2 Do any of the following:

• To insert static text, type the text.

• To insert volume or chapter numbers, choose Special > Variable. Then double-click Volume Number or Chapter Number in the Variables scroll list, and click Insert. For information on setting up numbering, see "Determining how documents and pages are numbered" on page 461.

• To insert the current page number, choose Format > Headers & Footers > Insert Page #. Type text next to the page number to produce numbering such as *page 1*. For information on choosing the page numbering style (for example, numeric, Roman, or alphabetic), see "Determining how documents and pages are numbered" on page 461.

• To insert the page count, choose Format > Headers & Footers > Insert Page Count. Use the page count with the page number and text you type to produce numbering such as *page 3 of 4*.

• To insert the current date, choose Format > Headers & Footers > Insert Current Date. FrameMaker updates the date whenever it redisplays the page—for example, when you scroll, zoom, or go to the page.

• To insert a different variable, choose Format > Headers & Footers > Other and specify the variable. For more information, see "Inserting variables" on page 226.

To add centered information in headers and footers, press Tab to move the insertion point to the centered tab stop. To add right-aligned information, press Tab again to move the insertion point to the right-aligned tab stop.

Changing page layout on specific pages

The preceding sections describe how to change the basic layout of the left and right master pages and all body pages that use them. Those basic techniques apply only to a symmetrical page layout—one in which facing pages have the same number of equal-width columns, and equal top, bottom, inside, and outside margins.

You can create an asymmetrical layout by adding or changing text frames directly on the master pages. For example, you may want the left margin to be wider than the right on both left and right pages. Or you may want a single-column layout on the left page and a two-column layout on the right. You can even create a layout that contains columns with different widths or with different gaps by using several text frames on a page—one text frame for each column.

About layout overrides

When you make changes on a master page, FrameMaker automatically updates all body pages using that master page. When you make layout changes on a body page (for example, by changing the number of columns, the gap between columns, or the margins), you create an override to its master page's layout. You can then do any of the following:

• Update the master page and all corresponding body pages with your changes (see "Updating body and master page layouts" on page 381).

• Create a new master page based on the body page changes (see "Creating custom master pages" on page 382).

• Do neither of the above, leaving the override as a one-time-only page layout (see "Creating one-time-only page layouts" on page 382).

Changing margins and column layout on specific pages

The following steps always produce either a single-column layout or a multicolumn layout with equal-width columns.

If you want to create a multicolumn layout with unequal column widths or gaps, use one text frame for each column, and position the text frames one by one. For information, see "Adding template text frames on master pages" on page 381 and "Adding text frames on body pages" on page 381.

To change the margins and column layout on a page:

1 Select the text frame whose margins you want to change by control-clicking the frame.

2 Choose Format > Customize Layout > Customize Text Frame.

3 Do the following:

• To change the margins, specify the new size and position in the Unrotated Size and Offset From areas. The Offset from Top and Offset from Left options specify the top and left margins. The bottom and right margins are then determined by the text frame's width and height.

• To change the number of columns or the gap between columns, change the values in the Columns area.

4 Click Set.

Another way to change the margins is to select a text frame and then drag a resize handle. When you resize a multi-column text frame, the column widths change to fit within the text frame, but the column gap remains the same.

Adding template text frames on master pages

For a master page to contain unequal-width columns of text, or to set up the layout for a newsletter or other document in which the articles don't flow continuously from the first page to the last, you use multiple text frames—one for each column. For example, for a page with two unequal-width columns, you would add a second template text frame. You can add a template text frame by drawing it or by duplicating an existing one.

To add a template text frame on a master page:

1 To draw the text frame, use the Text Frame tool on the Tools palette (see "Using text with graphics" on page 320). To draw more than one text frame, draw them in the order you want them connected.

2 In the Add New Text Frame dialog box, click Template for Body Page Text Frame, and choose a tag from the Flow Tag pop-up menu. Choose the current flow tag, unless you're setting up a text frame for a different flow in a multiflow document.

3 In the Columns area, specify the number of columns in the text frame and (if it's more than 1) the gap between adjacent columns. If you're setting up a layout with unequal-width columns, set the number of columns to 1, because you use a separate text frame for each column.

4 Click Add.

5 Move the text frame as needed.

To copy an existing text frame, select the frame, choose Edit > Copy, and then choose Edit > Paste. FrameMaker copies the text frame, its contents, and its properties (including the flow tag).

Adding text frames on body pages

When you draw a text frame on a body page, you are prompted for the number of columns and the gap between them. However, FrameMaker does not assign a flow tag and does not connect the text frame to existing text frames on the page. To use the new text frame as part of the document's text flow, connect it to the flow (see "Connecting text frames" on page 394). If the new text frame is the first one in the flow, also select Autoconnect so that new pages will be added automatically as needed (see "About the Autoconnect setting" on page 393).

Updating body and master page layouts

You can change template text frames on more than one master page and then update all corresponding body pages in one step. However, if you make column layout changes on a body page, you must update the corresponding master page before you can update the other body pages that use that master page.

Before FrameMaker updates body pages, it checks whether any body pages have column layouts that override their master page (see "About layout overrides" on page 380). If any pages contain layout overrides, you specify whether to keep the overrides.

To update body pages with master page changes:

1 After making layout changes on master pages, display body pages.

2 If FrameMaker displays an alert message, specify whether to keep or remove layout overrides, and then click Continue. If you keep layout overrides, FrameMaker updates those body pages with the master page's background text and graphics, but does not update the template text frames.

To update a master page with body page changes:

1 Choose Format > Page Layout > Update Column Layout. A message asks you to confirm the master page and body pages that are to be updated.

2 Click Update.

3 If FrameMaker displays an alert message, specify whether to keep or remove layout overrides on the pages being updated, and then click Continue.

Creating one-time-only page layouts

You may need to change the layout of only one body page in a document. For example, you can make a text frame longer to fit one more line of text on the page, or shrink a text frame to make room for a graphic placed directly on the body page. When you change the column layout of a body page without updating the master page, you create a layout override.

For information on changing the column layout on a body page, see "Changing margins and column layout on specific pages" on page 380. For information on adding a text frame, see "Adding text frames on body pages" on page 381.

Creating and editing custom master pages

Documents may need body pages with layouts that differ from those of the left and right master pages. For example, you can create a different look for the first page of a document, or you can include a landscape page in a portrait document. For such cases, you create custom master pages. (A document can contain up to 100 master pages.)
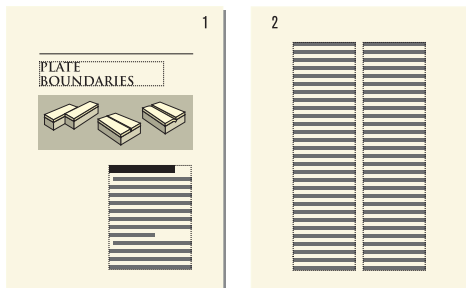
The first page uses a different layout.

You can also rename master pages and delete master pages that you no longer need.

Creating custom master pages

You create a custom master page by starting out with a blank page or by basing the new page on an existing master page. After you create the custom master page, change its column layout, and add background text and graphics (see "Changing page layout on specific pages" on page 380). You then assign the custom master page to one or more body pages (see "Assigning master pages to body pages" on page 385).

To create a custom master page that is empty or that is based on another master page's layout:

1 Display the master page that you want to use as a basis for the new master page.

2 Choose Special > Add Master Page and enter a name for the new master page in the Name text box.

3 Do one of the following:

• To create a master page with a layout that matches the layout of an existing master page, choose the master page from the Copy from Master Page pop-up menu.

• To create an empty master page, click Empty.

4 Click Add.

To create a custom master page based on a body page's layout:

1 Make the column layout changes you want on a body page.

2 With the body page displayed, choose Format > Page Layout > New Master Page.

3 Enter a name for the master page and click Create.

Note: Master pages support the Unicode text encoding standard.

Reordering custom master pages

You can reorder custom master pages to view them in any order you want. The Right and Left master pages always remain at the beginning.

To reorder custom master pages:

1 Open a master page, and then choose Format > Page Layout > Reorder Custom Master Pages.

2 Select a master page in the Custom Master Pages list, and click Move Up or Move Down to move the page accordingly.

3 Repeat step 2 as often as necessary to achieve the order you want.

4 Click Set. If you were previously viewing a custom master page, note that a different master page may now be visible.

Creating a rotated master page

You can create a custom master page that changes the orientation of a body page. For example, you can create a rotated orientation for a body page with a very wide table.
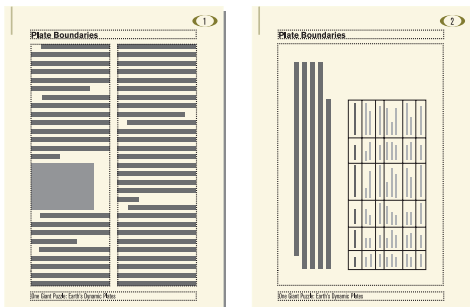
Right page uses a rotated master page.

To create a rotated master page:

1 Create a custom master page. (See "Creating custom master pages" on page 382.)

2 On the master page, set up any text frames and background text and graphics that you want to have the same orientation (unrotated) as headers and footers on the other master pages.
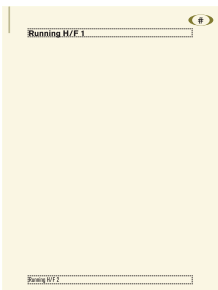
Unrotated master page

For example, if you want to achieve the effect shown in the illustration at the beginning of this section, you would set up the headers and footers now. If you want them to be rotated, you would add them later. For information on drawing background text frames, see "Creating and modifying background text frames" on page 378.

3 Choose one of the Format > Customize Layout > Rotate Page commands. When FrameMaker rotates the page, part of the page will probably be out of view. You can adjust the window size to see as much of the page as possible.
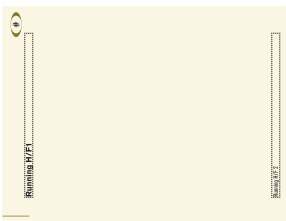
Rotated master page

4 Create the text frames, background text, and background graphics that you want to display rotated. For example, to achieve the effect shown in the illustration at the beginning of this section, you would add the template text frame now.

You can type in rotated text frames, or you can unrotate the page to make typing faster. To unrotate a page, choose Format > Customize Layout > Unrotate Page. When you're finished, you can rotate the page again.

Renaming and deleting custom master pages

You can rename a custom master page—for example, to avoid overwriting a master page when importing master pages from a template that contains a master page with the same name. You can't rename the master pages named Left and Right.

If a document no longer uses a custom master page, you can delete it. You can't delete the left or right master page or any master page currently assigned to a body page.

To rename a custom master page:

1 Display the master page and click the page name in the status bar.

2 Enter the new name and click Set.

To delete a custom master page:

1 Display the master page and choose Special > Delete Page.

2 Click OK.

Assigning master pages to body pages

You can assign a master page to a body page at any time. FrameMaker uses the template text frame from the master page and displays background text and graphics.

You can also choose to assign no master page to a body page. Because it's not associated with a master page, this type of body page has no headers, footers, or other background text or graphics. (If the body page contains a text frame, the text frame is unaffected.) For example, if each chapter in a book must contain an even number of pages, and if the last page of a chapter contains no body text, you may not want that page to use a master page, so that it will be completely blank.

For information on assigning master pages to pages containing specified paragraph tags or elements, see "Assigning master pages to body pages containing paragraph tags" on page 385 and "Assigning master pages to pages containing elements" on page 400.

To assign a different master page to body pages:

1 With a body page displayed, choose Format > Page Layout > Master Page Usage.

2 In the Use Master Page area, do one of the following:

• To assign the left or right master page, click Right (in a single-sided document) or Right/Left (in a double-sided document).

• To assign a custom master page, choose the page name from the Custom pop-up menu.

• To assign no master page, choose None from the Custom pop-up menu.

3 In the Apply To area, do one of the following:

• To apply the change to the current body page, click Current.

• To apply the change to a range of pages, enter the starting and ending page numbers in the Pages text boxes.

• To apply the changes only to odd or even pages within a range, select Even or Odd.

• To apply the changes only to pages within a range that currently use a particular master page, choose a page from the pop-up menu in the Apply To area.

4 Click Apply.

Note: If the master page contains a template text flow not found on the body page, FrameMaker adds the text frames that contain that flow to the body page. If the body page contains a flow not found on the master page, FrameMaker leaves the text frames that contain that flow unchanged. This action could result in overlapping text frames.

Assigning master pages to body pages containing paragraph tags

You can assign master pages to body pages that contain specified paragraph tags. For example, you may want all pages that include the Title paragraph tag to be formatted with a custom master page called First.

You map the paragraph tags to the master pages using the Reference Pages mapping table. When you choose the Apply Master Pages command, the master page will be applied to the body pages on which the referenced paragraph tag appears.

Paragraph Tag Name	Right-Handed Master Page (or Single-Sided Master Page)	Left-Handed Master Page	Range Indicator (Single, Span pages, Until changed)	Comments
Title	First		Single	Convert title pages to First master

UnstructMasterPageMaps
Book Update (Yes or No): Yes

In this example, the First master page will be applied to body pages containing Title paragraph tags.

For information on assigning master pages to elements in structured documents, see "Assigning master pages to pages containing elements" on page 400.

To assign a master page to body pages on which a paragraph tag appears:

1 Choose View > Reference Pages.

2 Click the Next Page ⬇ button until the five-column UnstructMasterPageMaps table appears.

💡 *If the mapping table does not appear in the reference pages, choose Format > Page Layout > Apply Master Pages.*

3 For Book Update (Yes or No), type **Yes** or **No** to determine whether the specified master page will be applied when you choose Apply Master Pages from a book.

4 Edit the mapping table by doing the following:

• Under the Paragraph Tag Name column heading, type the name of the paragraph tag to which you want the master page to be applied. This column is required for master pages to be applied. Spell the paragraph tag name correctly, using the same capitalization that the paragraph tag uses.

• Under the Right-Handed Master Page column heading, type the name of the master page you want to apply. This column is required for master pages to be applied. The specified master page will be applied to all body pages, including left-handed pages in double-sided documents on which the paragraph tags appear, unless you specify a different master page under the Left-Handed Master Page column. Master page names are case-sensitive.

• Under the Left-Handed Master Page column heading, type the name of the master page that you want to apply to the left-handed body pages on which the paragraph tags appear in double-sided documents. This column is optional.

• Under the Range Indicator column heading, type **Single** to apply the master page only to the body page on which each paragraph tag appears; type **Span pages** to apply the master page to the entire span of pages to which the paragraph tag is applied; or type **Until changed** to apply the master page to all pages, until the next body page with a different paragraph tag listed in the mapping table is encountered. If this cell is blank, master pages are applied to single pages.

• Add notes to the Comments column. Text you type in this column does not affect how master pages are applied in any way.

• To map additional master pages to paragraph tags, add and fill out additional table rows.

5 When you are done, choose View > Body Pages.

6 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

7 Choose Format > Page Layout > Apply Master Pages, and then click Yes to override manually applied master pages.

Adobe FrameMaker searches each body page for the first occurrence of any paragraph tag specified in the Master Page Maps table. When it finds text containing the specified paragraph tag, it applies the specified master page.

Aligning text across columns

You can use the following techniques to align text in the columns of a multicolumn layout so that the text has an even appearance:

• *Balance* text in a flow. FrameMaker distributes text evenly across the columns of a text frame that isn't full of text.

• *Feather* (vertically justify) text in a flow, so that the last line of text in each column reaches the bottom of the column.

• *Synchronize* (align) text in a flow. The first lines of body paragraphs line up whenever they appear side by side in columns.

If feathering and synchronization are both on for a flow, feathering takes precedence over synchronization. However, the first lines in the columns are synchronized with each other.

Balancing text across columns

In a layout that uses a multicolumn text frame, you can balance the text across columns that aren't full of text—for example, columns on partly empty pages that precede forced page breaks, and columns on the last page of a document. You can balance text across columns throughout a text flow or in an individual text frame.
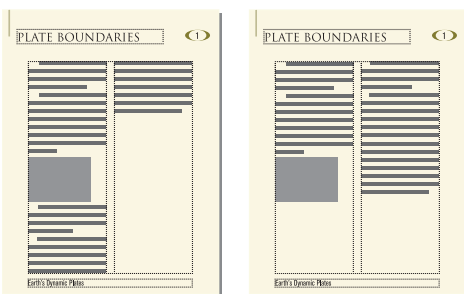
Balancing off and on

To balance text across columns throughout a text flow:

1 If a document window is active, place the insertion point in the main text flow or click in the page margin. If a book window is active, select the documents you want to affect.

2 Choose Format > Page Layout > Column Layout.

3 Select Balance Columns and click Update Entire Flow.

To balance text across columns in a single text frame:

1 Click in the text frame and choose Format > Customize Layout > Customize Text Frame.

2 Select Balance Columns and click Set.

Feathering text to the bottom of text frames

When FrameMaker feathers text, it first adds space between paragraphs, up to a limit that you set. If more adjustment is necessary, it adds space between lines, up to another limit that you set. FrameMaker does not feather the text in a text frame in which text runs around graphics.
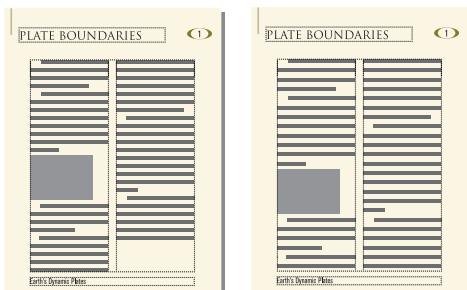
Before and after feathering

In a multicolumn text frame that contains straddles—paragraphs, tables, or anchored frames—FrameMaker adds vertical space to align the last baselines of text in adjacent columns above each straddle.
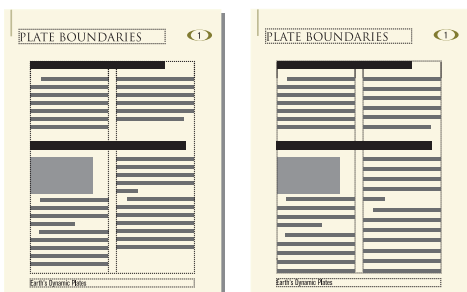
Before and after feathering with straddling

When text is feathered, the display of pages may be slower. For this reason, you may want to feather text only after you finish editing a document.

To feather text in a text flow:

1 If a document window is active, place the insertion point in the main text flow. If a book window is active, select the documents you want to affect.

2 Choose Format > Page Layout > Line Layout.

3 Select Feather, and enter the maximum amount of space FrameMaker can add between lines (Interline Padding) and between paragraphs (Inter-¶ Padding).

FrameMaker won't exceed the padding limits you set. If it's not possible to feather text in a column without exceeding the limits, FrameMaker does not feather text in that column.

4 Click Update Flow.

Note: Feathering leaves room for the largest possible descender in the largest font size used in the line, even if no character with such a descender actually appears. If the last line in a column seems too high, check to see whether the column contains a nonprinting character (such as an anchor symbol) in a font that's larger than that of the surrounding text.

Synchronizing baselines across columns

When you synchronize (align) text in a flow, FrameMaker creates an invisible grid in each text frame and aligns the baseline of the first line of each specified paragraph to the grid. FrameMaker also aligns the first line after an anchored frame and tries to align the first line in each column.
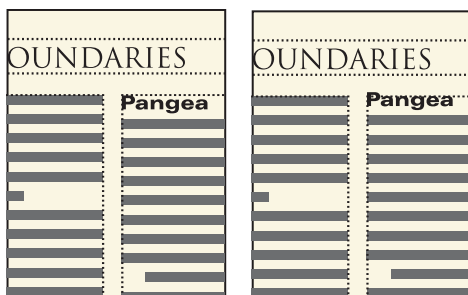
Before and after synchronizing

Because headings in large fonts often appear at the tops of columns, you can specify a first-line synchronization limit. This limit controls whether the baseline of a heading is placed on the first grid line when the heading falls at the top of a column, even when the heading's default font is larger than the grid can accommodate. To place the baseline of a heading on the first grid line, FrameMaker lets the heading extend above the top of the column as shown in the illustration. FrameMaker won't synchronize font sizes larger than the limit you set.

To synchronize baselines across columns:

1 Check the paragraph formats of the paragraph types you want to synchronize to make sure they all have the same default font size and line spacing. Fixed line spacing should be on (see "Changing spacing" on page 114).

2 Click in the flow you want to synchronize (or select the documents in the book that you want to affect) and choose Format > Page Layout > Line Layout.

3 Select Baseline Synchronization and turn off Feather.

4 In the Synchronization area, enter the line spacing you want to use for the text frame grid in the Synchronize ¶'s text box. Use the same line spacing as in the paragraphs you want to synchronize. Otherwise, FrameMaker won't synchronize the paragraphs with the text frame grid.

5 In the First-Line Synchronization Limit text box, enter the largest font size to align at the top of a column. For example, suppose the line spacing for body paragraphs is 12 points, the column grid is 12 points, and the headings are 18 points. If you want the headings to be aligned when they appear at the top of a column, specify 18 as the first-line limit.

6 Click Update Flow. Because no descenders appear above the first line in a column, the first grid line is offset from the top of the column a distance equaling two-thirds of the specified line spacing.

Synchronizing baselines in adjacent text frames

In some documents, such as multiflow newsletters, each page may contain several text frames—one for each column of text. When the tops of adjacent text frames start at the same position on the page, their invisible text frame grids line up nicely. When text frames start at different positions, however, you may need to adjust their tops to line up their grids.

Line up the grids by resizing adjacent text frames so that the distance between their tops is evenly divisible by the grid. For example, if the grid is 12 points, you can start a text frame 144 points (12 times 12 points) from the top of an adjacent text frame.
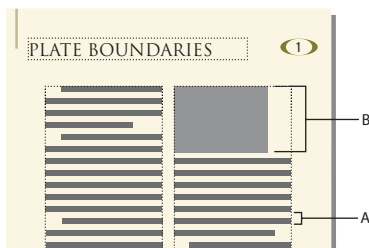
A. *Grid spacing* **B.** *Distance evenly divisible by the grid*

Use the snap grid to correctly position the text frames. To do so, specify a snap grid equal to the text frame grid. Then resize the text frames until their tops snap to the grid. For more information, see "Using grids" on page 308.

About multiflow documents

In most documents, the text frame on each page is automatically connected to the text frame on the next to form a single text flow running through the entire document.
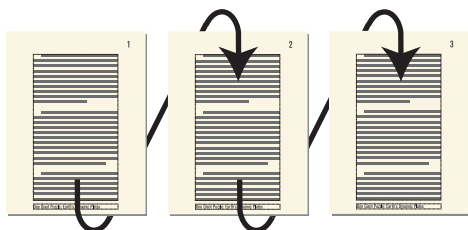
Single text flow

However, a document can have separate text flows, each with its own text frame connections. For example, a bilingual document may contain side-by-side translations of the same text.
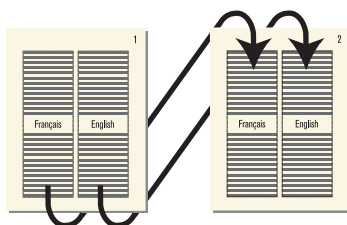
Text in left column flows to left column on next page.

In a newsletter, on the other hand, each article may have its own text flow. You specify how the text flows by connecting the text frames yourself.
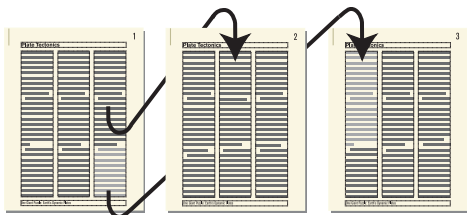
Text from first page flows to two different pages.

When a text frame fills in a multiflow document, you can tell FrameMaker not to add a new page. That way, you can add pages yourself and control the connections. Because each flow's autonumbering is independent of the numbering in other flows, you can maintain separately numbered lists, headings, and figure titles for each flow.

Setting up multiflow documents

You set up a document with side-by-side text flows by laying out and connecting the text frames on the master pages. Because the text frame connections are the same throughout the document, you usually don't need to make further changes on the body pages.

You set up a newsletter or magazine that requires nonparallel, multiple flows by establishing a column layout on the master pages. However, the master pages act only as the basic layout grid. You resize, delete, connect, and disconnect the text frames on the body pages until they look right. This approach gives you the greatest flexibility in determining the way text flows through the document.

Note: If you're creating a newsletter or magazine that has articles that flow consecutively from the first page to the last, you don't need to use the techniques described here. Instead, you can use a single text flow. You can create special effects by making text run around graphics, and by making paragraphs, tables, and frames straddle columns. For an example of this technique, see the newsletter template provided with FrameMaker.

To set up side-by-side flows:

1 Set up the flows on one of the master pages (see "Adding template text frames on master pages" on page 381). Use a text frame for each flow and assign a different flow tag to each text frame. Make sure that Autoconnect is on for each flow so that FrameMaker adds a new body page whenever text reaches the end of one of the flows (see "Changing flow tags and Autoconnect" on page 393).
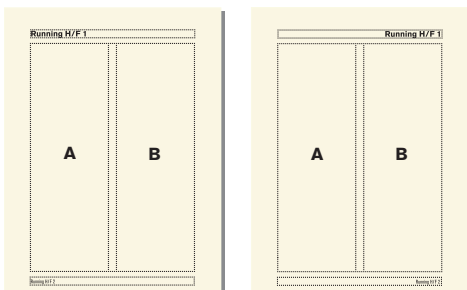
Left and right master pages for a side-by-side flow

2 Repeat the previous step for the remaining master pages. All master pages should have the same flow tags. Otherwise, FrameMaker won't alternate properly between the left and right master pages when adding body pages.

Important: To create a new body page correctly when text reaches the bottom of a text frame, the appropriate left or right master page must contain all of the flow tags on the current body page. If any flow tag is missing, FrameMaker creates the new page with the current body page's master page instead.

3 Update the body pages with the master page changes by displaying body pages.

To set up flows for a newsletter or magazine:

1 Decide on the number of columns, and put that number of single-column text frames on each master page (see "Adding template text frames on master pages" on page 381). All of the text frames should be in the same flow. You'll use these text frames as the layout grid within which you'll have text flow.
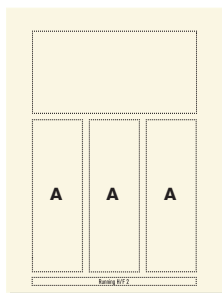
First master page
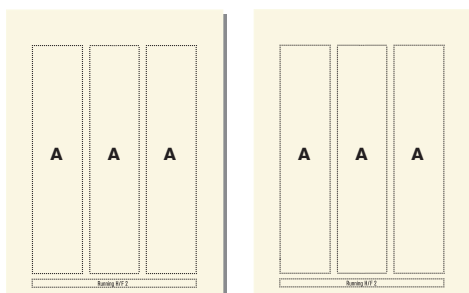
Left and Right master pages with the same flow

2 Turn off Autoconnect so that FrameMaker won't automatically add pages (see "About the Autoconnect setting" on page 393).

3 Update body pages with the master page changes by displaying body pages.

4 On each body page, resize, disconnect, and connect text frames as necessary. Don't update the master pages as you make changes on the body pages. (See "Connecting text frames" on page 394 and "Disconnecting text frames" on page 395.)

5 To synchronize text baselines in the newsletter, make sure the text frames are placed appropriately. If the document contains several text flows, synchronize baselines for each flow. For information, see "Synchronizing baselines across columns" on page 389 and "Synchronizing baselines in adjacent text frames" on page 389.

6 Manually create new disconnected body pages as necessary (see "Adding new, disconnected pages" on page 394).

7 Connect text frames between pages as necessary.

Controlling the flow of text

A flow's basic properties are its flow tag and its Autoconnect setting. Autoconnect determines whether a new page is automatically generated when the flow's text frames are full. Most documents contain a single, autoconnected text flow that you won't need to change. (In a new, blank document, the main flow is tagged A.)

If you need to assign a flow tag (for example, when creating side-by-side text flows), you can do so at any time. You need to assign a tag only once for a flow. After that, connecting a text frame to the flow assigns the tag to the text frame. If you change the flow tag or the Autoconnect setting in one text frame in a flow, the change is made to the entire flow.

You can control the flow of text by connecting, disconnecting, and splitting text frames in a flow. You can also add and delete disconnected pages.

About the Autoconnect setting

In a document with one flow or parallel flows, Autoconnect is usually on to tell FrameMaker to add a new page whenever the flow's text frames are full. The new page takes the column layout of the appropriate master page (left or right), and the text frames on the new page are automatically connected to the text frames on the original pages.

When working on a document with nonparallel, multiple flows, you'll usually turn off Autoconnect. This allows you to add a new, disconnected body page wherever you want, and to control the connections between it and existing pages.

If Autoconnect is off, and if the flow contains more text than it can hold in its text frames, the text overflows at the end of the last text frame in the flow. The bottom border of an overflowing text frame appears as a solid line when borders are visible.
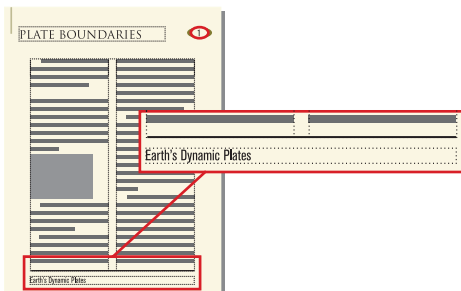
Overflowing text frame

If you try to type in an overflowing text frame, you'll hear a beep. Overflowing text is not deleted; it's just hidden from view. As soon as you connect the overflowing text frame to another text frame, the hidden text reappears in the next text frame.

Changing flow tags and Autoconnect

You normally change flow tags and the Autoconnect setting on master pages. If two text frames are connected, you must disconnect them before you can change one of their flow tags (see "Disconnecting text frames" on page 395).

To change a flow's tag or Autoconnect setting:

1 Click in a text frame in the flow.

2 Choose Format > Customize Layout > Customize Text Frame.

3 Enter a tag for the flow in the Flow Tag text box. You should keep flow tags short so they won't obscure other information in the Tag area of the status bar. You can't assign a tag that is already used on the current page.

Note: If you want two text frames on a page to have the same flow tag, connect the text frames (see "Connecting text frames" on page 394).

4 If you want FrameMaker to add a new page when you fill the last column on a page, select Autoconnect.

5 Click Set.

Adding new, disconnected pages

In documents with one main flow or two parallel flows, you normally don't add disconnected body pages; you let FrameMaker add connected pages automatically when necessary. In a multiflow document in which Autoconnect is off, or in other specialized documents, you can add new, disconnected body pages. When the text reaches the end of a text frame, you add a new page and connect the text frames.

To add a new, disconnected page:

1 From a body page, choose Special > Add Disconnected Pages.

2 Choose the location and number of pages you want to add.

3 Choose a master page from the Use Master Page pop-up menu and click Add.

Deleting disconnected pages

When you delete disconnected pages in a multiflow document, FrameMaker also deletes the pages' contents.

To delete disconnected pages:

1 Click in a page you want to delete and choose Special > Delete Pages.

2 Specify the first and last disconnected pages you want to delete and click Delete. If you want to delete only one page, enter its page number in both text boxes.

Connecting text frames

When two text frames are connected, the text flows from the end of the first text frame to the beginning of the second. You can connect a text frame on a master page to any other text frame on the same master page, and you can connect a text frame on a body page to any text frame on any body page. You can also connect a text frame in the middle of a flow.

When you connect two text frames, FrameMaker assigns the first text frame's flow tag to the second frame. If the first text frame is untagged, the second frame's tag is used. That way, all connected text frames belong to the same flow and have the same tag. If the first text frame contains overflowing text, the text flows into the second frame when you make the connection.

To connect two text frames:

1 (Windows and UNIX) Select the two text frames in the order in which you want text to flow. To select the text frames, control-click the text frames.

If the text frames are on different pages, the first frame is deselected when you select the second one, but FrameMaker keeps track of the first selection.

Note: To add a text frame to the middle of a flow, first select the text frame you want to add, and then select the frame that should follow it.

2 Choose Format > Customize Layout > Connect Text Frames. If the first text frame you selected isn't on a page that's currently visible, an alert message asks whether you want to connect to that frame.

Disconnecting text frames

You disconnect text frames when you want to create separate flows—for example, to place an article in a specific location in a newsletter, or to create a pull-quote. If you need to start a new flow in the middle of a column, you can split the text frame that contains the column in two (see "Splitting text frames" on page 395), and then disconnect the two text frames.

You can disconnect a text frame from the preceding text frame, the following one, or both. You can also remove a text frame from the middle of a flow.

Disconnecting text frames does not affect existing text in the frames. To move text to a different text frame, cut and paste it after disconnecting the frames.

Note: When you disconnect text frames on the same body page, FrameMaker creates separate flows with no flow tags. When you disconnect text frames on different body pages, FrameMaker creates separate flows with the same flow tag. In either case, if you're creating a newsletter-type document where Autoconnect is off for each flow, the flow tags don't matter. FrameMaker won't create new pages automatically and, thus, won't need to make text frame connections.

To disconnect text frames:

1 Select the text frame you want to disconnect by control-clicking the text frame.

2 Choose Format > Customize Layout, and then choose Disconnect Previous, Disconnect Next, or Disconnect Both.

To remove a text frame from the middle of a flow:

1 Select the text frame immediately preceding the one you want to remove. To do this, control-click the text frame.

2 Select the text frame immediately following the text frame you want to remove.

3 Choose Format > Customize Layout > Connect Text Frames. If the first text frame you selected isn't on a page that's currently visible, an alert message asks whether you want to connect to that frame.

Splitting text frames

You can split a text frame in two, and then disconnect the two text frames to start a new flow. For example, you may want a new article with its own flow to start in the middle of a text frame. You can also "unsplit" text frames after splitting them.
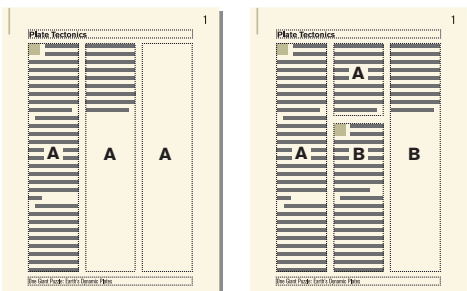
The second of three text frames is split, disconnected from the first text frame, and retagged.

To split a text frame:

1 Click in the line above where you want to split the text frame and choose Format > Customize Layout > Split Text Frame. FrameMaker splits the text frame below the line that contains the insertion point, creating two separate but connected text frames.

2 Select the bottom text frame by control-clicking the text frame.

3 Disconnect the text frame from the previous one by choosing Format > Customize Layout > Disconnect Previous. If the flow was tagged, FrameMaker removes the flow tag. If Autoconnect was on before you disconected the text frames, it is now off for both text frames.

4 Resize the text frames as necessary.

To unsplit text frames:

❖ Do one of the following:

• If you haven't made any other changes since splitting the text frame, choose Edit > Undo.

• If you made another change but you haven't yet disconnected the two text frames, delete the lower frame and then resize the remaining text frame to the size of the original unsplit frame.

• If you have already disconnected the two frames, cut the text from the second text frame and paste it at the end of the first text frame. Then delete the second text frame and resize the first one to the size of the original unsplit frame. If you need to turn Autoconnect back on or reassign a flow tag for the text flow, use Format > Customize Layout > Customize Text Frame.

Cross-referencing text frames

When an article in a newsletter or magazine continues from one page to another, you can use cross-references to tell the reader where to turn to continue reading and to indicate where the end of the article is continued from.
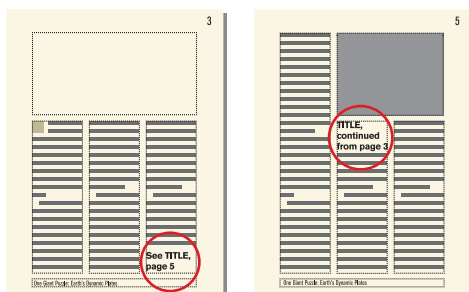
Indicate where the flow continues, and where it is continued from.

To cross-reference a disconnected text frame:

1 Resize the two text frames to make room for the cross-references. Drag the bottom of the first text frame upward and the top of the continuation text frame downward.

2 Draw a small text frame below the text frame on the first page, and another above the text frame on the continuation page. Don't connect either text frame to any other text frame.

3 Insert a cross-reference in the empty text frame on the first page, referring to the continuation page of the article. For information on working with cross-references, see "Inserting cross-references" on page 199.

4 Insert a cross-reference in the empty text frame on the continuation page, referring to the first page of the article.

Tracking a text flow

In a document with many flows, it's easy to lose sight of where a flow continues. You can zoom out to see more of a text flow or move from one text frame in a flow to the next.

To see more of a text flow:

1 Zoom out to 25% and adjust the window size to see as many pages as necessary.

2 Click in the flow you want to check and choose Edit > Select All in Flow. The flow is highlighted, showing how it traverses the pages of the document.
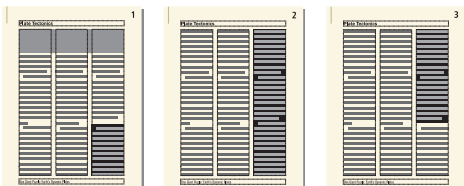
To move through a flow's text frames:

❖ Do one of the following:

• To display the next connected text frame, click in the last line of a text frame and press the Down Arrow key.

• To display the preceding connected text frame, click in the first line of a text frame and press the Up Arrow key.

Working with reference pages

You can use reference pages to store frequently used graphics that you want to position consistently throughout a document, and then use the graphics on body pages where they're needed. If you place a graphic in a *reference frame*—an unanchored graphic frame on a reference page—you can use the frame as a property of a paragraph format. For example, to design a heading with a line below it, draw the line in a reference frame, and then include the reference frame in the heading's paragraph format.
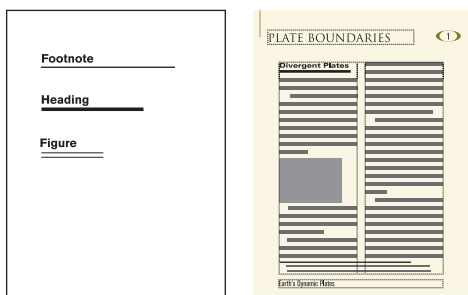
Reference page and body page

Reference pages can also hold boilerplate material or clip art that you can copy and paste on body pages—for example, symbols for cautions and notes. And specialized reference pages can contain hypertext commands, formatting information for generated lists and indexes, definitions of custom math elements, and mappings for converting to XML and HTML.

A document normally contains at least one reference page. You can add your own graphics to an existing reference page, and you can create additional reference pages (up to 100).

To display reference pages:

❖ Choose View > Reference Pages. The name of the current reference page appears in the Page Status area of the status bar.

Reference (1 of 1)   100% z Z
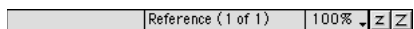
Page Status area

If the document doesn't contain any reference pages, the Add Reference Page dialog box appears. Create the first reference page by entering a page name and clicking Add.

To view other reference pages when a reference page is visible:

❖ Do one of the following:

• Click the Next Page ⬇ or Previous Page ⬆ button.

• Press the Page Up or Page Down key.

• Use the scroll bar.

To create a reference page:

1 Display reference pages and choose Special > Add Reference Page.

2 Enter a name for the reference page and click Add.

To return to body pages:

❖ Choose View > Body Pages. The most recently displayed body page appears.

Renaming and deleting reference pages

You can rename a reference page—for example, to avoid overwriting the reference page when you import reference pages from a template that contains a reference page with the same name.

If a document no longer uses a reference page, you can delete it. However, if you delete a reference page that contains a graphic used in a paragraph format, the graphic no longer appears in paragraphs using that format. When this happens, the Frame Above ¶ or the Frame Below ¶ pop-up menu in the Advanced properties of the Paragraph Designer is set to As Is for the paragraphs.

To rename a reference page:

1 Display the reference page and click the page name in the status bar.

2 Enter the new name and click Set.

To delete a reference page:

❖ Display the reference page and choose Special > Delete Page.

Using reference frames on reference pages

You can use a graphic as part of a paragraph format if you have put the graphic in a reference frame on a reference page. For information on using a reference frame in a paragraph format, see "Adding graphics to paragraph formats" on page 120.
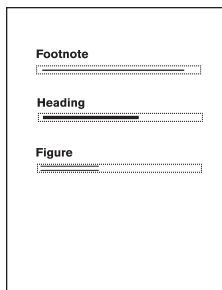
Graphics in reference frames

When you select a reference frame on a reference page, its name appears in the status bar after the word *Frame*.

To create a reference frame on a reference page:

1 Click the Graphic Frame tool ⌖ on the Tools palette, and then drag to draw the frame. To draw a square frame, Shift-drag.

2 Enter a name in the Name text box and click Set. Use a short, descriptive name you'll recognize later when the name appears in the Frame Above ¶ and the Frame Below ¶ pop-up menus in the Advanced properties of the Paragraph Designer.

3 Put a graphic in the frame. You can draw the graphic, import a graphic file, or combine drawn and imported graphics.

4 Adjust the frame's size and shape if necessary. When you use a reference frame above or below a paragraph on a body page, the whole frame—not just the graphic inside it—appears on the body page. The height of the frame affects the spacing of text above and below the frame.

5 Use the Text Line tool to type the frame's name above the frame (see "Using text with graphics" on page 320). Typing the name helps you identify the frame when you view the reference page. It does not rename the reference frame.

To rename a reference frame:

1 Select the reference frame and click the frame's name in the status bar.

2 Enter the new name and click Set. You should also type the new name in the text line above the reference frame. If you rename a reference frame used in a paragraph format, you need to update the format so that it uses the new frame name (see "Adding graphics to paragraph formats" on page 120).

To change other properties of a reference frame:

❖ Select the frame and use either Graphics > Object Properties or the options on the Tools palette. For details, see "Applying and changing drawing properties" on page 315, "Moving objects" on page 327, and "Resizing and reshaping objects" on page 335.

Setting up boilerplate graphics on reference pages

You can set up boilerplate graphics—for example, margin symbols—in anchored frames on a reference page. Then you can copy the anchored frames to body pages. When you do this, the graphics appear correctly positioned in their anchored frames.
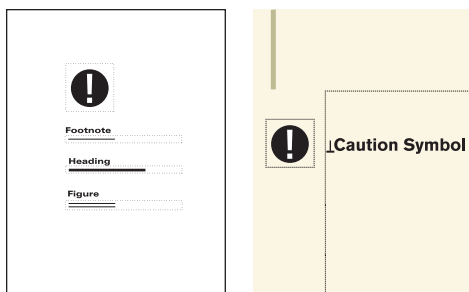
You can copy and paste boilerplate graphics onto body pages.

You can also place graphics directly on reference pages and then copy and paste them anywhere on body pages.

To set up a boilerplate graphic in an anchored frame:

1 Create a reference page with the same column layout as the body page on which you want to display the graphic. This ensures that the graphic is positioned correctly when you copy it to body pages. To set up the column layout, you can copy the text frame from a body page and paste it on the reference page.

On the reference page, set up the anchored frame exactly as you want it to appear on body pages.

2 Draw the graphic in the anchored frame, or paste or import it into the frame. You may want to add some text outside the anchored frame to identify the graphic. For example, in the illustration, *Caution Symbol* identifies the graphic.

Assigning master pages to pages containing elements

To assign master pages to body pages containing elements in structured documents, you map the elements to the master pages using the Reference Pages mapping table. When you choose Apply Master Pages, the master page will be applied to the body page on which the referenced element appears.

For more information on assigning master pages, see "Assigning master pages to body pages containing paragraph tags" on page 385.

To assign a master page to body pages on which an element appears:

1 In Structured FrameMaker, choose View > Reference Pages.

2 Click the Next Page ⬇ button until the eight-column StructMasterPageMaps table appears.

🔆 *If you're working on a document created in a previous version of FrameMaker, choose Format > Page Layout > Apply Master Pages, so that the mapping table appears in the reference pages.*

3 To the right of Book Update (Yes or No), type **Yes** or **No** to determine whether the specified master page will be applied when you choose Apply Master Pages from a book.

4 Edit the mapping table by doing the following:

• Under the Element/Paragraph Tag Name column heading, type a valid prefix (**E:** for element tag, or **P:** for paragraph tag), followed by the name of the element or paragraph tag to which you want the master page to be applied. If no prefix is applied, an element tag is assumed. Spell the name correctly, using the same capitalization that the element or paragraph tag uses. This column is required for master pages to be applied.

• Under the Right-Handed Master Page column heading, type the name of the master page you want to apply. The specified master page will be applied to all body pages, including left-handed pages in double-sided documents on which the elements or paragraph tags appear, unless you specify a different master page under the Left-Handed Master Page column. Master page names are case-sensitive. This column is required for master pages to be applied.

• Under the Left-Handed Master Page column heading, type the name of the master page that you want to apply to the left-handed body pages on which the elements or paragraph tags appear in double-sided documents. This column is optional.

• Under Attribute Name, type a valid attribute name to further define the mapping context.

• Under Attribute Value, type a valid attribute value to further define the mapping context.

• Under Context, type a value for an element's context label to further define the mapping context.

• Under the Range Indicator heading, type **Single** to apply the master page only to the body page on which each element or paragraph tag appears; type **Span pages** to apply the master page to the entire span of pages to which the element or paragraph tag is applied; or type **Until changed** to apply the master page to all pages until the next body page with a different element or paragraph tag listed in the mapping table is encountered. If this cell is blank, master pages are applied to single pages.

• Add notes to the Comments column. Text you type in this column does not affect how master pages are applied in any way.

• To map additional master pages to elements or paragraph tags, add and fill out additional table rows.

5 When you are done, choose View > Body Pages.

6 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

7 Choose Format > Page Layout > Apply Master Pages, and then click Yes to override manually applied master pages.

FrameMaker searches each body page for the first occurrence of any element or paragraph tag specified in the Master Page Maps table. When it finds text containing the specified element or paragraph tag, it applies the specified master page.

About Templates

Templates are FrameMaker documents you use as a foundation for formatting other documents. Templates provide an easy way to ensure that your design is consistent from one document to another. You can create a new document from a template or import formats from a template into an existing document.

This topic addresses the template designer, the person who creates templates for a workgroup. If you're not designing or editing templates, the only information in this chapter you'll need is "Using templates," and "Importing and updating formats" on page 408.

Using templates

When you create a document, FrameMaker prompts you for a template to base it on. FrameMaker provides a number of general-purpose templates to choose from. In a workgroup setting there may be other choices, designed for your particular documents.

You can also import the import styles defined in an external CSS file into your EDD file. For more information, see "Importing CSS element styles into an EDD file (Windows)" on page 69.
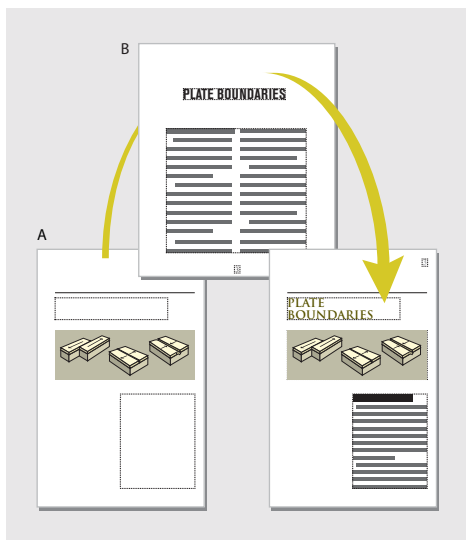
You can apply a template (A) to a document (B) to update the document's design.

For information on creating a new document based on a predefined template, see "Creating documents" on page 19.

Planning templates

As you develop a custom template, try to anticipate the needs of other users and consider a wide range of issues that apply across documents. For example, you may want to consider the following issues.

Anticipated template use Try to anticipate the situations in which your template will be used. Define all the formats and other design properties you think users might need. The more complete your template, the less users will need to customize their documents. For information on the formats and design properties you may need, see "Creating templates" on page 403.

Existing templates Before you create your own templates, take a look at existing templates, especially those provided with FrameMaker. You can use the templates as examples of how to set up items such as master pages, paragraph and character formats, headers and footers, cross-reference formats, and autonumbering.

If you find an existing template that's close to what you want, use it as the basis for your template. Modify the template and save it under a different name as a new custom template.

Online viewing If you're designing a document that will be used primarily online (but not in HTML format), make sure that the page size is no larger than the smallest screen size on which it will be displayed. Your document may need to be in landscape orientation if it will be used on laptop computers.

If you'll convert documents based on the templates to HTML, be sure to use formats and design elements that have HTML equivalents. For example, background graphics on master pages of your FrameMaker documents won't appear in the HTML files, rotated text will appear unrotated in the HTML files, and footnotes may not look the way you want.

Localization If documents based on your template will be translated into other languages, consider letting the translators review the template design. Some design elements may not work well with another language. The standard page size and default measurements may need to be different for use in other countries.

Fonts Decide on the fonts to use as early as possible. Fonts affect many other design elements—for example, line height in paragraphs, and the height of header and footer columns.

Platforms If documents based on the templates will be edited on several platforms, use fonts that are available on all of them. Also, set up cross-platform file naming conventions for your templates, for the documents that will be based on the templates, and for the folders in which the documents will be stored. For details, see the online manual *Working on Multiple Platforms.*

Ease of use Try to make your templates usable as well as attractive. For example, consider the following guidelines:

• Because people who use your template may not know FrameMaker as well as you do, keep the design as simple and easy to use as possible.

• Set up the template so that it works as seamlessly and automatically as possible. For example, specify a Next ¶ Tag in the Basic properties of the Paragraph Designer, or select Keep with Next or Keep with Previous in the Pagination properties.

• If you're preparing a set of templates for a book, prepare templates for a table of contents and an index as well as for the other files in the book. Also, consider making the templates general so that you have as few of them as possible. For example, you could create one template that is used for chapters, prefaces, and appendixes. That way, you won't have to update many templates if you need to make changes.

• Set up a master page for each page layout needed. For example, a chapter template might contain master pages for a first page, a right page, a left page, and a rotated page—even though only one or two of the chapters will contain pages that need to use the rotated master page.

• Document your template for other people who will use it. If the template contains sample text, you can use that text to describe the parts of the template. For example, a body paragraph might contain the text *This is a body paragraph*. When you finish the template, prepare a document summarizing its contents, and put that document in the same location as the template.

Creating templates

When you set up a template, you lay out master pages, define and apply formats, and define special text, such as cross-reference formats and variables. This section provides only an overview to the process of creating a template. For detailed instructions, see the other chapters in this book.

Designing the page layout

Begin a template by specifying the overall page layout. This includes choosing the page size, defining the column layout, creating master pages, and defining the basic document properties. For details, see "Page layout and templates" on page 370.

To design the page layout:

1 Create a new document. You can start with either a custom new document or a copy of an existing document you plan to modify.

To see how facing pages look as you design the page layout, display them side by side. Choose View > Options, and then choose Facing Pages from the Page Scrolling pop-up menu. Make the document window larger and zoom out, if necessary, to fit both pages in the window.

2 Define the column layout. If you started with a custom document, you have already specified the margins and the number of columns. If you're modifying an existing document, you may want to change the column layout.

3 Add and name any custom master pages you'll need.

4 Enter background text and graphics on the master pages, including headers and footers.

If a running header or footer shows the text or an autonumber of a document paragraph, such as a chapter or section title, it contains a Running H/F variable that refers to the paragraph. To set this up, decide what the tag for that paragraph will be.

5 Define the custom document properties, such as numbering and text options, and specify the view options.

Designing text formats

After designing the page layout, define how you want the text to be formatted. A good template has a paragraph and character format for every type of text that will be used in the documents. Consider the following guidelines:

• If your document will be opened or printed on computers other than your own, use fonts that are widely available.

• Paragraph formats provide the foundation of text formatting, so set them up before setting up the character formats.

• When creating a character format, set all the options in the Character Designer as As Is, and then specify only the settings you want to change. This way, the format will work with any paragraph format.

• Use tags that express the purpose rather than the appearance of the text. For example, name a format for emphasized text *Emphasis* rather than *Bold*. Then if you decide to change to italics for emphasized text, you can redefine the *Emphasis* format without having to retag any text.

• Use names that are easily recognizable. For example, you might name the formats for numbered lists *Step1* and *StepNext* rather than *st1* and *stn*. Or, if you want to use the keyboard to apply paragraph and character tags, consider naming your tags *st1 Step1* and *stn StepNext*. That way the tags and descriptions are quickly available from the keyboard. For more information, see "Applying predefined formats to text" on page 102.

• If the template uses more than one series of autonumbers, add a series label to the format for each autonumber. For example, define step autonumbers as *S:<n+>,* where *S:* is the series label.

• In paragraph formats, use either Space Above or Space Below consistently to add space above or below the paragraph. (FrameMaker uses only the larger of the two values to determine the space between paragraphs.)

Standardizing graphics, frames, and tables

If the documents will contain graphics, frames, or tables, follow these guidelines to maintain consistency:

• Put standard items on a reference page. You can include graphics that users will need again and again—for example, a symbol that calls attention to notes and cautions, or an anchored frame with a standard height and width. Users can copy and paste these items as needed.

- Create a paragraph format for anchored frames to provide consistent spacing around graphics. For example, a paragraph format named *Frame* could contain a Space Below setting of 20 points and a Line Spacing setting of zero. Then, each frame could be anchored to a blank paragraph with the Frame tag. Alternatively, you can use single-cell tables and their titles for graphics and their captions.

- If you'll use text frames for graphic callouts, create a paragraph format for the callouts. If you'll use text lines for callouts, create a character format. (You can't apply a paragraph format to a text line.)

- Choose a color model and redefine colors and color views if necessary.

- Prepare standard table formats. Not all the properties you set for tables can be imported into another document. The width of text in actual tables varies greatly, as do other properties. So, regardless of how you prepare your tables, users will probably need to adjust some of these properties themselves. Think of your tables as models for users to start with. For a list of the properties that are stored in the table format, see "About tables" on page 155.

Setting up numbering

The page numbering for new documents is set to Restart at 1. If you're building a template for continuous page numbering in books, you may want to set the page numbering in the template to Continue Numbering from Previous Page in Book. In addition, you may want to set the chapter numbering to Continue Numbering from Previous File in Book. For more information on setting up numbering, see "Determining how documents and pages are numbered" on page 461.

Defining special text

A template can include definitions and specifications for handling special text. You may need to do the following to set up special text items:

- Select a footnote numbering style and number format, and other footnote properties.

- Define formats for cross-references. Standardize as much of the cross-reference format as possible. For example, if cross-references should always be introduced by *see*, include that word in the format definition.

- Consider defining user variables for product names, document names, and other items that may change during the course of the project.

- Define condition tags, condition indicators, and view settings for conditional text.

- Define custom marker types if you'll need to create specialized indexes.

- Define equation sizes and fonts if any documents will have equations.

Setting up HTML options

If documents based on your templates will be converted to HTML, you'll need to set up the mappings and conversion macros that define how documents are converted. In particular, you should do the following:

- Set up the mappings from FrameMaker paragraph formats and character formats to HTML tags.

- Create the conversion macros that convert cross-reference formats to a form suitable for online documents.

- Create any other conversion macros you may need (for example, to place a logo at the top of every new Web page, or to define the title of the HTML document).

Setting up Japanese-language options

If your documents will contain Japanese-language text, define the combined fonts you want to use and set the properties of rubi text.

Testing templates

Before making your templates available to other users, test the templates thoroughly. You test a template by creating several sample documents from it and then examining the documents to make sure that everything looks and works the way you want. When testing a template, do the following:

• Intermingle different types of paragraphs on a page to make sure the line spacing and leading look right. Try each type of paragraph in a place where you expect it to be used. Sometimes a paragraph looks good in one place but not in another. For example, the space after a body paragraph may look correct when it appears before another body paragraph, but the space might be too large when it appears before a list.

• Review all autonumbering carefully. Examine the numbering for steps, figures, and any other autonumbered paragraphs defined in the template. Check the alignment of double-digit lists and chapter numbers.

• Apply each master page to a body page.

• Try each condition tag with its indicators on to make sure the indicators are clear and achieve the effect you want.

• Test the color definitions to make sure color objects look the way you expect. Remember that colors on your monitor may not look exactly the same as printed colors. If necessary, test some sample output with your commercial printer.

• Create tables using various table formats.

• Create equations to try out equation sizes and fonts and custom math element definitions.

• Generate a table of contents from a sample document. Check the chapter and heading autonumbering.

• Add several sample documents to a book and update the documents. Check any cross-chapter autonumbering, such as chapter and page numbers.

• Print a sample document to see how it looks.

• If the documents will be converted to HTML, test the conversion process.

Organizing templates in a folder

A template folder should contain all the related templates as well as a document that describes the templates and how to use them.

To organize templates in a folder:

1 Create a new folder and give it a name that identifies the purpose of the templates. If other users will work with the templates on a network, put the folder where your users have access to it and will be able to find it.

*In UNIX, you could also make the templates available to all users by saving them in the Templates folder ($FMHOME/fminit/*language*/Templates, where* language *is the name of the user interface language—for example, usenglish or ukenglish). In Windows, you can change the default template folder (For information, see the online manual Customizing FrameMaker on the Adobe website:* www.adobe.com/devnet/frame-maker/pdfs/Customizing_Frame_Products.pdf*).*

2 Move each template into the folder.

3 Set the file permissions so that template users have only read access to the templates.

Creating templates for generated files

When you generate a table of contents, an index, or another kind of generated file, if the folder that contains the source document or book file contains a file whose name matches the generated filename, FrameMaker uses the formatting of the existing file when generating the new one. In effect, the existing file serves as the new generated file's template, just as if you had imported formats from it. Use this feature to create generated-file templates that contain page layouts, paragraph and character formats, and the formatting information that appears on the reference page.

You can also update the formats in a generated file by importing formats from a template. However, you'll probably need to generate the file again after importing formats to see all the formatting. For information, see "Importing and updating formats" on page 408.

To create a template for a generated file:

1 Open the document or book file from which you want to generate the table of contents, index, or other file.

2 Generate the file.

3 Format the generated file. This formatted file is your template.

4 Save the generated file. Make sure that this generated-file template is in the folder that contains the document or book file that you will use to create a new generated file.

Creating templates to change conditional text settings

If you often change the view of conditional documents in a book, you may find it helpful to have a template for each view. You can then change the view of all the files in the book at the same time by importing the conditional text settings from one of the templates into the book file.

If you want to change the view of a single document that contains conditional text, it is easier to change the document's Show/Hide settings (see "Changing the view of conditional documents" on page 303).

To create templates that change conditional text settings throughout a book:

1 Set up a basic template for the conditional document with all conditions and condition indicators visible. You'll import conditional text settings from this template before editing a document.

2 Set up a template for each combination of conditions you want to view. Use these templates to view or print one version of the document at a time. You can also use the template to change variable definitions that are unique to a view.

Changing templates for blank paper and text files

When you create a blank paper document by clicking Portrait, Landscape, or Custom in the New dialog box, the document contains many default settings and formats—for example, display units, paragraph and character formats, table formats, variable definitions, cross-reference formats, and the contents of reference pages.

You can change the custom template for blank paper so that it contains the formats you want. The template can contain the same formats as any other template, except for the page layout. The master page layout, number of columns, and margins are determined when you create the blank paper documents.

You can also change the custom template that FrameMaker uses when you open text files.

Note: In Windows, you can change the filename that FrameMaker looks for when it creates a blank paper document or opens a text file. For information, see the online manual Customizing FrameMaker on the Adobe website: www.adobe.com/devnet/framemaker/pdfs/Customizing_Frame_Products.pdf.

To change the template for blank paper:

1 Change a document so it contains the formats and settings you want. Leave existing master pages empty and do not create custom master pages.

2 Remove all text frames from both the left and right master pages—even if a document is single-sided. (If the document is single-sided, choose Format > Page Layout > Pagination, select Double Sided, and click Set. Then select and delete the text frames on the master pages.)

3 Choose Special > Delete Pages and delete all body pages.

4 Save the document, using one of the following filenames and locations:

• (Windows) The Custom file in the FrameMaker fminit folder. (When you choose New > Adobe FrameMaker document from the context menu in a folder or on the desktop, the Shellnew.fm file is used.)

• (UNIX) The NewTemplate file in the $FMHOME/fminit/*language*/CustomDocs folder (*language* is the name of your user interface language—for example, usenglish or ukenglish).

To change the template for text files:

1 Change a document so it contains the formats and settings you want. For example, you can put headers and footers, a Paragraph Catalog, and master page graphics in the template document.

2 Delete all text on the body pages.

3 Click in the empty text frame on page 1, and tag it with the paragraph format you want all text in the document to use. The default template uses the Body paragraph format.

4 Save the document, using one of the following filenames and locations:

• (Windows) The txttmplt file in the FrameMaker fminit folder.

• (UNIX) The ASCIITemplate file in the $FMHOME/fminit/*language*/CustomDocs folder (*language* is the name of your user interface language—for example, usenglish or ukenglish).

To set up multiple templates for text files in UNIX:

❖ Name each template *suffix*Template, where *suffix* is the suffix of the text file being opened. When you open a text file that has a filename suffix, FrameMaker looks for a corresponding *suffix*Template file before it looks for an ASCIITemplate file. If it finds a *suffix*Template file, it uses the file as the template for the text file. For example, when you open a text file that ends with *.c*, FrameMaker looks for a file named cTemplate to use as a template.

Importing and updating formats

You can import paragraph formats, table formats, variable definitions, and other properties from any document. Typically, this other document is a template (though it doesn't need to be). You can also retain or remove any format overrides in the document—for example, changes that were made to a paragraph but not stored in the Paragraph Catalog.

You can also import properties into several (or all) files in a book at the same time.

To import and update formats in a document or book:

1 Open the document that contains the formats you want to import.

2 Make the appropriate document window or book window active. If a book window is active, select the documents you want to update.

3 In the document or book you're updating, choose File > Import > Formats.

4 Do one of the following:

• To import formats from a document, choose the document from the Import from Document pop-up menu. The pop-up menu lists all open, saved documents.

• To reapply formats from the current document, choose Current from the Import from Document pop-up menu.

5 Select the Import and Update settings you want to apply to the current document. By default, all options are selected. To deselect or select all options at once, click Deselect All or Select All. If you're updating variable definitions, cross-reference formats, or math definitions, and if any of these items use character formats, select Character Formats so that the formats are added to the document.

For information on these settings, see "About import and update settings" on page 409.

6 To remove changes that you made to individual formats and didn't save in a catalog, do the following:

• To remove page breaks that are not a part of a Paragraph Catalog format, select Manual Page Breaks.

• To remove paragraph, character, page layout, and table formatting overrides, select Other Format/Layout Overrides (see "About format overrides" on page 106, "Changing the look of tables" on page 162, and "About layout overrides" on page 380).

7 Click Import.

About import and update settings

When you import formatting information from a template, FrameMaker merges the information into the document rather than completely replacing the information. For example, when you import paragraph formats, FrameMaker adds the formats to the document's Paragraph Catalog. If any formats have the same name in both documents, the imported format overwrites the original format. Any formats that are not overwritten remain in the document.

Note: Format names are case-sensitive, so Body *is not the same as* body.

Paragraph formats The template's Paragraph Catalog is merged into the document, and all formats in the catalog are reapplied in the document. The template's PDF bookmark settings are also copied into the document.

Character formats The template's Character Catalog is merged into the document, and all formats in the catalog are reapplied in the document.

Page layouts The template's master pages are merged into the document, and body pages are updated with the master page changes. If the template and the document both have a master page with the same name, the template's master page replaces the document's. FrameMaker copies the change bar properties, all the settings in the Page Size and Pagination dialog boxes, and most settings in the View Options dialog box.

Table formats The template's Table Catalog and ruling styles are merged into the document, and all formats in the catalog are reapplied in the document.

Color definitions The template's color definitions and views are merged into the document.

Document properties The template's custom marker types and footnote properties; the volume, chapter, page, paragraph, footnote, and table footnote numbering styles in the Numbering Properties dialog box; the characters in the Allow Line Breaks After setting in the Text Options dialog box; and the Feather settings in the Line Layout dialog box are merged into the document. The PDF Setup settings (other than the bookmark settings) are also merged into the document. On Japanese-language systems, the rubi properties and kumihan rules (Japanese-language typesetting rules) are also merged into the document.

Reference pages All the template's reference pages (except for FrameMath reference pages) are merged into the document. If the template and the document both have a reference page with the same name, the template's reference page replaces the document's. To import FrameMath reference pages, select Math Definitions.

Variable definitions The template's variable definitions are merged into the document.

Cross-reference formats The template's cross-reference formats are merged into the document, and internal cross-references are updated.

Conditional text settings The template's condition tags and Show/Hide settings are merged into the document and applied to conditional text.

Math definitions The template's equation size and font settings, custom math element definitions, and FrameMath reference pages are copied into the document. If a custom math element in the document is deleted when the reference pages are merged, FrameMaker replaces the math element in equations with the name of the element enclosed by question marks.

Combined fonts On Japanese-language systems, the specifications for combined Japanese and Western fonts are merged into the document and applied to text that uses combined fonts.

Chapter 12: Tables of contents and indexes

About Tables of Contents

In Adobe FrameMaker, tables of contents (TOCs), lists of figures, and other such lists are generated from the text of specified paragraphs in a set of documents. An index is generated from markers you insert in documents. You can easily update both tables of contents and indexes whenever you revise the documents they're based on.

There are various types of lists, such as tables of contents, and indexes. You can create and update lists, create and update indexes, and title and format both lists and indexes.

About generated files

A *generated file* is a file created by FrameMaker by extracting paragraphs or marker text from a source document or from several documents in a book. Each time the generated file is updated, all the old paragraphs or marker text are discarded and the current text from the source documents replaces them. In this way, FrameMaker keeps generated files such as tables of contents and indexes current and accurate.

You can generate several types of lists and indexes in addition to a table of contents and standard index. For example, you can generate lists and indexes that contain text from paragraphs or from markers that you inserted in the text. The result may be a table of contents based on heading paragraphs, a list of illustrations based on figure titles, or an index based on special author markers.

Most lists and indexes fall into three categories: lists of paragraphs (or elements in structured documents), lists of markers, and indexes of markers. A fourth category, lists and indexes of references, is used less often, for special purposes.

Tables of contents and other lists of paragraphs or elements

Lists of paragraphs contain the text of specified paragraphs (those with the tags you specify), with one entry per paragraph (or elements in structured documents). You can generate the following lists of paragraphs (or elements in structured documents):

- Tables of contents, which contain headings of specified levels, listed in the order in which they occur in the source documents

• Lists of figures, tables, or paragraphs (or elements), which contain figure captions, table titles, or the text of other specified paragraphs, listed in the order they occur in the source documents

TABLE OF CONTENTS
Plate boundaries _____ **124**
  Divergent boundaries _____ 125
  Convergent boundaries _____ 126

LIST OF FIGURES
Fig. 46 Divergent boundaries _____ **125**
Fig. 47 Convergent boundaries _____ **126**
Fig. 48 Transform boundaries _____ **127**

Lists of paragraphs include TOCs and lists of figures.

• Alphabetical lists of paragraphs (or elements), which contain the same information as the other lists but present them in alphabetical order

Note: Tables of contents and lists support the Unicode text encoding standard.

Lists of markers

Lists of markers contain entries corresponding to the markers inserted on body pages in the source document. The markers are manually inserted on body pages in the source document (normally as marker elements in structured documents), and the marker text appears in the generated list. For example, you could create a list of reviewers' comments on a draft by generating a list of markers of type Comment. In a standard list of markers, entries appear in the order that they occur in the source document or book. You can also generate alphabetical lists of markers.

List of Markers

20305: head1: Tectonics 65
42407: head2: Pangea 65
25668: head.step: rift valley 66
35887: head1: Volcanism 68
25807: head2: Volcanic arc 72
39687: head2: Volcanic pipe 74

A list of Cross-Ref markers

Indexes of markers

Indexes of markers include standard indexes, author and subject indexes, and indexes of other types of markers. The markers are manually inserted on body pages in the source document, and the marker text appears in the index. You can use syntax (building blocks) in the marker text to specify index levels and special page numbering, sorting, and formatting. Entries are sorted alphabetically, and entries with the same text are merged into a single entry with several page references.

Index of Markers

10279
  head1
    Continental drift 74
10557
  Step
    fossil evidence 66
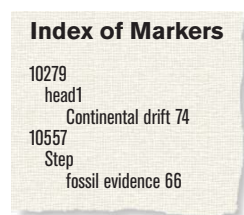
An index of Cross-Ref markers

Lists and indexes of references

Lists and indexes of references help you track special categories of information. You can generate lists and indexes of condition tags, external cross-references, unresolved cross-references, fonts, text insets, unresolved text insets, imported graphics.

List of Fonts:

Trajan-Regular @ 18.0 pt 1   Helvetica Light @ 8.5 pt 1
Helvetica @ 6.5 pt 1   Helvetica Bold @ 10.0 pt 1

Index of Fonts:

Trajan-Regular @ 10.0 pt 3-9   Helvetica Light @ 10.0 pt 5-7
Helvetica @ 10.0 pt 1-10   Helvetica Bold @ 10.0 pt 2-3
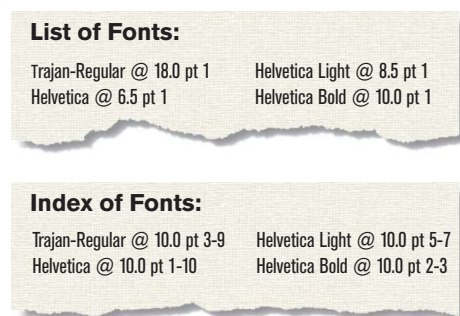
A list of fonts and an index of fonts

Preparing the sources for TOCs and other generated lists

A table of contents or other generated list is based on the content of its source. The source can be either a single document or a group of documents in a book. In most cases, you must prepare the source documents to get the results you want.

Preparing documents for a TOC or other list of paragraphs

When you generate a table of contents or other paragraph list, you choose the tags of the paragraphs you want to include. In the source document, do the following to avoid problems in generated lists:

• Tag paragraphs consistently. For example, use Heading1 for all first-level headings; don't use it for any other paragraphs.

- Make each item you want to include in the list a single paragraph. For example, you won't get the desired results if a heading is two lines (with each line separated by a paragraph return).

Note: You usually generate a list of references—such as a list of fonts or unresolved cross-references—for your own use while working with a document. You do not need to prepare the document before generating such a list.

Preparing documents for a list of markers

Before you generate a list of markers, the markers must be inserted in the source document.

In some cases, the markers may already have been inserted by FrameMaker into the document for another purpose (for example, Cross-Ref markers or Conditional Text markers). But in other cases, such as a list of reviewers' comments, you insert the markers yourself before generating the list.

Note: You can enter a tab character in marker text by typing either \t or the hexadecimal code \x08. However, if you generate a list of markers, only tabs entered as hexadecimal codes appear. If you generate an index of markers, only tabs entered as \t appear.

To insert a marker in a source document:

1 Click where you want to insert the marker and choose Special > Marker.

2 Choose a marker type from the pop-up menu. You can use any predefined marker type except Conditional Text, Header/Footer $1, Header/Footer $2, or Cross-Ref. You can also define your own marker types. (See "Adding custom marker types" on page 433.)

3 Enter text that you want to appear as the list entry in the list. You can enter up to 255 characters (127 Japanese double-byte characters). You can type the text or use alternative methods to enter marker text without typing. (See "Adding index markers" on page 421.)

4 Click New Marker. A marker symbol ⊤ appears when text symbols are visible.

Generating TOCs and other lists

You can generate tables of contents and lists of paragraphs, markers, or references from a book or from a single document. For information on generating indexes, see "Generating indexes" on page 425.

If you're working with structured documents, see "Generating TOCs and other lists in structured documents" on page 447 for element-specific information.

To generate a table of contents or list for a book:

1 Open the book window and select the file below where you want the generated file to appear.

2 Do one of the following:

- Choose Add > Table of Contents.

- Choose Add > List of, and then choose a type of list from the menu.

The items you see in the dialog box depend on the type of list you're generating.

3 In the Add File pop-up menu, specify whether the generated list will appear before or after the current document.

4 Enter a suffix or keep the default one. The suffix indicates the type of generated file. For example, TOC is the usual suffix for a table of contents.

Note: The suffix is not the same as the filename's extension. The suffix is used with paragraph tags in the generated lists, and appears as part of the generated file's filename, such as UserGuideTOC.fm.

5 Move items to the Include scroll list. To move an item between scroll lists, select the item and click an arrow, or double-click the item. To move all items from one scroll list to the other, Shift-click an arrow.

6 To have each entry in the generated list be linked to its source, select Create Hypertext Links. These links let you jump to the source of an entry by clicking on the entry (see "Testing and troubleshooting hypertext documents" on page 540).

7 Click Add, and then click Update. FrameMaker generates the list. You can view the generated list by double-clicking its name in the book window.

8 Save the generated list in the same folder as the source document or book. If you want to rename the generated file, use the book window to do so—FrameMaker will rename it on the disk and update all references.

The first time you generate a list (if you don't use a template as described in "Formatting lists and indexes using templates" on page 434), the list uses the page layout (master pages) of the first non-generated document in the book, and all entries look the same. For information on changing the format of a list—changes that won't be lost when you regenerate the list—see "Formatting lists and indexes" on page 434.

If the list already exists in the source document's folder when you save it, save it in the same folder and don't change the filename. That way, the list's formatting is used when you generate the list again. Otherwise, formatting changes won't be retained when you update the list.

To use a template or an existing generated file in a new book file, add it to the book as a generated file. Then put the existing file in the folder that contains the book file, using the name that appears in the book window.

9 Save any open files in the book. Open files are updated only in your computer's memory and not on the disk. If a file isn't open, the changes are made on the disk.

To generate a table of contents or list for a single document:

1 Do one of the following:

• Choose Special > Table of Contents.

• Choose Special > List of, and then choose a type of list from the menu.

2 When prompted, specify whether you want to create the generated file as a stand-alone document or add it to a book.

If you choose Yes to create a standalone document, FrameMaker will create a generated list in the original document's folder. If you choose No, FrameMaker adds the generated file to an open book, or creates a new book if necessary.

3 Enter a suffix or keep the default one. The suffix indicates the type of generated file. For example, TOC is the usual suffix for a table of contents.

Note: The suffix is not the same as the filename's extension. The suffix is used with paragraph tags in the generated lists, and appears as part of the generated file's filename, such as Chapter1TOC.fm.

4 Move paragraph tags, marker types, or reference types to the Include scroll list. To move an item between scroll lists, select the item and click an arrow, or double-click the item. To move all items from one scroll list to the other, Shift-click an arrow.

5 To have each entry in the generated list be linked to its source, select Create Hypertext Links. These links let you jump to the source of an entry by clicking on the entry (see "Testing and troubleshooting hypertext documents" on page 540).

6 Do one of the following:

• If you are creating a stand-alone list, click Set. FrameMaker generates and displays the list.

• If you are adding the list to a book, click Add, and then click Update. If a new book is created, choose File > Save Book As, and then save the book.

7 Save the generated list in the same folder as the source document or book.

The first time you generate a list (if you don't use a template as described in "Formatting lists and indexes using templates" on page 434), the list uses the page layout (master pages) of the source document or of the first nongenerated document in the book, and all entries look the same. For information on changing the format of a list—changes that won't be lost when you regenerate the list—see "Formatting lists and indexes" on page 434.

8 Save the list in the same folder as the source document or book. For information on renaming generated files, see "Renaming files in books" on page 459.

Updating and editing TOCs and lists

A generated list (such as a table of contents) can quickly become outdated. You can update a table of contents to include revised headings and up-to-date page numbers, or change which paragraphs are included.

You edit entries in a list by editing their corresponding paragraphs or markers in the *source* document and then regenerating the list. If you revise entries by typing directly in the list, your changes will disappear when you regenerate it.

For example, if you fix a typing error directly in a table of contents, that error will reemerge the next time you generate because it still exists in the source paragraph. To permanently fix an error, you must correct it by changing the paragraph or marker text in the source document and then regenerating the list or index.

This section describes updating and editing generated lists of paragraphs, not lists of markers. For information on updating and editing indexes or lists of markers, see "Updating and editing indexes" on page 427.

To update a TOC or list that is part of a book:

1 Make changes to the source documents as needed.

2 In the book window, choose Edit > Update Book.

3 Move the lists you want to update to the Generate scroll list, make sure Generate Table of Contents, Lists, and Indexes is selected, and then click Update.

To add or remove paragraph tags included in a TOC or list that is part of a book:

1 Select the generated file (such as the table of contents) in the book window.

2 Choose Edit > Set Up Table of Contents or Set Up List of *type*.

3 Move items between the list boxes as desired, and click Set. Then click Update.

To update a TOC or list that is a standalone document:

1 Make changes to the source document as needed.

2 In the source document, choose the command (such as Table of Contents) from the Special menu, and then choose Yes when prompted to create a standalone document.

3 Move items between the list boxes as desired, and click Set.

Finding the source of list entries

When you need to revise an entry, you must trace the entry back to its source—the corresponding paragraph in the source document—to revise the entry.

The quickest way to find the source of a list entry is to use the hypertext link on the entry in the generated file. This hypertext link can display and select the corresponding information in the source document. You can also find and select an entry in the source document by using the Find/Change command.

To find the source of a list entry by using a link:

1 If you did not select Create Hypertext Links when you generated the list or index, select it now and regenerate the list.

2 In the generated list, do one of the following:

• (Windows) Alt-Control-click an entry in a list.

• (UNIX) Control-right-click an entry in a list.

FrameMaker opens the source document to the page that contains the corresponding paragraph and selects it.

To find and select a paragraph by using Find/Change:

1 In the source document (not in the generated list), choose Edit > Find/Change.

2 Choose Paragraph Tag from the Find pop-up menu and enter the tag you want.

3 Click Find.

Editing and deleting list entries

You revise the contents of entries by changing their corresponding paragraphs in the source document.

To edit a list entry:

❖ In the source document, edit the paragraph text.

To delete a list entry:

❖ In the source document, delete the paragraph text.

Troubleshooting TOCs and lists

Minor problems in the source document may cause corresponding problems in the list. For example, an incorrectly tagged paragraph may cause an extra entry to appear in the list or to be missing from it. Or an empty paragraph may cause an extra line to appear in the list.

Continental drift 10
  Fit of the Continents 13
.... 13 ——— A
Many rocks are broken by the effect of
freezing and thawing .... 34 ——— B

A table of contents
A. *An extra line appears here.*
B. *This entry doesn't belong in the list.*

Extra entries or lines Incorrect formatting in the source document can cause extra paragraphs to appear in a list such as a table of contents. To correct this, do the following:

• If the list contains an entry that doesn't belong there, check the corresponding paragraph tag or marker type in the source document and either apply a different format to the paragraph or change the marker type.

• If the list contains an extra line with only a page number, delete the corresponding empty paragraph in the source document. If you need extra space between paragraphs in the source document, use the spacing properties of the paragraphs' formats rather than insert an empty paragraph.

Missing entries To include entries that appear in the source document, but not in the list, do one of the following:

• If all entries with a particular paragraph tag or marker type are missing, make sure the Include scroll list in the Set Up dialog box contains the correct items.

• If an occasional entry is missing, check the tag of the corresponding paragraph or the type of the corresponding marker in the source document. If the paragraph tag or marker type is incorrect, the information won't be included in the list.

Split entries A multiline heading in the source document can be a problem if the line breaks were created by pressing Return so that each line is a separate paragraph. The list will contain an entry for each paragraph in the heading. Fixing the list requires using only one paragraph for the heading in the source document.

Avoid using forced returns in a heading; forced returns appear in the generated TOC. Instead, to force a heading to break into two lines where you want, change the right indent of the heading paragraph in the source document. If the heading is centered, you may want to change both the left and right indents. You can also use nonbreaking spaces to force a heading to break acceptably.

Bad line breaks Bad line breaks in the list or its source document may separate information that belongs together in the list. To correct this, do one of the following:

• Change the characters after which FrameMaker allows line breaks. For example, FrameMaker normally allows a line break after an en dash (–). To disallow breaks after an en dash, use Format > Document > Text Options. See "Changing hyphenation and line breaks" on page 118.

• In the special text flow on the reference page, use nonbreaking spaces between the text and page number for each entry so that a page number does not appear on a line by itself. See "Editing special text flows for lists and indexes" on page 436 and "Changing hyphenation and line breaks" on page 118.

Disappearing titles A title you entered may disappear the next time you generate the list unless you follow the steps in "Adding titles and other static text to lists and indexes" on page 434.

Disappearing formatting If your formatting changes aren't retained when you regenerate (see "Formatting lists and indexes" on page 434), do the following:

• If you changed the filename or location of the list, change the name and location back. FrameMaker won't find any formatting changes unless you save the list in the same folder as the source document and use the filename that FrameMaker assigns.

• To retain paragraph and character format changes, store them in the list's Paragraph Catalog or Character Catalog, making them available the next time you generate the list. For details, see "Redefining (updating) formats" on page 132.

• To retain other changes, make them in the special text flow, as described in "Editing special text flows for lists and indexes" on page 436.

Embedding TOCs in a document

A typical table of contents is a separate file whose contents are mostly automatically generated by FrameMaker. However, if you want a small table of contents embedded at the start of a document instead of being a separate file, you can create the table of contents with cross-references.

A TOC embedded at the start of a document

FrameMaker does not automatically maintain this type of table of contents. If you change the order of references or delete a heading while editing the document, you'll need to rearrange the entries or delete an entry in the table of contents yourself.

Another approach is to generate a separate table of contents and then import the generated file by reference. The resulting text inset in the document is automatically updated when the table of contents changes. For information, see "Importing formatted text" on page 495.

To embed a TOC in a document by using cross-references:

1 Create a cross-reference format that formats text the way you want the table of contents entries to look. Typically, this format would contain the <$paratext> and <$pagenum> building blocks. For details, see "Creating cross-reference formats" on page 203.

2 At the start of the document, set up a cross-reference to each paragraph you want to appear in the table of contents (see "Inserting cross-references" on page 199). Use the cross-reference format you created in the previous step.

To maintain a TOC embedded in a document:

❖ Do the following:

• If you change the order of paragraphs while editing the document, rearrange the cross-references to be in the same order as the references. Then update the cross-references to update the table of contents (see "Maintaining cross-references" on page 206).

• If you delete a paragraph that's included in the table of contents, delete the cross-reference to it. Otherwise, the table of contents entry will be an unresolved cross-reference.

To embed a TOC in a document as a text inset:

1 Generate a table of contents in the usual way (see "Generating TOCs and other lists" on page 414).

2 Import the table of contents into a document (see "Using the Import command to import text" on page 495).

About indexes

In a typical index, entries are generated from markers and are sorted alphabetically. Entries with the same text are merged into a single entry with several page references. You can add special building blocks to marker text to control the form of the index entry—for example, to specify that it's a subentry or a cross-reference to another entry.
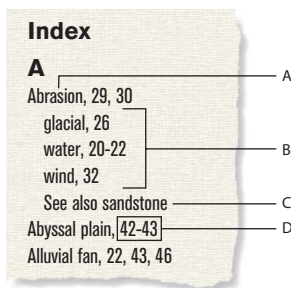
Index entries
A. Main entry
B. Subentries
C. Cross-reference to another entry
D. Page range

Most of the time, you'll use the Index marker type to create the standard index you find in the back of most books.

You can also create specialized indexes by using predefined marker types such as Subject or Author, or by using other marker types that you create (see "Adding custom marker types" on page 433).

Note: *Indexes support the Unicode text encoding standard.*

Adding index markers

Before generating an index for a document, you insert the markers for the index entries.
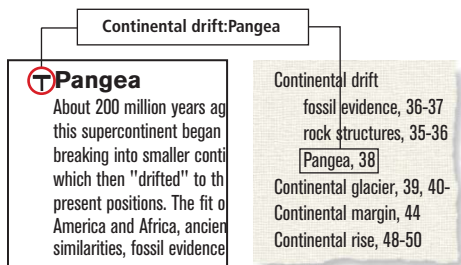
Index marker placed in the source document, and the formatted entry appearing in the index

To insert an index marker:

1 Click where you want to insert the marker and choose Special > Marker. You can insert markers only in text frames.

2 Choose a marker type from the pop-up menu. Typically, you'll use the Index marker type. To create several indexes for a document—for example, a subject index and an author index—use a different marker type for each.

3 Enter the text of the index entry in the Marker dialog box. You can enter up to 255 characters (127 Japanese double-byte characters). You can also use any of the following building blocks in marker text to control the form of the index entry and its location in the index.

Building block	Meaning
: (colon)	Separates levels in an entry
; (semicolon)	Separates entries in a marker
[ ] (brackets)	Specifies a special sort order for the entry
<$startrange>	Indicates the beginning of a page range
<$endrange>	Indicates the end of a page range
<$nopage>	Suppresses the page number in the entry
<$singlepage>	In a marker that contains several entries, restores the page number for an entry that follows a <$nopage> building block
Character tag between angle brackets (< >)	Changes the character format (for example, <Emphasis>)
<Default Para Font>	Restores the paragraph's default font

If you're working in Japanese fonts, enter all these building blocks except the brackets ([ ]) using single-byte characters.

Note: To enter a backslash or any special character used in these building blocks—colon, semicolon, bracket, or angle bracket—as regular characters, precede it with a backslash (\).

4 Click New Marker. A marker symbol ⊤ appears when text symbols are visible.

To insert an index marker without typing:

❖ To reduce or eliminate typing when creating index markers, do one of the following:

• Insert an empty marker (a marker with no text in it) at the beginning of the word you want to index. When you generate the index, the text to the right of the marker, up to the first space, becomes the text of an entry.

• To use text that appears in the document as the marker text, simply select the text in the document. As long as the selected word or phrase doesn't contain a marker, it automatically appears in the Marker Text box.

To put several entries in one marker:

❖ Type several entries in the marker, using a semicolon (;) between entries, as in the following examples.

Marker text	Result in index
Abrasion; Water erosion	Abrasion 10
	Water erosion 10
<$nopage>Erosion. See Abrasion;<$singlepage>Abrasion	Abrasion 10
	Erosion. See Abrasion

In the second example, <$nopage> affects subsequent entries in the marker. To return to a single page number, <$singlepage> is included with the next entry in the marker.

You can type any number of spaces after the semicolon to improve readability. Initial spaces are ignored when compiling the index unless they're special ones such as nonbreaking or em spaces. (If you're working in Japanese fonts, only single-byte space characters are ignored.)

Using subentries in index entries

You can group several entries under one entry for a larger category of information by marking them as subentries. You can also create subentries to subentries.
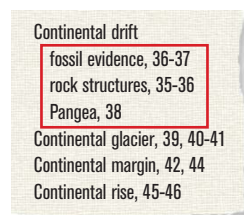
Subentries

To create a subentry:

❖ Separate the entry from the subentry with a colon (:). For example, to create the first subentry in the illustration, enter **Continental drift:fossil evidence**

A subentry is always preceded by the entry to which it is subordinate. If you need two subentry levels, place a colon between the subentry and the sub-subentry. For example, enter **Continental drift:fossil evidence:dating of**

Using cross-references in index entries

Indexes often contain cross-reference entries to direct readers to related terms. This makes it unnecessary to duplicate the entries and page numbers for related terms that already appear in the index.

Abrasion, 29, 30
  glacial, 26
  wave, 31-32
  wind, 32
  See also Sandstone
Abyssal plain, 42-43
  See also Bajada

Cross-references

Cross-references can also appear as subentries (usually preceded with *See also,* as in the illustration). For information on sorting cross-reference subentries so that they appear at the top or bottom of the list of subentries for the same main entry, see "Specifying sort orders in indexes" on page 424.

To create a cross-reference in an index entry:

❖ Insert a marker and use <$nopage> at the beginning of the marker text to prevent a page number from appearing with this entry. For example, to create the first cross-reference in the illustration, enter **<$nopage>Abrasion. See also Sandstone**

Using page ranges in index entries

You can use a page range such as 36–37 to mark information that spans several pages.

Continental drift
  convergent boundary, 17
  divergent boundary, 21
  fossil evidence, 36-37
  rock structures, 35-36
  Pangea, 38
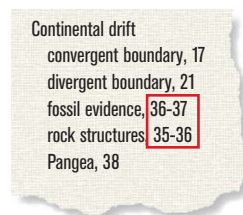
Page ranges

You can create a page range in an entry by manually inserting two markers to indicate the range, one at the beginning of the range and the other at the end. You can also have FrameMaker create page ranges for you automatically whenever the same marker text occurs on consecutive pages of a document. For example, instead of 3, 4, 5, the entry would automatically appear as a page range (3–5).

To manually create a page range for an index entry:

1 Insert an index marker at the beginning of the information, with <$startrange> at the beginning of the marker text. For example, to create the first page number in a range, enter **<$startrange>Continental drift:fossil evidence**

2 Add an index marker (or marker element, if working with a structured document) at the end of the information, identical to the first except that you enter <$endrange> rather than <$startrange> at the beginning of the marker text. For example, to create the second page number in a range, enter **<$endrange>Continental drift:fossil evidence**

If both markers appear on the same page, the page range collapses to a single page number.

To automatically create page ranges in an index:

1 Display the reference page that contains the special text flow for indexes, as described in "Editing special text flows for lists and indexes" on page 436.

2 Type the <$autorange> building block at the beginning of the paragraph whose tag begins with the marker type.

For example, to collapse the entries generated from markers of type Index into page ranges when possible, edit the paragraph tagged IndexIX to contain the following building blocks: **<$autorange><$pagenum>**

Using character formats in index entries

You can change the character format of specified text or of the page number in an entry. For example, you may want a book title to appear in italics, or you may want a particular page number to appear in bold. The character format must be stored in the Character Catalog of the index.
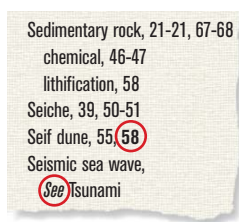
Character formatting

For information on specifying paragraph formats for entries in an index, see "Changing paragraph and character formats of entries" on page 436.

To use a character format in an index entry:

1 Enter an index entry, as described in "Adding index markers" on page 421.

2 To format part of the entry in a character format, do one of the following:

• To format specific text in an entry, type the character tag between angle brackets (< and >) before the text and type <**Default Para Font**> after it. For example, to create the entry "Tidal Waves *See* Tsunami," you might enter this marker text: **Tidal Waves <Emphasis>See <Default Para Font> Tsunami**

Character format tags affect only the entry they precede. For example, **<bold>fruit:strawberry** would generate a two-line entry that shows "fruit" as bold and "strawberry" without bold. To format both entries in bold, enter **<bold>fruit:<bold>strawberry**

• To format only the page number, type the character tag between angle brackets at the end of the marker text. For example, to create the entry "Erosion **24**," you might enter this marker text: **Erosion<Bold>**

If you're using a special character format for many—but not all—page numbers in an index (for example, to use bold for principal entries), you may want to create a custom marker type with that formatting. See "Adding custom marker types" on page 433.

Specifying sort orders in indexes

You can change where an entry appears in the index by specifying a sort order. For example, even though 486 would normally appear with other numbers in the index, you may want it to appear under *F* (as if it were spelled out as *four eighty-six*).

Similarly, if you're using a *See also* cross-reference in a subentry, you can ensure that it is the last one under the main entry.

If you're working in Japanese, kanji characters always need a special sort order defined. (For information on Japanese sort order, see "About Japanese sort order" on page 444)

To specify a sort order for an index entry:

❖ Add text between brackets ([and]) at the end of the marker text, indicating exactly how you want the entry sorted.

Index marker text	Result in index	Explanation
1950s[Nineteen fifties]	Neap tides 47 *1950s 10* North America 21	Sorts under *N* (for *Nineteen fifties*)
Erosion:of soil [Erosion:soil]	Erosion rate 32 of soil 10	Ignores the word *of*

<$nopage>Erosion:
see also Wind
[Erosion:aaa]
	Erosion
	   see also Wind
	   rate 16
		Sorts as the first entry under *Erosion*

<$nopage>Erosion:
see also Wind
[Erosion:zzz]
	Erosion
	   rate 16
	   see also Wind
		Sorts as the last entry under *Erosion*

Note: The sorting information, in brackets, must be the last item in the marker text.

To specify the sort order for a kanji index entry:

❖ Enter its pronunciation (yomigana) in brackets in the marker text. (Double-byte bracket characters may be used.)

Sort order for kanji index entry

Generating indexes

After you insert index markers in your source document, you can generate a standard index or any other index of markers. When you revise your source document, you can generate the index again to update it. For information on generating tables of contents and other lists, see "Generating TOCs and other lists" on page 414.

You ordinarily use predefined marker types. However, you can create your own marker types for special effects in indexes, such as displaying principal entries in bold or adding custom text to some page entries but not to others. The custom text might be the word *note* to follow some page numbers and *figure* to follow others. Scholarly indexes might use abbreviations, such as *ff* and *passim* after page numbers.

You can also generate a special-use index of references, such as an index of fonts used in a document. This type of index is not generated from markers.

You can generate an index from a single document or from a book.

To generate an index for a book:

1 Open the book window and select the file above where you want the generated file to appear.

2 Do one of the following:

• Choose Add > Standard Index.

• Choose Add > Index of, and then choose the type of specialized index you want to create.

3 Move the marker types you used for the entries to the Include Markers of Type scroll list.
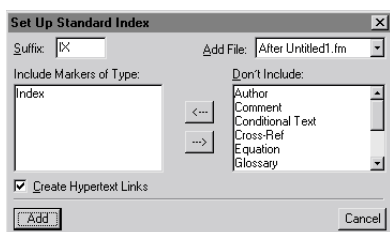
Generating a book index

To move an item between scroll lists, select the item and click an arrow, or double-click the item. To move all items from one scroll list to the other, Shift-click an arrow.

4 In the Add File pop-up menu, specify whether the generated list will appear before or after the current document.

5 Enter a suffix or keep the default one. The suffix indicates the type of generated file. For example, IX is the usual suffix for a standard index.

Note: The suffix is not the same as the filename's extension. The suffix is used with paragraph tags in the generated lists, and appears as part of the generated file's filename, such as UserGuideIX.fm.

6 To link each entry in the generated index to its source, select Create Hypertext Links.

7 Click Add, and then click Update. FrameMaker generates the index and displays it in a separate document.

8 Save the index in the same folder as the source document or book. If you want to rename the generated file, use the book window to do so—FrameMaker will rename it on the disk and update all references.

The first time you generate an index, it uses the page layout of the first nongenerated document in the book, and all entries look the same. (You can avoid this unformatted look by using a template; see "Formatting lists and indexes using templates" on page 434.) For information on making changes to the format of an index—changes that won't be lost when you regenerate it—see "Formatting lists and indexes" on page 434.

9 Save any open files in the book. Open files are updated only in your computer's memory and not on the disk. If a file isn't open, the changes are made on the disk.

To generate an index for a single document:

1 Do one of the following:

• Choose Special > Standard Index.

• Choose Special > Index of, and then choose the type of specialized index you want to create.

2 When prompted, specify whether you want to create the generated file as a standalone document or add it to a book.

If you choose Yes to create a stand-alone document, FrameMaker will create a generated index in the original document's folder. If you choose No, FrameMaker adds the index to an open book, or creates a new book if necessary.

3 Enter a suffix or keep the default one. The suffix indicates the type of generated file. For example, IX is the usual suffix for a standard index.

Note: The suffix is not the same as the filename's extension. The suffix is used with paragraph tags in the generated lists, and appears as part of the generated file's filename, such as UserGuideIX.fm.

4 To link each entry in the generated index to its source, select Create Hypertext Links.

5 Do one of the following:

• If you are creating a stand-alone index, click Set. FrameMaker generates and displays the index.

• If you are adding the index to a book, click Add, and then click Update. If a new book is created, choose File > Save Book As, and then save the book.

The first time you generate an index, it uses the page layout of the source document or of the first nongenerated document in the book, and all entries look the same. (You can avoid this unformatted look by using a template; see "Formatting lists and indexes using templates" on page 434.) For information on making changes to the format of an index—changes that won't be lost when you regenerate it—see "Formatting lists and indexes" on page 434.

6 Save the index in the same folder as the source document or book. For information on renaming generated files, see "Renaming files in books" on page 459.

To generate a standard index that displays page numbers in a variety of ways:
1 Create one or more custom marker types (see "Adding custom marker types" on page 433), and name them in a way that indicates their intended use. For example, if you want to distinguish index entries that refer to footnotes, you might create a marker type called IndexNote.

2 Index your source document, using the Index marker type for regular entries and your custom marker types for the others.

3 Generate the index. Select the Index marker type along with the custom ones.

In the index, edit the special text flow on the reference page for the custom marker (the reference page would be called IX) to add text after the page number or to change character format. For example, you might change the text for IndexNoteIX as follows to have *[note]* appear after the page number: **<$pagenum>** [**note**].

For details, see "Manually adding text to entries" on page 440, and for adding a character format, see "Changing paragraph and character formats of entries" on page 436.

4 Update the index again for your edits to take effect.

Updating and editing indexes

An index can quickly become outdated. With an index, you typically need to make some changes after you review the index for the first time. For example, you may see that some entries do not use parallel phrasing, or you may decide to change the organization of some entries.

You edit entries in an index by editing their corresponding paragraphs or markers in the *source* document and then regenerating the index. If you revise entries by typing directly in the index, your changes will disappear when you regenerate it.

For example, if you fix a typing error directly in an index, that error will reemerge the next time you generate because it still exists in the source marker. To permanently fix an error, you must correct it by changing the marker text in the source document and then regenerating the index.

This section describes updating and editing generated indexes (or lists of markers), not lists of paragraphs such as tables of contents. For information on updating and editing lists of paragraphs, see "Updating and editing TOCs and lists" on page 416.

To update an index that is part of a book:

1 Make changes to the source document as needed.

2 In the book window, choose Edit > Update Book.

3 Move the lists you want to update to the Generate scroll list, make sure Generate Table of Contents, Lists, and Indexes is selected, and then click Update.

To add or remove items included in an index that is part of a book:

1 Select the generated index in the book window.

2 Choose Edit > Set Up Standard Index (or Set Up Index of *type*).

3 Move items between the list boxes as desired and click Set. Then click Update.

To update an index that is a stand-alone document:

1 Make changes to the source document as needed.

2 In the source document, choose the command (such as Standard Index) from the Special menu, and then choose Yes when prompted to create a stand-alone document.

3 Move items between the list boxes as desired, and click Set.

Finding the source of index entries

When you need to revise an entry, you must trace the entry back to its source—the corresponding marker (or marker element, if working with a structured document) in the source document—to revise the entry.

The quickest way to find the source of an index entry is to use the hypertext link on the entry in the generated file. This hypertext link can display and select the corresponding information in the source document. You can also find and select a marker in the source document by using the Find/Change command. Or, if you're working with a structured document, you can select the element in the Structure View if you can see its bubble.

Important: If you're generating extremely large indexes (indexes of more than 50,000 markers), don't use Create Hypertext Links. Generating indexes of this size with Create Hypertext Links selected will take a very long time or might not succeed.

To find the source of an index entry by using a link:

1 If you did not select Create Hypertext Links when you generated the index, select this option and regenerate.

2 Choose Special > Marker.

3 In the generated index, do one of the following:

• (Windows) Alt-Control-click a page reference in an index.

• (UNIX) Control-right-click a page reference in an index.

FrameMaker opens the source document to the page that contains the corresponding marker and selects it. The marker text appears in the Marker dialog box.

To select a marker by using Find/Change:

1 In the source document (not in the generated list), choose Edit > Find/Change.

2 Do one of the following:

• If you're working in an unstructured document, choose Any Marker, Marker of Type, or Marker Text from the Find pop-up menu. Enter the marker type or marker text as needed.

• If you're working in a structured document, choose Element from the Find pop-up menu, enter the tag of the element you want to find, and click Set.

3 Click Find.

Note: When a marker is selected, the marker text appears in the Marker dialog box. Don't click Change in the Find/Change dialog box to change the marker text. If you do, FrameMaker replaces the marker itself. Instead, change the text in the Marker dialog box and then click Edit Marker.

To select a marker in the source document:

❖ Drag through it. As long as the selected text contains only one marker, its text appears in the Marker dialog box. If more than one marker is selected, the text of the first marker appears.

Editing and deleting index entries

You revise the contents of entries by changing their corresponding markers (or marker elements) in the source document.

To edit a marker (or marker element):

❖ Select the marker (or element), change the text in the Marker dialog box, and click Edit Marker.

To delete a marker (or marker element):

❖ Select the marker (or element) in the source document and press Delete.

Creating a master TOC or index for several books

When you produce several related books, you may want to create a master table of contents (TOC) or index for the books.

Master index

To set up a book file to create a master TOC or index:

1 Create a new book file that contains the files in all the books in order (see "Creating book files" on page 456).

If you're adding files that were generated in the original books, add them to the new book as *document* files (see "Adding files to books" on page 456). If you need to update those generated files, do so from their original book file, not from the master book file.

2 Add a table of contents, an index, or other generated file to the new book file. This generated file will be the master file.

3 Using the book window, specify how volume, chapter, and page numbers for each document should appear in the master generated file. See "Setting up numbering" on page 462.

Note: When you update the book, the book's numbering options will override the documents' numbering options, unless you select Read from File.

4 Using the book window, specify the appropriate pagination and page layout options (see "Changing the basic page layout of a document" on page 373).

5 Generate and update the file (see "Updating books" on page 466).

Troubleshooting indexes

If you type marker text incorrectly, the index will reflect it. The first time you generate an index, problems often appear.

Missing entries If an entry is missing entirely from the generated index, do the following:

• Check whether the corresponding marker (or marker element) is an incorrect marker type. You can do this by generating a list of markers that includes all marker types and then searching the list for the entry you want. For details, see "Generating TOCs and other lists" on page 414.

• Check whether the corresponding marker (or marker element) is in hidden conditional text by using Special > Conditional Text to show all conditional text, and then generating the index again.

• Check whether the marker (or marker element) was deleted accidentally.

Entries containing double question marks Double question marks (??) in a page range indicate that FrameMaker can find only one of the two markers that define the range. If you see double question marks, do the following:

• Check that neither marker (or marker element) is missing.
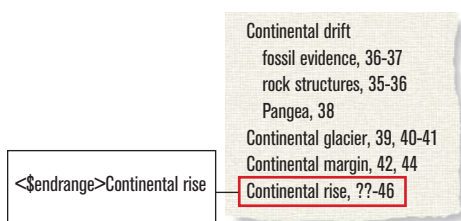
Missing <$startrange> and the resulting page range

• Check that the spelling, punctuation, and capitalization of the marker text match exactly.

Continental drift
    fossil evidence, 36-37
    rock structures, 35-36

<$startrange>
Continental drift:Pangaea
<$endrange>
Continental drift:Pangea

    Pangaea, 38-??
    Pangea, ??-39
Continental glacier, 39, 40-41
Continental margin, 42, 44
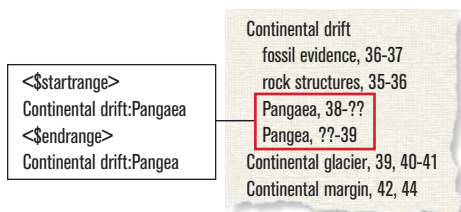
Inconsistent spelling and the resulting page range

• Check that <$startrange> appears in the first marker (or marker element) and that <$endrange> appears in the second marker (or marker element).

Continental drift
    fossil evidence, 36-37
    rock structures, 35-36

<$endrange>
Continental drift:Pangea
<$startrange>
Continental drift:Pangea

    Pangea, ??-38, 39-??
Continental glacier, 39, 40-41
Continental margin, 42, 44
Continental rise, 45-46
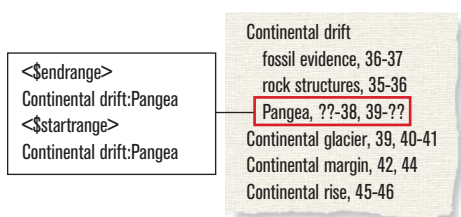
<$endrange> comes first and causes the resulting page range.

Missorted entries Most sorting problems are the result of incorrect marker text. If you see missorted entries, do the following:

• Check that the colons and semicolons are used correctly. If a semicolon appears where a colon belongs, two main entries appear rather than one subentry. If a colon is missing, a subentry appears incorrectly as a main entry.

Continental drift
    fossil evidence, 36-37
    rock structures, 35-36

Continental drift:Pangea

Continental drift Pangea

    Pangea, 38
Continental drift Pangea, 39
Continental glacier, 39, 40-41
Continental margin, 42, 44
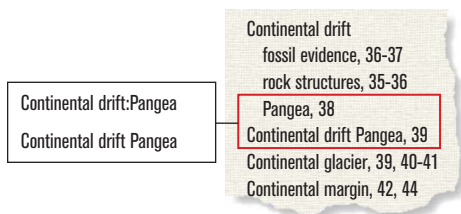
Missing colon and the resulting missorted entry

• Check that sorting information is present and correct, and appears between brackets ([ ]) at the very end of the marker text (see "Specifying sort orders in indexes" on page 424). For example, if you want to sort a cross-reference as the last subentry, the sorting information in the marker text for it should end with *:zzz*.

Continental drift
    fossil evidence, 36-37
    rock structures, 35-36
    Pangea, 38

<$nopage>Continental drift:
See also Wegner

    See also Wegner
    transform boundaries, 77
Continental glacier, 39, 40-41
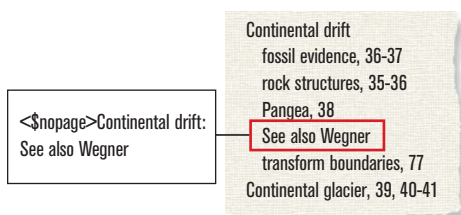
Missing :zzz and the resulting missorted entry

- If sorting errors occur in a pattern—for example, if all numeric entries appear at the end of the index rather than at the beginning—check that the sorting information in the special text flow on the reference page is correct. For details, see "Changing the sort order of indexes" on page 442.

Page numbers with See or See also cross-references A cross-reference index entry may incorrectly contain a page number. Make sure that <$nopage> appears at the beginning of the marker text for the cross-reference entry.
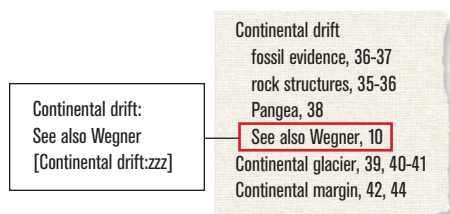
Missing <$nopage> and the page number wrongly appears

Bad line breaks If entries break between numbers in a page range or between the end of the entry and the first page number, do the following:

- Change the characters after which FrameMaker allows line breaks. To disallow line breaks after certain characters, such as an en dash (–), use Format > Document > Text Options (see "Changing hyphenation and line breaks" on page 118).

- To force the end of an entry to appear on the same line as the page number, use a nonbreaking space, an en space, or an em space as the separator between them.

- If you specified in the special text flow on the reference page that spaces or hyphens appear between page numbers in a range, make sure they are nonbreaking (see "Editing special text flows for lists and indexes" on page 436 and "Changing hyphenation and line breaks" on page 118).

- Change the volume or chapter numbering for the source document's page numbers (see "Setting up numbering" on page 462). If the book's pages are numbered by chapter *(1-1, 1-2, …, 2-1, 2-2, …),* the volume or chapter number should be followed by a nonbreaking hyphen. See "Changing hyphenation and line breaks" on page 118.

Bad line breaks

Disappearing titles A title you entered may disappear the next time you generate the index, unless you follow the steps in "Adding titles and other static text to lists and indexes" on page 434.

Disappearing formatting If your formatting changes aren't retained when you regenerate (see "Formatting lists and indexes" on page 434), do the following:

- If you must rename a generated file, do so using the book window. FrameMaker will rename the file in the book window and on disk.

- To retain paragraph and character format changes, store them in the index's Paragraph or Character Catalog, making them available the next time you generate the index. For details, see "Redefining (updating) formats" on page 132.

• To retain other changes, make them in the special text flow, as described in "Editing special text flows for lists and indexes" on page 436.

Adding custom marker types

You can create your own marker types and then use them in lists or indexes just as you would any other type of marker. Once a new marker type has been created, it can be shared with other documents and books.

For an example of using custom marker types with indexes, see "Generating indexes" on page 425.

To add or delete a custom marker type:

1 Choose Special > Marker and choose Edit from the Marker Type pop-up menu.

2 Do one of the following:

• Type a new name and click Add.

• Choose a name from the pop-up menu and click Delete.

3 Click Done.

You can also use the book window to edit custom marker types. Select the documents you want to affect, and then press Esc e m t.

To copy a marker type from one document to another:

❖ Do one of the following:

• Copy a marker or text containing a marker and paste it in another document.

• Choose File > Import > Formats and import Document Properties.

To rename a marker type:

1 Choose Special > Marker and choose Edit from the Marker Type pop-up menu.

2 Choose the marker type you want to rename from the pop-up menu and click Change.

3 Do one of the following:

• To rename the specified markers with a new name, enter the new name in the To text box.

• To rename the specified markers with the name of another marker type, choose the new marker type from the To pop-up menu.

4 Click OK, and then click Done.

Adding titles and other static text to lists and indexes

If you want to add a title or other unchanging text in your list or index, add it after you generate the list or index the first time.
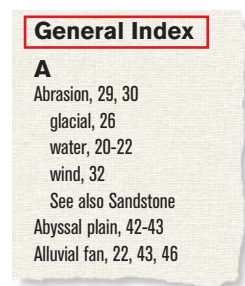
Static text as a title in a generated file

You can also add static text to a template and then use the template to format a list or index (see "Formatting lists and indexes using templates" on page 434).

To create a title for a list or index:

1 Type the title before the first entry on a body page.

2 Use the Paragraph Catalog to give the text a special paragraph format for static text; or create a new paragraph format for the title.

3 If you create a new paragraph tag, make sure it does not end with the suffix assigned when you created the generated file, such as IX for a standard index or TOC for a table of contents. When you generate the index again, FrameMaker replaces only the paragraphs that have tags ending with the suffix.

Formatting lists and indexes

The first time you generate a list or index (if you don't use a template as described in "Formatting lists and indexes using templates" on page 434), it uses the page layout of the source document or the first nongenerated document in the book, and all entries look the same. You can change the page design and the formats in the list or index after you generate it, just as you do in any other document. When you generate the file again, your changes are retained.

For example, you can change the headers and footers, the number of columns of text, and the paragraph and character formats used for entries. You can use a tab and tab leader dots before the page numbers in entries, or include the autonumber of a paragraph in an entry. You can also include the chapter and volume numbers in entries.

You can also control the formatting of generated lists or indexes by changing the contents of the special text flow on the reference page of the generated file. The special text flow is created when the list or index is first generated.

For information on changing paragraph and character formats, see "Redefining (updating) formats" on page 132.

Formatting lists and indexes using templates

You can use a template for a list or index rather than generating the list or index and then making format changes one by one. For information on creating a template for a list or index, see "Creating templates for generated files" on page 407 and most of the remaining sections of this chapter.

To have FrameMaker use a template for a generated file:

1 Copy the template to the source document's folder using the same filename as the list or index.

2 Generate the list or index.

💡 *You can also use File > Import > Formats to import a template's formats. Then generate the list or index again so any changes in the special text flow are reflected in the generated file.*

About special text flows

Many formatting aspects of a list or index are controlled by a special text flow on a reference page in the generated file. The name of the reference page matches the default suffix, such as TOC for a table of contents or IX for a standard index.

For generated lists, each paragraph in the flow corresponds to a paragraph tag or marker type you included in the list. These paragraphs have tags that end with the default suffix. For example, a paragraph tagged Heading1TOC in the text flow for a table of contents corresponds to the entries for first-level headings (tagged Heading1 in the source document).


```
<$paratext>
Chapter <$chapnum>........................<$pagenum>
<$paratext>........................................<$pagenum>
<$paratext>........................................<$pagenum>
<$paratext>........................................<$pagenum>
```
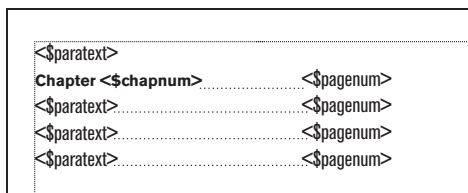
Special text flow on reference page for a table of contents

For indexes, the paragraphs in the flow correspond to the marker types you included in the index, the levels of entries and subentries, the sort order, the separator text used, and several other index properties.


```
1, 2–3 ──────────────────────────── A
Level2IX ┐
Level1IX ┘────────────────────────── B
Symbols[\ ];Numerics[0];A;B;C;D;E;F;G;H;I;J;K;L;M;N;O;P;Q; ── C
R;S;T;U;V;W;X;Y;Z
<$symbols><$numerics><$alphabetics> ─────────────── D
── ──────────────────────────────── E
```
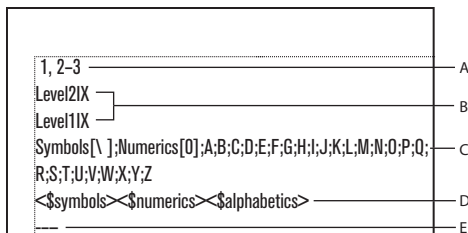
Special text flow for an index
A. *Separators placeholder*
B. *Levels of entries*
C. *Group titles placeholder*
D. *Sort order*
E. *Ignore characters placeholder*

If the list or index was created with hypertext links, the special text flow also contains a paragraph that specifies the form of the hypertext commands in the generated file. The paragraph's tag begins with the word *Active*.

Special text flows for lists and indexes have special paragraphs with placeholder text. This placeholder text lets you specify how your entries will look when you regenerate the file.

Editing special text flows for lists and indexes

Building blocks such as <$pagenum> and <$paratext> in each paragraph of the special text flow determine the information that appears in the list or index and the order in which the information appears. You can use the following building blocks in the special text flow.

Building block	Meaning
<$autorange>	Automatically creates index page ranges (see "Using page ranges in index entries" on page 423)
<$numerics> <$alphabetics> <$symbols> <$kana>	Specifies the overall sort order in an index (see "Changing the sort order of indexes" on page 442)
<$pagenum>	Displays the page number on which the source paragraph or marker appears
<$volnum>	Displays the volume number of the document in which the source paragraph or marker appears
<$chapnum>	Displays the chapter number of the document in which the source paragraph or marker appears
<$paratext>	Displays the text of the paragraph, excluding any autonumber
<$paranum>	Displays the paragraph's entire autonumber, excluding spaces and tabs at the end of the autonumber (for example, *Section 2.1.1*)
<$paranumonly>	Displays the paragraph's autonumber counters and the characters between them (for example, *2.1.1*)
<$paratag>	Displays the source paragraph's tag

To edit the special text flow for a list or an index:

1 In the list or index, choose View > Reference Pages.

2 Display the reference page that contains the text flow you want. (The reference page name matches the default suffix, such as TOC for table of contents or IX for a standard index.)

3 Edit the appropriate paragraphs in the text flow. For specific editing instructions, see "Changing paragraph and character formats of entries" on page 436 and the following sections.

4 Choose View > Body Pages.

5 Generate the index again to see the effect of your changes.

Note: Make sure you generate the list or index from the source document, not from the generated file.

Changing paragraph and character formats of entries

You can change the look of entries in a generated list and index by modifying their paragraph formats.

You can also change the character format of any text appearing in a list and of all index page numbers created with the same marker type. For example, you could make all page numbers italic.

Note: If you create a new character format in the source document after you generate the list or index, you may have to use File > Import > Formats to import the character format into the generated list. This is necessary only if you use the new character format in a paragraph or marker that's part of the list or index. If you created the character format before first generating the list or index, FrameMaker imports it for you into the generated file.

To change the paragraph format of entries:

1 In the list or index, display the reference page that contains the special text flow. Usually this is TOC for a table of contents and IX for a standard index.

2 Locate the placeholder paragraphs that have paragraph formats corresponding to the list or index entries. (For example, Level1IX is the format for the placeholder text for the first-level index entry, and Head1TOC is the format for a Head1 entry in a table of contents.)

3 Change the properties of the paragraph formats, such as indents and font size, and update the paragraph formats, so that they are available the next time you generate the file. For details on modifying formats, see "Redefining (updating) formats" on page 132. The placeholder paragraphs show you how the entries will look.
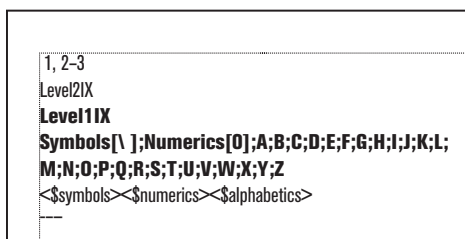
Formatted placeholder paragraphs

To change the character format of entries:

1 In the list or index, create a new character format and store it in the Character Catalog (see "Creating new formats" on page 135).

2 Choose View > Reference Pages and display the reference page that contains the special text flow.

3 In the paragraph whose tag corresponds to the entries you want to change, do the following:

• In a list, enter the character tag between angle brackets (< >) before the text you want to change. To change back to the paragraph's default font, enter **<Default Para Font>**. For example, you could define a format tagged ChapNumFont, and then use it to format chapter numbers in a larger font in a table of contents.
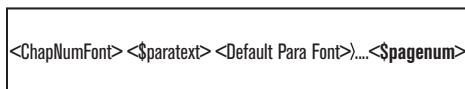
Reference page and resulting TOC

• In an index, enter the character tag, between angle brackets (< >), to the left of <$pagenum>. For example, if IndexPgNum is a character format defined for italic page numbers in a standard index, you could use it to format just the page numbers in the paragraphs tagged IndexIX.

<IndexPgNum> <$pagenum>

Index

A

Abrasion, *156, 158*	Bonding	Continental drift
glacial, *145*	covalent, *33-34*	fossil evidence, 36-37
river, *105-6*	ionic, *32-33*	rock formation, 35-36
wind, *32*	metallic, *36*	Pangea, *38*
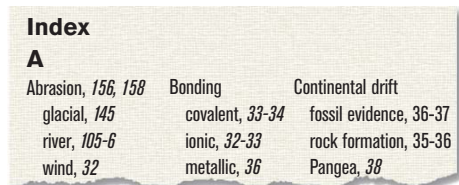
Reference page and resulting index

You can also change the character format of text that appears in a list or index by applying a character format directly to the building block rather than preceding the building block with a character tag enclosed in angle brackets. Be careful not to apply the character format to the paragraph symbol.

Including volume, chapter, and paragraph autonumbers

In a generated list, you can include autonumbers—text and numbers inserted automatically as part of a paragraph format—in addition to (or instead of) page numbers in entries. In an index, you can use autonumbers instead of page numbers if all paragraphs that contain index markers are also autonumbered.

Abrasion, §3.1
    glacial, §3.3, §5.9, §6.1
    river, §10.1
    wave, §10.3
    wind, §10.2
    See also Sandstone §6.2

Index using section symbols and section numbers instead of page numbers

You can use the following building blocks to add autonumbers:

• <$volnum> and <$chapnum>, which include the volume and chapter counters. (See "Determining how documents and pages are numbered" on page 461.)

Reference page
Vol. <$volnum>-<$chapnum>.<$pagenum>

Index

A

Abrasion, Vol. 1-3.1	Bonding, Vol. 2-6.3
glacial, Vol. 1-3.3	covalent, Vol. 2-6.4

Building block for volume and chapter autonumbering, and resulting index

- <$paranumonly>, which includes the counters and the characters between them (for example, *2.2* for a paragraph whose autonumber is *Section 2.2*).
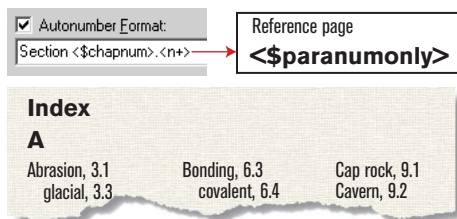
Building block for paragraph autonumbering using section numbers, and resulting index

- <$paranum>, which includes the counters and all text in the autonumber (except for spaces or tab characters at the end).
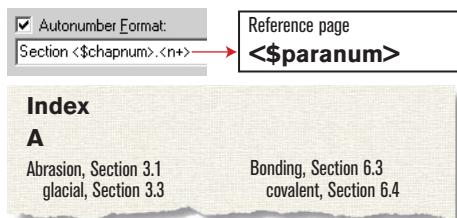
Building block for paragraph autonumbering using "Section" text and section numbers, and resulting index

To include volume and chapter autonumbers:

1 Choose View > Reference Pages and display the reference page that contains the special text flow.

2 In a list or index, type the <$volnum> or <$chapnum> building block where you want to insert the autonumber.

For example, to include the chapter number along with the page number (such as 3-1) in entries generated from markers of type Index, type **<$chapnum>-** before the <$pagenum> building block in the paragraph tagged IndexIX.

To make sure numbers such as "3-1" don't break between lines, insert a nonbreaking hyphen by pressing Esc hyphen h. (See "Changing hyphenation and line breaks" on page 118.)

To include paragraph autonumbers:

1 Choose View > Reference Pages and display the reference page that contains the special text flow.

2 Do one of the following:

- In a list, type the <$paranumonly> or the <$paranum> building block where you want to insert the autonumber.

- In an index, replace the <$pagenum> building block with <$paranum> or <$paranumonly> in the paragraph with the tag that begins with the marker type. For example, to include the paragraph autonumber rather than the page number in entries generated from markers of type Index, replace the <$pagenum> building block in the paragraph tagged IndexIX.

Changing page number separators

A typical index entry such as *Erosion 1, 2–3* includes a space after the entry text, a comma and a space between page numbers, an en dash to show a page range, and nothing after the last number. You can change the en dash to the word *to,* or change this separator text in any other way. For example, you could change the separator text so that a comma appears after the entry, such as *Erosion, 1.*

To change page number separators:

1 Choose View > Reference Pages, and display the reference page that contains the special text flow.

2 Edit the Separators paragraph. (Look for the paragraph containing *1, 2–3.*) You can change any separator, but you must use the placeholder numbers 1, 2, and 3.
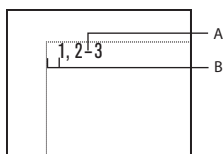
A custom Separators paragraph on the IX reference page
A. *En dash* **B.** *Em space*

Manually adding text to entries

You can add text to all entries generated from paragraphs with a particular tag or markers of a particular type. For example, you can enclose page numbers in brackets.

Brackets added in a TOC

You can also use custom marker types with added text to display page numbers in a variety of ways in an index. For example, suppose you want to generate the following scholarly index.
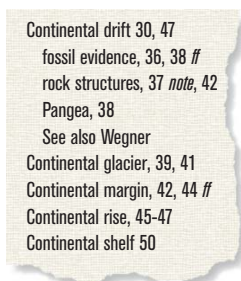
Custom page numbers added in an index

To do this, you need two custom markers: one for page numbers followed by *ff,* and one for page numbers followed by *note*. You might call these markers Indexff and IndexNote.

When generating the index, you include all three marker types (Index plus the two new ones). After generating the index for the first time, you can edit the special text flow for the marker types on the reference page.

Marker type	Edit to the reference page	Result
Indexff	<$pagenum> *ff*	15 *ff*
IndexNote	<$pagenum> *note*	15 *note*

The next time you generate the index, the changes appear in the generated index.

To manually add text in an entry:

1 Choose View > Reference Pages, and display the reference page that contains the special text flow for the list or index.

2 Enter the text where you want it to appear. For example, to enclose all page numbers in brackets, enter brackets around the page number building blocks: **<$paratext> [<$pagenum>]**

Using tabs and tab leaders

You can use tabs to align page numbers in a list or index. You can also use tabs to add tab leaders, such as a row of dots, between entry text and page numbers.

Continental drift 10
Fit of the Continents 13
Fossil Evidence 16
Paleoclimatic Evidence 34

Right-aligned tab stop with leader dots in a TOC

Index
A
Abrasion 14,   29,   30
  glacial 26
  water 20-21,   40
  wind 40, 132

Tab stops make index page numbers line up in columns.

To use tabs and tab leaders in a list:

1 Choose View > Reference Pages and display the reference page that contains the special text flow for the table of contents or list.

2 Select the space between the <$paratext> and <$pagenum> building blocks in the paragraph whose tag matches the entries you want to change, and then press Tab.

3 Change the paragraph format of the entries by adding a tab stop where you want to align the page numbers (see "Changing tab stops" on page 112). Define the format to include leader dots, if you want. Then update the paragraph formats so the changes are available the next time you generate the list. For details, see "Redefining (updating) formats" on page 132.

To use tabs and tab leaders in an index:

1 Choose View > Reference Pages, and display the reference page that contains the special text flow for the index.

2 Select the space before the number 1 in the Separators paragraph, and then press Tab.

3 Change the paragraph format for each level of the index by adding a tab stop where you want to align the page numbers (see "Changing tab stops" on page 112). Define the formats to include leader dots, if you want. Then update the paragraph formats of all entries at each level of the index, so the changes are available the next time you generate the index. For details, see "Redefining (updating) formats" on page 132.

Rearranging information in list entries

You can specify the order in which the parts of a list entry appear. For example, you can specify that the page number appear first, followed by the paragraph text.

To rearrange information in list entries:

1 Choose View > Reference Pages, and display the reference page that contains the special text flow for the table of contents or list.

2 Rearrange the building blocks. For example, to put the page number first, followed by the paragraph text, rearrange the building blocks: <$pagenum> <$paratext>.

Changing the sort order of indexes

Indexes are sorted so that special symbols appear first, numbers appear second, and alphabetic characters appear last. By default, a few punctuation characters are ignored in sorting, and alphabetic characters appear in the correct sort order for the English language.

Note: When generating indexes in multilingual documents, symbols sort based on the Unicode Collation Algorithm (UCA) of the Unicode text encoding standard.

You can change the sort order of index entries—for example, to sort alphabetic characters based on the sort order for another language. You can also change whether the index sorts entries letter by letter or word by word.

Sorted letter by letter	Sorted word by word
Seabed	Sea level
Sea level	Sea walls
Seasonal change	Seabed
Sea walls	Seasonal change

You change the sort order by editing the contents of the IgnoreChars and the SortOrder paragraphs in the special text flow of the reference page for the index. For information, see "Editing special text flows for lists and indexes" on page 436 and the following sections.

Specifying characters to ignore

By default, FrameMaker ignores hyphens, nonbreaking hyphens, en dashes, and em dashes when sorting index entries. You can specify other characters to be ignored—for example, underscore characters, periods, brackets, braces, and quotation marks.
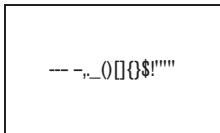
An IgnoreChars paragraph with added characters

To specify the characters to ignore when sorting an index:

1 Choose View > Reference Pages, and display the reference page that contains the special text flow for the index.

2 Edit the IgnoreChars paragraph.

Note: If you're working with Japanese fonts, you may want to include the Chouon character ⎯ in the IgnoreChars paragraph. The Chouon character is normally used in Japanese to lengthen the vowel sound that it follows, but you probably won't want it to affect the sort order.

To sort letter by letter instead of word by word:

1 Choose View > Reference Pages, and display the reference page that contains the special text flow for the index.

2 Add a space at the beginning of the IgnoreChars paragraph in the special text flow of the index. (The space cannot be at the end of the paragraph.)

Specifying sort order

The SortOrder paragraph in the special text flow contains building blocks that control how characters are sorted in an index.
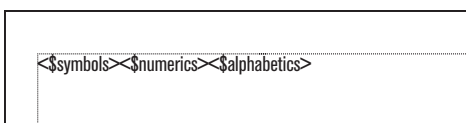
SortOrder paragraph

Each sort order building block represents several characters in a particular order. The following table shows the order for US English. The alphabetic sort order differs slightly for other languages.

Building block	Characters, in this order
<$numerics>	0 1 2 3 4 5 6 7 8 9
<$alphabetics>	AÁÀÂÄÃÅaáàâäãåª Bb CÇcç Dd EÉÈÊËeéèêë Ffƒ Gg Hh IÍÎÏiíîï Jj Kk Ll Mm NÑnñ OÓÒÔÖÕØoóòôöõøº Pp Qq Rr Ss Tt UÚÙÛÜuúùûü Vv Ww Xx YŸyÿ Zz
<$symbols>	All other characters in ASCII order

To sort symbols, numbers, or other characters in another location in an index:

1 Choose View > Reference Pages, and display the reference page that contains the special text flow for the index.

2 Rearrange the building blocks in the SortOrder paragraph in the special text flow. For example, to put symbols at the end of an English-language index instead of at the beginning, arrange the building blocks as follows: <$numerics><$alphabetics><$symbols>

To specify your own sort order:

1 Choose View > Reference Pages, and display the reference page that contains the special text flow for the index.

2 Replace a building block in the SortOrder paragraph with the specific characters in the order you want them sorted. Follow these rules when entering a new sort order:

• If you replace <$alphabetics> with individual characters, separate the letter groups with a space. (*Letter groups*— for example, Ffƒ—are characters that are sorted as if they were the same character, unless they are the only characters that differ in the sorted text. In that case, the first character in the string appears first.)

• If you replace <$symbols> with individual characters, use a backslash before the angle bracket symbols (< >).

• Don't press Return at the end of a line. Let FrameMaker wrap the characters automatically from line to line.

• To indicate that a letter pair should be sorted as a single character, specify the letter pair between angle brackets (< >)—for example, CÇcç<CH><Ch><ch>. In this example, all the characters or letter pairs are in the same letter group (the letter C). The letter pair CH is sorted after the letter C, and uppercase letter pairs are sorted before lowercase letter pairs.

About Japanese sort order

A document that uses Japanese fonts includes the <$kana> building block, which controls sorting of Japanese kana (hiragana and katakana).

Building block	Characters, in this order
<$kana>	Symbols[\], Numerics [0]、A、B、C、D、E、F、G、H、I、J、K、L、M、N、O、P、Q、R、S、T、U、V、W、X、Y、Z、あ、い、う、え、お、か、き、く、け、こ、さ、し、す、せ、そ、た、ち、つ、て、と、な、に、ぬ、ね、の、は、ひ、ふ、へ、ほ、ま、み、む、め、も、や、ゆ、よ、ら、り、る、れ、ろ、わ、を、ん

Single-byte (half-width) katakana are converted to double-byte katakana in the generated file when sorted. The sort order of kanji is determined by its kana pronunciation (yomigana), as illustrated in "Specifying sort orders in indexes" on page 424. Because of this, the <$kana> building block also controls how most kanji sort.

The sort order of kanji without yomigana and of Japanese symbols (double-byte numerics and Roman alphabetics) is not included by default in the <$kana> building block. Instead, kanji is sorted by code value and appended after characters sorted by <$kana>.

If you want to sort kanji without yomigana and Japanese symbols differently, add these characters to the <$numerics>, <$alphabetics>, or <$kana> building blocks. For example, double-byte Japanese characters could be added to the <$symbols> building block.

Working with group titles in indexes

Index entries are initially grouped one letter at a time—all the As, all the Bs, and so on—using the uppercase letter as a group title. In a small index or when only a few entries appear under some letters such as X, Y, and Z, you may want to group letters differently and change the group titles.

FrameMaker inserts group titles as if they were index entries but uses a different paragraph format. It uses the labels and sort positions you specify in the GroupTitles paragraph in the special text flow.
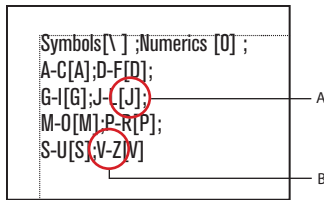
An edited GroupTitles paragraph on the IX reference page
A. Sorting information   B. Group title

The result in the index

To change the groupings and group titles:

1 Choose View > Reference Pages, and display the reference page that contains the special text flow for the index.

2 Edit the GroupTitles paragraph in the special text flow. For example, edit the group titles (the characters between semicolons, excluding bracketed text), or delete group titles you don't want. Type text between brackets ([ ]) to specify where you want the group titles sorted.

For example, to collapse all entries that start with *V* through *Z* into a single group whose title sorts under *V*, edit the GroupTitles paragraph so that its last entry is **V–Z[V]**.

Note: The first two entries in the GroupTitles paragraph define what group titles to use for symbols and numbers and where to place these titles. You can change the titles, but changing the sort information of these two groups might give unexpected results.

To create an index without group titles:

❖ Edit the GroupTitles paragraph in the special text flow to look like this:
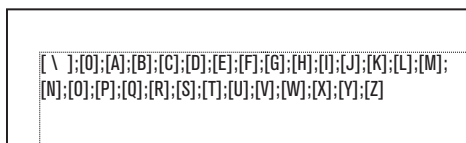
To create an index with neither a group title nor a space between entry groupings:

❖ Delete all the text in the GroupTitles paragraph in the special text flow, but don't delete the paragraph symbol.

To create quick access to group titles in a hypertext document:

❖ Generate clickable thumbtabs to the group titles to make navigating through the index easier. For information, see "Adding hypertext links to generated files" on page 541.

Working with TOCs in structured documents

In FrameMaker, a table of contents, list of figures, or other similar list is generated from text in specific elements in a document. An index is generated from text in marker elements you insert in a document.

Preparing structured documents for a TOC or other list of elements

When you generate a table of contents or other element list, you choose the tags of the elements you want to include. In the source document, do the following to avoid problems in the list:

- Make sure that the elements are tagged correctly and consistently in the document. If any text is not in the right element (such as heading text in a Para element rather than in a Head element), it will not appear in the list.

- Make each item you want to include in the list a single paragraph in an element. If an element has more than one paragraph, only text from the first paragraph will appear in the list. For example, you won't get the results you want if a heading is two lines, with each line in a separate paragraph.

- Validate the document to make sure it does not have any structure errors (see "Validating documents" on page 52).

Note: You usually generate a list of references—such as a list of fonts or unresolved cross-references—for your own use while working with a document. You do not need to prepare the document before generating such a list.

Preparing structured documents for a list of markers

Before generating a list of markers, you need to insert the markers in the source document. You usually insert markers as elements so they appear in the document's structure.
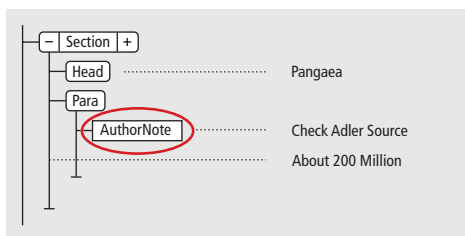
Marker element

As you insert markers, you enter text in them that will appear in the generated list. You can see at least part of this text in the Structure View.

For information on inserting a marker that's not an element, see "Preparing documents for a list of markers" on page 414.

To insert a marker element for a generated list:

1 Click where you want to insert the marker.

2 Select a marker element in the Element Catalog and click Insert.

You can also use Special > Marker to insert an element. If more than one marker element is available, choose the one you want from the Element Tag pop-up menu in the dialog box that appears.

3 To change the marker type, choose from the Marker Type pop-up menu. Changing to another type is not a format rule override, even if the element has a type preselected.

Consult your developer before changing a marker type. Your document may have a separate element defined for each marker type you'll need.

If you change the marker type, you can use any predefined type except Cross-Ref, Conditional Text, Header/Footer $1, and Header/Footer $2. Some custom types may also be available.

4 Enter the text you want to appear as the entry in the list. You can enter up to 255 characters (127 Japanese characters). Type the text or use alternative methods to enter text (see "Adding index markers" on page 421).

5 Click New Marker. If text symbols are showing, a marker symbol ⊤ appears in the document window. A bubble for the marker appears in the Structure View, with a text snippet that shows the beginning of the marker's text.

6 If the Attributes for New Element dialog box appears, enter attribute values for the marker element and click Insert Element (see "Entering attribute values as you insert elements" on page 46).

If no marker element is available at the location you want, you might use an invalid element. After inserting the element, talk to your developer about making the element valid at this location.

To use an invalid marker element:

❖ Insert an element that is valid in another part of the document. Either insert the element in a valid location and then move it, or use the All Elements setting (see "Changing the scope of elements available in a structured document" on page 18) to make the element available everywhere and then insert the element where you want it.

Generating TOCs and other lists in structured documents

After you've prepared a source document for a TOC or other list, you're ready to generate the list. You can generate a list from a book or from a single document.

Note: A generated list is initially unstructured, but you can add structure to it. You often regenerate a list several times in the process of getting it right, and each time you regenerate, the list loses its structure. Wait until the list is in its final version before adding structure to it.

Although the steps for generating TOCs and lists in structured documents are the same as for unstructured documents (see "Generating TOCs and other lists" on page 414), consider the following additional points:

• The items in the scroll lists vary depending on the type of list you're gathering. For example, the element and paragraph tags in the source document appear for a table of contents. (Paragraph tags appear after element tags and are preceded by a paragraph symbol ¶.) For a list of references, the available reference types appear.

- Some element tags may have *context labels* that provide information about the element's location in the structure. For example, if Section elements can be nested within other Section elements, context labels might identify whether the elements are first-, second-, or third-level sections.
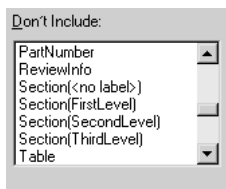
Context labels

- If an element uses context labels, a <no label> entry also appears in the scroll list for occurrences not described by the labels. In the example above, Section(<no label>) represents Section elements that are at a fourth level or lower in the document.

- If an element has more than one paragraph, only text from the first paragraph will appear in the generated list. For example, the first paragraph within a Section element—usually its Head—will appear.

- The first time you generate a list (if you don't use a template), it uses the page layout (master pages) of the first non-generated document in the book, and all entries look the same. The list also has element definitions from the source document.

Updating and editing lists in structured documents

You edit entries in a list by editing the corresponding elements in the source document and then regenerating. If you edit entries by typing directly in the list, your changes will disappear the next time you regenerate it.

If a generated list is structured, you'll lose the structure every time you regenerate. Do not add structure to a list until it is in its final version.

For information on updating lists, see "Updating and editing TOCs and lists" on page 416.

Finding the source of list entries in structured documents

When an entry needs to be edited, you trace the entry back to the corresponding element in the source document to make the revision.

The quickest way to go to the source of a list entry is to use the hypertext link on the entry in the generated file to display and select the element in the source document. You can also go to an element by using the Find/Change command, or select the element in the Structure View if you can see its bubble.

To find the source of an entry by using a link:

1 If you did not select Create Hypertext Links when you generated the list, select this option and regenerate the list.

2 If you're revising a marker element, choose Special > Marker so you can see the marker text.

3 In the generated list, do one of the following:

- (Windows) Control-Alt-click an entry.

- (UNIX) Control-right-click an entry.

FrameMaker opens the source document to the page that contains the element and selects it. If the element is a marker, the marker text appears in the Marker dialog box.

To find the source of an entry by using Find/Change:

1 If you're revising a marker element, choose Special > Marker so you can see the marker text.

2 In the source document (not in the generated list), choose Edit > Find/Change.

3 Choose Element from the Find pop-up menu, enter the tag of the element you want to find, and click Set.

4 Click Find. FrameMaker goes to the page that contains the element and selects it.

Note: When a marker element is selected, the marker text appears in the Marker dialog box. Don't click Change in the Find/Change dialog box to change the marker text. If you do, FrameMaker replaces the marker itself. Instead, change the text in the Marker dialog box, and then click Edit Marker.

Editing and deleting list entries in structured documents

You revise the entries in a list by changing their elements in the source document.

To edit a marker element:

❖ Select the element, change the text in the Marker dialog box, and click Edit Marker.

To delete any element:

❖ Select the element in the source document and press Delete.

Adding index marker elements in structured documents

Before generating an index, you need to insert index markers in the source document. You usually insert markers as elements so they appear in the document's structure.

Index marker element

As you insert markers, you provide text that describes how to organize the source information in the index.
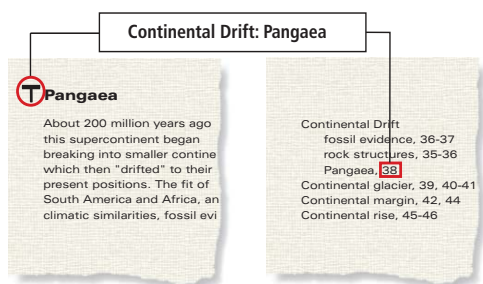
Marker text

For information on inserting a marker that's not an element, see "Adding index markers" on page 421.

To insert an index marker element:

1 Click where you want to insert the marker.

2 Select a marker element in the Element Catalog and click Insert.

You can also use Special > Marker to insert an element. If more than one marker element is available, choose the one you want from the Element Tag pop-up menu in the dialog box.

3 To change the marker type, choose from the Marker Type pop-up menu. Changing to another type is not a format rule override, even if the element has a type preselected.

Consult your developer before changing a marker type. Your document may have a separate element defined for each marker type you'll need.

You can generate an index from the predefined Index, Subject, and Author marker types. Some custom types may also be available.

4 Type the text of the index entry. You can enter up to 255 characters (127 Japanese characters). You can also use any of the following building blocks in marker text to control the form of the index entry and its location in the index.

Building block	Meaning
: (colon)	Separates levels in an entry
; (semicolon)	Separates entries in a marker
[ ] (brackets)	Specifies a special sort order for the entry
<$startrange>	Indicates the beginning of a page range
<$endrange>	Indicates the end of a page range
<$nopage>	Suppresses the page number in the entry
<$singlepage>	Restores the page number for an entry that follows a <$nopage> building block in a marker that contains several entries
Character tag between angle brackets (< >)	Changes the character format (for example, <Emphasis>)
<Default Para Font>	Restores the paragraph's default font

Note: *To enter a backslash or any of the special characters used in these building blocks—bracket, colon, semicolon, or angle bracket—as a regular character, precede it with a backslash (\).*

5 Click New Marker. If text symbols are showing, a marker symbol ⊤ appears in the document window. A bubble for the marker appears in the Structure View, with a text snippet that shows the beginning of the marker's text.

6 If the Attributes for New Element dialog box appears, enter attribute values for the marker element and click Insert Element (see "Entering attribute values as you insert elements" on page 46).

If no marker element is available at the location you want, you might use an invalid element. After inserting the element, talk to your developer about making the element valid at this location.

To use an invalid marker element in indexes:

❖ Insert an element that is valid in another part of the document. Either insert the element in a valid location and then move it, or use the All Elements setting (see "Entering or editing attribute values for elements already in a document" on page 47) to make the element available everywhere and then insert the element where you want it.

To specify marker text without typing:

❖ Do one of the following:

• To use one word in the document as the index entry, insert an empty marker element (with no text in it) at the beginning of the word. When you generate the index, the word to the right of the marker becomes the text of an entry.

• To use a range of text in the document as the index entry, select the text before inserting the marker element. If the selected word or phrase doesn't contain a marker, it automatically appears in the Marker Text box.

Formatting lists and indexes in structured documents

A generated list or index in structured documents has the same formatting properties as unstructured documents:

• A page design, such as running headers and footers, and the layout of text columns.

• Catalogs of paragraph and character formats for text in the entries.

• A special flow on a reference page that controls many characteristics of the entries, such as tabs and tab leaders, page number separators, a sort order for index entries, and which text to display from source elements.

Typically, these properties are stored in a special template for lists and indexes. If you have such a template, FrameMaker can apply it to a list or index when you first generate the file.

If you do not use a template when you generate a list or index, the generated file gets its formatting properties from the source document (with a few additional catalog formats). After generating, you can either import the properties you want from the template or make formatting changes manually in the generated file.

As long as the generated file has the filename that FrameMaker assigns it and is in the same folder as the source document, the file keeps its formatting properties every time you regenerate it.

For information on changing the formatting properties manually, see "Formatting lists and indexes" on page 434.

To apply a template to a list or index when you generate the first time:

1 Copy the template to the source document's folder, using the same filename as the list or index—for example, Chap1TOC.fm.

2 Generate the list or index. The generated file replaces the template and takes the template's formatting properties.

To apply properties from a template after you generate the first time:

1 Import the formatting properties you want (see "Importing and updating formats" on page 408).

2 Regenerate the list or index so that any changes in the special flow are reflected in the index.

Troubleshooting TOCs and lists in structured documents

Minor problems in the source document may cause corresponding problems in the generated list. For example, an incorrectly tagged element may cause an extra entry to appear in the list or to be missing from the element. Or an empty element may cause an extra line to appear in the list.
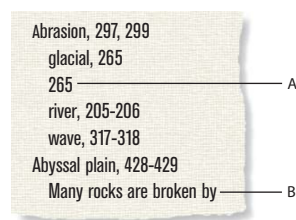
Problems in an index
A. Extra line B. Doesn't belong in list

The following information describes typical problems and possible solutions.

Note: For more information on solutions described here that affect catalog formats or the special flow on a reference page, consult your application developer.

Extra entries or lines Incorrect tagging in the source document can cause extra paragraphs to appear in the generated list. To correct this, do the following:

• If the list contains an entry that doesn't belong there, check the corresponding element in the source document and change the element to a type that does not appear in the list.

• If the list contains an extra line with only a page number, there may be an empty element in the source document; delete the empty element. If you need extra paragraph spacing in the source document, use an element that is defined to provide the spacing rather than using an empty element.

Missing entries To include entries that appear in the source document but not in the list, do one of the following:

• If all entries with a particular element tag are missing, make sure the Include scroll list in the Set Up dialog box contains the correct items.

• If an occasional entry is missing, check the tag of the corresponding element in the source document. If the element is tagged incorrectly, the information won't be included in the list.

Incomplete entries When an element contains more than one paragraph, the list includes an entry for only the first paragraph. A multiline heading in the source document can be a problem if each line is a separate paragraph.

Avoid using forced returns in a heading; forced returns appear in the generated TOC. Instead, to break a heading into two lines (while still including all of its text in the list), use nonbreaking spaces to force a break. Or you can adjust the right indent for the heading to force a break, or the right and left indents if the heading is centered, though this will be a format rule override.

Important: Be aware that these techniques create overrides to both paragraph styles and element definitions. As such, they may not be retained when importing formats or element definitions, or when changing the context of the element by editing other parts of the structured document.

Bad line breaks Bad line breaks in the list or its source document may separate information that belongs together in the list. To correct this, do one of the following:

• Change the characters after which FrameMaker allows line breaks. For example, FrameMaker normally allows a line break after an en dash (–). To disallow breaks after an en dash, use Format > Document > Text Options.

• In the special text flow on the reference page, use nonbreaking spaces between the text and page number for each entry so that a page number does not appear on a line by itself.

Disappearing titles A title you entered may disappear when you regenerate, unless you give the title a paragraph format as described on "Adding titles and other static text to lists and indexes" on page 434.

Disappearing formatting If your formatting changes aren't retained when you regenerate, do the following:

• If you changed the filename or location of the list, change the name or location back. FrameMaker won't find any formatting changes unless you save the list in the same folder as the source document, and use the filename that FrameMaker assigns.

• To retain paragraph and character format changes, store them in the list's Paragraph or Character Catalog, making them available the next time you generate the list.

• To retain other changes, make them in the special text flow on the reference page.

Embedding TOCs in structured documents

A table of contents is typically a separate file with contents that are automatically generated by FrameMaker. If you want a small table of contents embedded at the beginning of the source document instead of in a file of its own, you can set up the table of contents with cross-references.

A special cross-reference element should already be defined for your document.

FrameMaker does not automatically maintain a table of contents that uses cross-references. If you change the order of sections in the document or delete a section, for example, rearrange the entries or delete an entry in the table of contents yourself.

You can also generate a separate table of contents and then import the generated file by reference at the beginning of the source document. In this case, the text inset with the table of contents is automatically updated when the table of contents changes.

To embed a TOC in a document by using cross-references:

❖ For each item you want to appear in the table of contents, insert a cross-reference element (see "Inserting element-based cross-references in structured documents" on page 217). The document may also have paragraph elements defined for formatting See your application developer for information.

Note: Make sure that the sequence of entries in the table of contents reflects the sequence of source elements in the document. This isn't automatic as it is with a generated table of contents.

To maintain a TOC that uses cross-references:

❖ Do the following:

• If you change the order of source elements while editing the document, rearrange the cross-references to be in the same order as the sources. Then update the cross-references (see "Updating cross-references manually" on page 207).

• If you delete a source element, delete the cross-reference to it. Otherwise, the entry in the table of contents will be an unresolved cross-reference.

To embed a TOC in a document as a text inset:

1 Generate a table of contents in the usual way (see "Generating TOCs and other lists" on page 414).

2 Import the table of contents into the source document. For details, see "Using the Import command to import text" on page 495.

Chapter 13: Books

About book files

You can group separate documents into one FrameMaker book. This grouping lets you generate a single table of contents or index for the documents, and it greatly simplifies printing, numbering, cross-referencing, and formatting.

A *book file* is a special FrameMaker file that ties several files together so you can work with them as a unit. For example, you can number pages and paragraphs continuously from one file to the next, and update cross-references across the files all at once.

A book file contains the filenames of the documents that make up a book—including documents such as chapters and appendixes, and generated files such as a table of contents and an index. The book file also contains pagination and numbering settings for each file in the book.

Each file in a book can have its own numbering system. For example, you might start page numbering at *i* on the title page, at *1* in the first chapter, and then number continuously through subsequent chapters. You can also add chapter and volume numbers to page numbers—for example, the chapter *2* in the page number *2-1*.

When you update the book, FrameMaker creates or updates generated files and updates numbering throughout the files. FrameMaker also updates cross-references to match the new numbering.

Building books

When you're ready to assemble a book, you create the book file that will contain a list of all the files in the book, in order.

Keep your book organized by putting all the component files into one folder and making each chapter a separate FrameMaker document. (To improve performance, you may want to break up very long chapters into separate files.)

Overview of book building

Book building refers to the process of assembling a book from its components. Most components like preface, chapters, and appendixes exist as separate files before you add them to a book. Other components like the table of contents and indexes are generated as part of the book building process.

To build a book:

1 Create the book (see "Creating book files" on page 456).

2 Add all the other documents needed in the book (see "Adding files to books" on page 456).

3 Add the filenames for any generated file you'll want for the book, such as a TOC or index.

4 Set up volume, chapter, page, and paragraph numbering (see "Determining how documents and pages are numbered" on page 461).

5 Update the book to add content to the TOC and index and to fix numbering across the book. Any errors or unresolved cross-references will now be obvious (see "Updating books" on page 466).

6 After fixing errors (see "Troubleshooting books" on page 468), generate and update again.

Note: Books support the Unicode text encoding standard.

Creating book files

You can create the book file from any document that will be in the book. Once a book file is created, FrameMaker provides special menu commands for working with it.

To create a book file:

1 Open a document, and then choose File > New > Book. An alert message asks if you want to include the document in the book.

Note: (UNIX) If no document or book window is open, you can press Esc f Shift+n to create a new book.

A new book window appears showing the contents of the book.
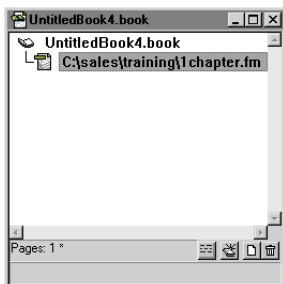
Contents of a new book is displayed in the new book window

2 Use File > Save Book As to save the book file. In Windows, a book extension is added to the filename when you save it.

Adding files to books

You can add two kinds of files to books: documents and generated files. When you add a file to a book, the file's name and location are added to the book file, and a link is established between the file and the book. When you use the book window to rename the file, FrameMaker changes the filename on disk and updates cross-references, hypertext links, and text insets. FrameMaker can then find the document or generated file when you use commands in the book window that apply to it. Books can also include non-FrameMaker documents.

In the book window, the 🗐 icon appears next to documents, and the 🗐 icon appears next to generated files.

For information on adding generated files to a book, see "Generating TOCs and other lists" on page 414.

To add document files to a book (Windows):

1 In the book window, choose Add > Files or click ⬜.

2 Select the document file or files you want to add to the book (see "Selecting files in a book" on page 458), and then click Add.
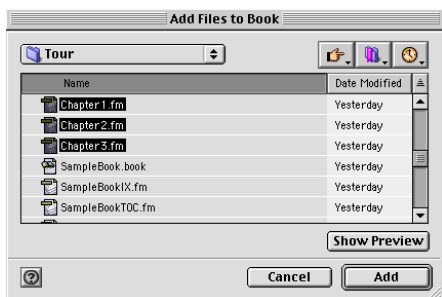
Select files you want to add to your book

To add document files to a book (UNIX):

1 In the book window, choose Add > Files or click ⬜.

2 Select the document file and click Add. The Add Files to Book dialog box reappears.

3 Continue to add files to the book. When you are finished adding files, click Done.

To drag files to a book (Windows):

❖ Drag files from another book window or a file manager window (such as Explorer or Finder) into the book window.
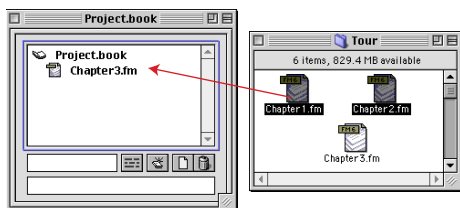
Adding files by dragging them into a book window

To toggle between displaying filenames and text:

❖ In the book window, do one of the following:

• Click ☷ to display the first paragraph in the main flow of each document (such as "Chapter 2: Color").

• Click ▪▪ to display the documents' filenames.

To add generated files to a book:

1 Open the book window and select the file next to where you want the generated file to appear.

2 Do one of the following:

• Choose Add > Table of Contents, or choose Add > List of, and then choose a type of list from the menu. For more information, see "Generating TOCs and other lists" on page 414.

• Choose Add > Standard Index, or choose Add > List of, and then choose the type of specialized index you want to create. For more information, see "Generating indexes" on page 425.

Adding metadata to a book

FrameMaker includes built-in support for Extensible Metadata Platform (XMP). *Metadata*, or file information, is descriptive information that can be searched and processed by a computer. Use it to provide information about the contents of a document and to preserve information about a document that will be opened in other Adobe applications. If you export the file to PDF, much of this metadata will appear in Adobe Acrobat.

Metadata tags travel with the document and describe its content. By embedding them in your documents, you make the documents easier to track, manage, and retrieve.

Metadata in a book file will override metadata in a document file when you have selected more than one document in a book and then selected File Info from that book.

If a checkbox next to any of the eight info fields is checked, the book's metadata for that field will override the document's metadata.

To ensure your metadata is not overwritten, open the book file and select the document before you add metadata.

To add metadata to a book:

1 Select the book you want to add metadata to.

2 Choose File> File Info.

3 Complete the metadata form and click Set.

Working with files in a book window

In a book window, you can rename and rearrange files, and you can open, save, and print files.

You can select one or more documents in the book window and apply formatting changes to the selected documents. For example, you can change the page layout, remove change bars, select numbering options, and change the zoom settings of selected documents.

It's a good idea to use the book window to apply changes to documents that belong to a book. If you set up numbering, pagination, and color definitions in individual documents, these changes may be overridden when you update the book.

Selecting files in a book

You can select files in a book by clicking them, or you can use the Select All commands.

To select files in a book:

❖ Do one of the following:

• Click the file icon.

• In the book window, choose Edit > Select All, and then choose a selection option from the menu. For example, choosing Generated Files will select only the index, list, and table of contents files.

• Ctrl-click to select noncontiguous files or Shift-click to select a range of files.

Rearranging and deleting files

You can change the order of files in a book file and delete files from a book. When you delete files in a book window, the filenames are removed from the book window, but the files remain on the disk.

To rearrange files in a book:

❖ In the book window, select one or more files and drag the selected files to the desired position in the book window.

To delete files in a book:

1 In the book window, select the file or files you want to delete.

2 Choose Edit > Delete File from Book, or click the Delete icon 🗑 in the book window.

Renaming files in books

When you rename a file in a book, FrameMaker will rename the corresponding file on the disk. FrameMaker will also update cross-references, hypertext links, and text inset links in the other files in the book.

When you add a generated file (such as a table of contents or index) to a book, the file is assigned a name based on the book's filename. If you leave generated files with the default filename, the filename is changed in the book, but not on disk, when you rename the book. If you rename the generated file so it doesn't have the default name, renaming the book won't rename the generated file.

For example, suppose that in Sample.book, you have a generated file SampleTOC.fm. If you rename the book to New.book, the generated file will be renamed as NewTOC.fm in the book window, but not on disk. However, if you rename the generated file to Contents.fm and then rename the book, the generated TOC will still be named Contents.fm in the book window and on disk.

To change the name of a document in a book:

1 In the book window, select the file you want to rename, and then choose Edit > Rename File.

2 Type the new name of the file and press Return or Enter. When the alert message appears, click OK to update other files in the book.

To change the name of a book file within FrameMaker:

❖ In the book window, use File > Save Book As to save the book file using a different filename.

Note: The Save Book As command saves the book file only, not the files in the book. If you are saving the book to a new location you will need to open and save each file individually.

Using Revert to Saved Book

Choose File > Revert to Saved Book to return to the previously saved version of the book. This command affects files that have been added or deleted, as well as settings that have been applied to documents in the book, such as numbering, pagination, color definitions, and file setup specifications. The contents of documents are not changed.

Opening, closing, and saving from a book window

You can use a book window to open, save, print, and close individual files in a book. You can also open, save, and close all the files in a book and print and update the format of several files or all files.

(Windows) When you open a non-FrameMaker document from the book window, the appropriate application, if available, is launched.

To open files from a book window:

❖ Do one of the following:

• To open one file in a book, make sure only the file is selected and double-click it. You can also select the filename and press Enter. If you're working with a structured document, double-click its element bubble in the Structure View.

• To open several files in a book, select the files you want to open and press Enter.

• To open all files in the book, hold down Shift and choose File > Open All Files in Book.

Note: Using Open All Files in Book can be a time-consuming procedure if there are many cross-references or text insets to update in the files. You can suspend this automatic updating by choosing Edit > Suppress Automatic Reference Updating from a book window, selecting the appropriate check box, and then clicking Set. When you open an individual document that has settings for automatic update, cross-references and text insets are still updated.

To close or save all files from a book window:

❖ Do one of the following:

• Hold down Shift and choose File > Close All Files in Book. All the components in the book are closed, but the book window remains open.

• Hold down Shift and choose File > Save All Files in Book (the book file is also saved). The book and all the files in the book are saved.

Printing from a book window

You can use a book window to print the entire book or to print selected files. For more information, see "Printing documents" on page 28.

When you're working with structured documents, element boundaries (either as brackets or as tags) are printable characters. If you're showing these boundaries in any of the files, hide them before you print (see "Showing and hiding element boundaries" on page 16).

To print files from a book window:

1 To make sure your page numbering, cross-references, text insets, and generated files are up to date, update the book before you print files from it.

2 Do one of the following:

• In the book window, select the file or files you want to print, and then choose File > Print Selected Files.

• In the book window, choose File > Print Book.

3 Specify printing options and click Print. All normal printing options are available except print range.

To print to file:

1 Select File > Print.

2 Do one of the following:

• (Windows) Select Print to File, and browse to the document you wish to print. The browse button allows the user to specify the Print to File location.

Note: You can print book to a Single file or as Print separate print job for each file.

• (UNIX) From the pop-up menu, choose to print to file books as a Single print job or a separate print job for each file within the book.

You can create a PostScript file for the whole book or for each file in the book. For information, see "Creating PostScript files" on page 30.

To stop printing:

❖ Do one of the following:

• (Windows) Press Esc.

• (UNIX) Press Control+c.

Determining how documents and pages are numbered

You can change volume, chapter, page, paragraph, footnote, and table footnote numbering in your documents.

By default, FrameMaker uses a numeric style (1, 2, 3, …), starting with page 1. You can start the document with a page number other than 1, or choose a different numbering style (Roman or alphabetic, uppercase or lowercase). If your system supports the typing of Japanese text in documents and dialog boxes, several Japanese numbering styles are also available.

Setting up numbering

All body pages in a document use the same numbering style. You can, however, use different numbering styles from document to document in a book. For example, a preface might use Roman numerals, while the remainder of a book uses Arabic numerals.

When setting up numbering, you use the Numbering Properties dialog box to set the volume, chapter, page, and footnote values for the document, or for each document in the book. Volume and chapter settings are useful for creating a multiple numbering system, such as 3.1.1, 3.1.2, and so on.
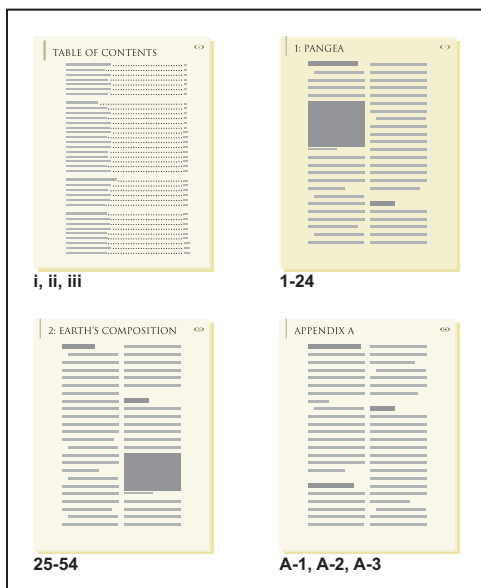
Page numbers can restart in some files but be continuous in others.

After you set up numbering in a document or book, you can use the Volume Number, Chapter Number, and Current Page # variables in page headers and footers. You can also use the <$volnum>, <$chapnum>, and <$pagenum> building blocks in cross-reference formats, paragraph auto numbers, and generated files such as indexes.

For information on specifying numbering for footnotes, see "Changing the footnote numbering style" on page 212.

Important: The numbering properties in the book will override the numbering properties in documents that belong to the book. If you are setting up page numbering in a book, make sure you change the numbering properties by selecting documents in the book window instead of making changes to the individual documents.

To specify volume or chapter numbers:

1 If the document is part of a book, open the book and select the document in the book window.

2 Choose Format > Document > Numbering.

3 Select Volume or Chapter from the pop-up menu. In Windows, you can click the tabs at the top of the dialog box.

4 Do one of the following:

• Select Volume # or Chapter #, specify the number of the volume or chapter, and choose a numbering style from the Format pop-up menu.

• Select Continue Numbering From Previous File in Book.

• Select Use Same Number As Previous File.

- If a book window was active when you opened the dialog box, you can select Read From File, which uses the numbering value specified in the associated document.
- If you selected more than one file in the book window, you can choose As Is to use the numbering values specified in the selected documents.

5 Click Set.

To specify page numbers and numbering style:

1 If the document is part of a book, open the book and select the document in the book window.

2 Choose Format > Document > Numbering.

3 Select Page from the pop-up menu. In Windows, you can click the Page tab at the top of the dialog box.

4 Do one of the following:

- Select First Page #, specify the starting number of the page, and choose a numbering style from the Format pop-up menu.
- Select Continue Numbering From Previous Page in Book.
- If a book window was active when you opened the dialog box, you can select Read From File, which uses the numbering value specified in the associated document.
- If you selected more than one file in the book window, you can choose As Is to use the numbering values specified in the selected documents.

5 Click Set.

To specify paragraph numbers and numbering style:

1 If the document is part of a book, open the book and select the document in the book window.

2 Choose Format > Document > Numbering.

3 Select Paragraph from the pop-up menu.

4 Specify whether you want to restart paragraph numbering or continue numbering from the previous paragraph in the book. If a book window was active when you opened the dialog box, you can select Read From File, which uses the numbering values specified in the associated document.

5 Click Set.

Inserting numbering in your documents

After you set up volume, chapter, and page numbering in books, the next step is to add variables or building blocks to cross-reference formats, headers and footers, paragraph numbering, or generated lists such as tables of contents and indexes.

For information on adding numbering to paragraphs, see "Basing autonumbering on volume and chapter numbers" on page 128. For generated lists, see "Including volume, chapter, and paragraph autonumbers" on page 438.

Note: In most instances, numbered lists created in FrameMaker 5.0 or earlier versions remain unchanged when the document is opened in FrameMaker 6.0 or later versions. However, to take advantage of the volume and chapter numbering, you may want to replace building blocks such as <$paranum> and <$paranumonly> with <$volnum> and <$chapnum> building blocks. These variables are available only in FrameMaker 6.0 and later versions.

Including volume and chapter numbers in cross-references

If your book's pages are numbered by chapter (for example, 2-6), you probably want cross-references to include the chapter number as part of the page number—for example, *see page 2-6.*

To include volume or chapter numbers in cross-references:

❖ Create a cross-reference format (see "Creating cross-reference formats" on page 203) that includes the volume or chapter number building block. The cross-reference format might look like this: *See page <$chapnum>–<$pagenum>*

💡 *To keep the chapter number on the same line as the page number, use a nonbreaking hyphen in the cross-reference format (see "Changing hyphenation and line breaks" on page 118).*

Including volume and chapter numbers in headers or footers

Some books have pages numbered by chapter, such as *2-3* for page 3 of Chapter 2 or *A-2* for page 2 of Appendix A. To number pages by chapter, you can use a Chapter Number (or Volume Number) variable, a running header/footer variable for the chapter numbers, or you can type the chapter number directly in the header or footer of each chapter. When you use a variable, the numbers are updated automatically whenever you update the book.
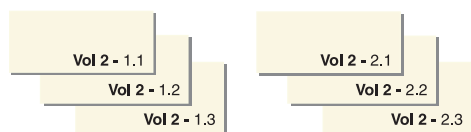
To create a multi-level numbering effect, add chapter and volume numbers to your document.

To include volume or chapter numbers in a header or footer:

1 Display the master page that contains the header or footer. See "Displaying master pages" on page 376.

2 Place the insertion point in the header or footer where you want to add numbering and use the Special > Variable command to insert the volume number or chapter number variable. For details, see "Inserting variables" on page 226.

3 Insert the appropriate punctuation, such as a hyphen or period.

4 To add page numbering, choose Format > Headers & Footers > Insert Page #.

The header or footer should look like this on a body page:

A. *Chapter number variable (<$chapnum>)*
B. *Current Page # variable*

Including the total page count of a book in a header or footer

You may want a header or footer to show the total number of pages of a book—for example, *4 of 200* on page 4 of a 200-page book.

When you insert the page count in a file's header or footer with the Page Count variable, the header or footer shows the number of pages in that *file,* not in the entire book. To show the number of pages in a *book,* you can use a cross-reference to a special paragraph you create.

To show the total page count of a book in a header or footer:

1 Set up the files in the book for continuous page numbering (see "Setting up numbering" on page 462).

2 Display the master page for the last page of the last file in the book (see "Displaying master pages" on page 376), and place the insertion point in an otherwise empty paragraph of the header or footer.

3 Insert the Page Count variable by choosing Format > Headers & Footers > Insert Page Count.
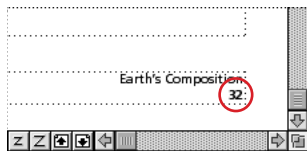
Page Count variable in a separate paragraph

4 Create a new paragraph format for the paragraph with the page count and store it in the Paragraph Catalog (see "Using the designers" on page 103). Having a unique format for this paragraph makes it easier to cross-reference it later.

5 If you don't want the page count to appear where you put it, either resize the text frame so the page count is hidden or set the paragraph's color to White.

6 In the other files in the book, insert cross-references to the paragraph with the page count on each master page of each document (see "Inserting cross-references" on page 199). The cross-reference format should use the <$paratext> building block.

7 Put the cross-references in the header or footer on each master page of each file in the book, including the last one.

Changing the format of files in a book

To change the page design, paragraph formats, or other formats of files in a book, you can make the changes in one file and then update all the files in the book at once.

To change the format of multiple files in a book, you can also select the files in the book window and then apply the formatting to the selected files. See "Using book-wide commands" on page 466.

To change the format of files in a book:

1 Open or create the file that contains the formats you want to use. The file must be named and saved.

2 In the book window, select the file or files you want to change, and then choose File > Import > Formats.

3 From the Import From Document pop-up menu, select the file with the formats you want to import.

4 Choose the settings you want to import and update (see "Importing and updating formats" on page 408).

5 Click Import. If a file isn't open, it's updated on the disk. If a file is open, it's updated only in your computer's memory and not on the disk. You must save the file to keep the changes.

Using book-wide commands

Many FrameMaker commands can be used across some or all documents in a book. For example, you can search for and replace a phrase throughout the entire book. In addition, you can change view options, spell-check, and change the page layout of selected files in the book. When working with structured documents, you can also edit attributes, set available elements, and set new element options in the book.

If the document associated with a book is open, FrameMaker applies the book-wide command to the document, but the document will not be saved or closed. If the document associated with the book is not open, FrameMaker will open the document, apply the book-wide command, and then save and close the document.

If the values in a dialog box appear to be incorrect when applying a command, update the book and try again.

To use a book-wide command:

1 In the book window, select the file or files you want to change.

2 Choose the desired command (such as Edit > Find/Change) from a menu, or use the appropriate keyboard shortcut.

If FrameMaker cannot open a selected file or if other problems occur when you apply the command to a selected file, a message appears in the Book Error Log.

Updating books

After setting up a book and specifying numbering properties for each file in the book, you update the files. This is the last step in book building.

Even though you generate and update in one step, the two processes are different:

• *Generating* creates the table of contents, other generated lists, and indexes in the book file. The first time you generate a list or index, it uses the page layout (master pages) and reference pages of the first nongenerated document in the book file.

• *Updating* corrects the numbering in all files in the book, reimports text insets, and revises cross-references so they are correct based on the new numbering. Empty pages are added or deleted where required.

Be sure to generate and update a book whenever you make any of the following changes to a document or a book file:

• Editing that affects pagination

• Editing that affects the wording of a generated file (such as changes to a chapter title)

• Adding a new color (so that color separations will be accurate)

• Changing conditional text settings or indicators

• Changing the numbering of documents or generated files

• Changing formatting information in the special text flow on a reference page of a generated file (see "Editing special text flows for lists and indexes" on page 436)

• Rearranging, adding, or removing files in a book

To update the files in a book:

1 In the book window, choose Edit > Update Book, or click the Update Book icon ✪.

2 Select whether you want to update numbering, cross-references, text insets, or generated files, such as tables of contents and indexes.

3 Move the names of the files you want to generate to the Generate scroll list.

To move a filename between scroll lists, select the filename and click an arrow or double-click the filename. To move all filenames from one scroll list to the other, Shift-click an arrow.

Note: Only generated files appear in the list. If no files are present, the book has no generated files. If no files appear in the lists—or if you move all the files to the Don't Generate list—you should still continue to the next step to update the book's pagination, numbering, text insets, and cross-references.

4 Click Update. For information on messages you may see in the Book Error Log, see "Troubleshooting books" on page 468.

5 Save the open files to keep the changes. Open files are updated only in your computer's memory and not on the disk. If a file isn't open, the changes are made on the disk—even if the file is in View Only format.

Comparing books

FrameMaker can compare two versions of a book to show you what has changed. It looks not only at the text in the two versions, but also at footnotes, markers, anchored frames, text insets, variables, and cross-references. For details, see "Items compared" on page 479.

When you compare two versions of a book, only documents with matching filenames are compared.

Note: FrameMaker doesn't compare the structure of the two versions. Also, when comparing large documents, you may encounter memory issues. Increase memory allocation or swap space (UNIX) if necessary.

To compare two versions of a book:

1 Open both versions of the book file.

2 In the book window of the newer version, choose File > Utilities > Compare Books.

3 Specify the older version and the documents you want to create.

The summary document gives a report of differences in the files. Composite documents (which have a CMP suffix) show the differences in the files side by side.

4 To set up the comparison options, click Options (see "Comparing document versions" on page 477).

5 Click Compare. When the comparison is complete, only the summary document appears.

6 Click a page number in the list of changes to open the composite document or to jump to the spot where that change occurs in either the newer or older document.

Troubleshooting books

You might encounter problems or error messages when working with books. Even though you can update and generate a book without error messages, the book may still have some problems that need correcting.

Generated file is empty Make sure the name of the generated file is preceded by a generated files icon 📄 in the book window. If it isn't, the file was added as a document to the book file rather than as a generated file (see "Adding files to books" on page 456). When a file is added as a document file, FrameMaker won't generate it. Also check that the setup of the generated file is correct.

Slow performance To improve performance, open as many files in the book as possible before you use Edit > Update Book or File > Import > Formats in a book window. After using the command, save all the files in the book.

Chapter starts on wrong side You need to correct your documents' pagination. See "Adding and deleting empty pages" on page 375.

Interpreting error messages

The Book Error Log reports all errors that occur when you apply a command to a book. In addition, many error messages contain hypertext links so that you can click the message in the Error Log to display the location of the error. When you update, the following alert messages or Book Error Log messages may appear.

Unresolved Cross-Refs The Book Error Log lists all files that contain unresolved cross-references (see "Resolving cross-references" on page 207).

Inconsistent Show/Hide Settings, Inconsistent Use Condition Indicators, or Inconsistent Condition Indicator
The indicated file contains conditional text settings that differ from those in the previous file in the book. You can make the settings in each file the same (by using Special > Conditional Text) or you can update the settings throughout the book at once. To do this, change the settings in one file and then use File > Import > Formats to apply the settings to the entire book (see "Changing the format of files in a book" on page 465).

Inconsistent Numbering Properties The numbering properties specified in the component are different from the book's numbering properties. The book's numbering properties override those of the document. See "Determining how documents and pages are numbered" on page 461.

Inconsistent Color Settings The indicated file contains color separation settings or color definitions that differ from those in the previous file in the book (see "Separating colors" on page 366 and "Defining and modifying colors and tints" on page 361).

Couldn't Open File The Book Error Log will indicate if the file was saved using an older format, if it used unavailable fonts, or if it cannot locate the file. For more information on the problem, open the file to see the alert message that appears.

Book Not Self-Consistent The contents of generated files, the page count, or cross-references continued to change while generating and updating files in the book. For example, if a book contains both a list of markers and an alphabetical list of markers, and if both contain hypertext links, the number of markers grows each time the files are generated. If this happens, move one of the generated lists out of the Include scroll list when you use the Generate/Update command again.

Inconsistent Element Boundary Settings In a structured book, element boundaries are showing in some files in the book but not in others. Fix the settings in individual files to make them consistent (see "Showing and hiding element boundaries" on page 16).

About structured book files

Like any file in FrameMaker, a book file can be structured. Each document and generated file is an element in the book, and you can work with the elements' bubbles in the Structure View to change the order of files or to remove one from the book. You can also validate the contents of an entire book at one time.

A book and its files might all use the same Element Catalog so that a single catalog defines a valid structure for everything in the book. Or the parts of a book might use different catalogs so that each catalog has only the elements it needs. Ask your developer how your catalogs are set up for books.

To assemble a book, create a book file that contains a list of the documents in the book. Then add the documents to the book file, in the order you want. If a document in the book is structured, the book file is automatically structured. You can also add structure to a book file later by importing element definitions into it.

Creating structured book files

You can create a structured book file from any structured document that will be in the book. Once a book file is created, FrameMaker provides special menu commands for working with it.

A new book file has the same Element Catalog as the document you create it from. The book has a preliminary structure with a highest-level element called NoName and an element called BOOK-COMPONENT for the document. As you add other files to the book, you'll see a new element for each one. You can correct the structure when you're finished adding files.

If you do not have a structured document for building the book, you can create the book and give it element definitions later (see "Importing element definitions into structured books" on page 472).

To create a book file:

1 Choose File > New > Book. If a document is active, an alert message asks if you want to include it in the book. A new book window appears showing the contents of the book.

Note: In UNIX, if no document or book window is open, you can press Esc f Shift+n to create a new book. In Windows, use alt-f-n-b.

2 Use File > Save Book As to save the book file. In Windows, the .book extension is added to the filename when you save it.

Adding files to structured books

You can add FrameMaker documents and generated files to a book. The name and location of the files are stored in the book file so that FrameMaker can find the files when you work with them using book commands.

As you add files to a book, the files appear as element bubbles tagged BOOK-COMPONENT in the Structure View. FrameMaker revises these tags later when you update the book.
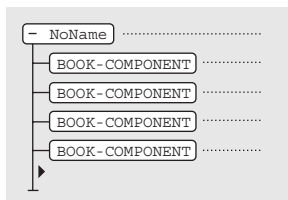
A bubble appears for each file you add.

Usually a generated file doesn't exist yet when you add it to a book file; it is created when you update the book. The name of a generated file is based on the book's filename, so make sure the book has the name you want before adding the generated file.

For information on adding generated files such as indexes and tables of contents to a book, see "Generating TOCs and other lists in structured documents" on page 447 and "Generating indexes" on page 425.

Renaming, rearranging, and deleting files in structured books

You can rename, rearrange, or delete a file in a book. For information, see "Working with files in a book window" on page 458.

When working with structured books, you can also rearrange and delete files by working with element bubbles in the Structure View. You'll probably want to do this only after updating the book so that the text snippets identify the files.

If you delete a file from a book you've updated, the file may retain some structure information inherited from the book. Remove this information from the file to make it a stand-alone document again (see "Removing inherited information from structured files" on page 474).

Generating and updating structured books

After setting up a book and specifying page and paragraph numbering for each file in the book, you need to generate and update the files. Although you generate and update in one step, the two processes are different:

• *Generating* creates the table of contents, other generated lists, and indexes in the book file. The first time you generate a list or index, it uses the page layout (master pages) and reference pages of the first nongenerated document in the book file.

• *Updating* revises the book's element tags from information in the files, reapplies format rules from the book's element definitions, corrects numbering, reimports text insets, and revises cross-references so they reflect the numbering. Empty pages are added or deleted where required.

Before you update a book the first time, each file in the book is represented by an element called BOOK-COMPONENT. When you update, the element for each structured file changes to the tag of the highest-level element in that file—typically a tag such as Chapter that describes the file as a whole. (If a file has more than one flow, the tag comes from the highest-level element in flow A.)
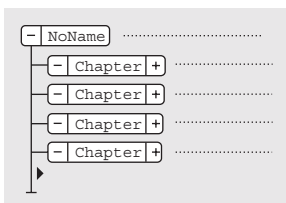
Chapter is the highest-level element in the files.

The elements for any unstructured files in the book are still called BOOK-COMPONENT. To change BOOK-COMPONENT to an element tag, add structure to the files and then generate and update again. For information on making other corrections to the book's structure, see "Editing the structure" on page 471.

Be sure to generate and update a book whenever you make any of the following changes to a document or a book file:

• Changing the highest-level element in one of the book's files

• Importing new or revised element definitions

• Editing that affects pagination

• Editing that affects a generated file (such as an additional Section element or a wording change to a chapter title)

• Adding a new color (so that color separations will be accurate)

• Changing conditional text settings or indicators

• Changing the setup of documents or generated files

• Changing formatting information in the special text flow on a reference page of a generated file

• Rearranging, adding, or removing files in the book

For information on generating and updating files in a book, see "Generating TOCs and other lists in structured documents" on page 447.

To update the files in a book:

1 In the book window, choose Edit > Update Book or click the Update Book icon ⛏.

2 Select whether you want to update numbering, cross-references, text insets, OLE links, and generated files, such as tables of contents and indexes.

3 Move the names of the files you want to generate to the Generate scroll list. To move a filename between scroll lists, select the filename and click an arrow, or double-click the filename. To move all filenames from one scroll list to the other, Shift-click an arrow.

Note: Only generated files appear in the list. If no files are present, the book has no generated files. If no files appear in the lists—or if you move all the files to the Don't Generate list—you should still continue to the next step to update the book's elements and other properties.

4 Click Update. For information on messages you may see in the Book Error Log, see "Troubleshooting books" on page 468.

5 Save the open files. Open files are updated only in your computer's memory and not on the disk. If a file isn't open, the changes are made on the disk.

Working with book structure

Editing the structure

A new book file has a structure with a highest-level element called NoName and an element called BOOK-COMPONENT for each document and generated file you added to the book. When you update the book, the elements for structured files change to the tag of the highest-level element from the file.

In most cases, you need to make a few corrections in the structure of a book file after updating. For example, you should change the NoName element to the highest-level element defined for the book. And if any file elements are still called BOOK-COMPONENT, add structure to those files and then generate and update again (see "Updating books" on page 466).

The book's element definitions may also require you to group elements in higher-level elements such as FrontMatter, Body, and Appendixes.
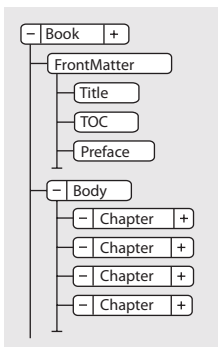
Typical structure for a book file

💡 *To open a file quickly, double-click its bubble in the Structure View.*

You can edit the structure of a book in most of the same ways that you edit a document—by inserting, wrapping, and changing elements; merging and splitting; dragging and deleting bubbles in the Structure View; and so on. However, you cannot merge or split elements that represent files, and you cannot undo a cut or paste in a structured book that contains anything other than the default structure.

For general information on editing structure, see "Importing element definitions into structured books" on page 472."

Importing element definitions into structured books

You can import element definitions into a book file and into any files contained in the book. The definitions are stored in the Element Catalog for the book and the other files. You may need to import element definitions in the following cases:

- To add structure to an unstructured book. After importing the definitions, you can insert elements in the book file.

- To update the element definitions in a book or its files. You need to update definitions whenever the application developer revises the definitions in your template.

- To give a book and all its files the same element definitions. You may want to update a book if its files were created from different templates.

When you import element definitions into a book, FrameMaker replaces the definitions in the book and all its files with the new definitions and reapplies format rules from the definitions. It also validates the book file.

For general information on importing element definitions, see "Importing and updating formats" on page 408.

To import element definitions into a book:

1 Open the book you want to update and the template, document, or book with the definitions to import.

2 In the book window, select the files into which you want to import element definitions, and choose File > Import > Element Definitions.

3 Choose the template or document from the Import from Document pop-up menu. The menu lists all open, saved documents and books.

4 To remove format rule overrides in the files, select While Updating, Remove Format Rule Overrides. Use this setting if you have made text or paragraph formatting changes to elements and now want to return to the formatting described in the element definitions.

5 Click Import. FrameMaker updates the element definitions in the book file and in the files listed in the Update scroll list.

Validating structured books

You can validate an entire book (including its files), only the book file, or only the current element in the book file. If you validate the entire book, the structure of the book and each file is checked against the Element Catalog for the book.

When FrameMaker finds an error, it selects the element and displays an error message at the top of the Element Validation dialog box. If the error is in the book file, FrameMaker uses the same messages it displays when validating a document. If the error is in one of the other open files, the "File contains a validation error" message appears. You can validate that file to learn about the error.

If you want to skip an element when validating, you can mark the element as a special case.

For general information on validating, see "Validating documents" on page 52.

To validate a book:

1 In the book window, choose Element > Validate.

2 Select Entire Book, Book Elements Only, or Current Element to specify the scope of the validation.

3 To exclude missing elements or attribute values from the search, turn on Ignore Missing Elements or Ignore Missing Attribute Values.

If these settings are on, FrameMaker does not look for places where a required child element or a required attribute value is missing. You may want to turn these on if you are not trying to build a complete book at this time.

4 Click Start Validating.

5 If FrameMaker finds an error, specify whether to allow the error to remain, and then click Start Validating again.

The top part of the Element Validation dialog box shows the tag of the element and a brief message about the problem. (See "Validation error messages" on page 54.)
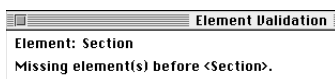
Element and error identified

If you want the error to remain as it is, click Allow as Special Case.

6 Repeat step 5 until FrameMaker does not find any more errors.

To clear all special cases:

1 Choose Element > Validate.

2 Click Clear Special Cases. FrameMaker clears the special cases in the entire book, only the book file, or only the current element—whichever scope is selected in the dialog box.

Removing inherited information from structured files

When you generate and update a book, the files in the book inherit structure information from the book file. A file's Element Catalog may have inclusions and exclusions from the book, and other inherited information in the file may affect the formatting of its text elements.

If you delete a file from a book to use the file as a stand-alone document, reapply the file's element definitions to remove any structure information that came from the book. If the file's text formatting was affected by this structure information, reapplying the definitions also restores the file's original formatting.

To remove inherited information from a file:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 In the file, choose File > Import > Element Definitions.

3 Leave the Import from Document pop-up menu set to Current, select While Updating: Remove Information Inherited from Book, and click Import.

Importing formats into a structured book

You can import formatting information—such as page layouts, paragraph formats, and reference pages—into the files of a book. You can also remove format overrides in the files, such as a font change made to a paragraph that was not stored in the paragraph's format.

Important: The format rules in element definitions often specify overrides so that a file can use as few catalog formats as possible. Normally, when importing formats into a structured book, you should not remove format overrides. For a discussion of format overrides, see "About formatting overrides" on page 66.

In general, when you import formats, FrameMaker merges the new formatting information into the document rather than replacing the existing information.

To import formats into a book:

1 Open or create the file that contains the formats you want to use. The file must be named and saved.

2 In the book window, select the file or files you want to change, and then choose File > Import > Formats.

3 Choose the template or document from the Import from Document pop-up menu. The menu lists all open, saved documents.

4 Select the Import and Update settings you want to apply to files in the book. (For details on these settings, see "Importing and updating formats" on page 408.)

If you're updating cross-reference formats, math definitions, or variable definitions, and any of these items uses character formats, also select Character Formats so that any new formats are added to the files.

5 If you want to remove formatting changes you made but didn't save in a catalog, do the following:

• To remove page breaks that are not part of a paragraph format, select Manual Page Breaks.

• To remove paragraph, character, page layout, and table formatting overrides, select Other Format/Layout Overrides.

In most cases, you should not select Other Format/Layout Overrides in a structured book because the element definitions may use format overrides. You can select this in an unstructured book without any repercussions.

6 Click Import. The formatting information is merged into the files.

Chapter 14: Revision management

About revision management

You can use the following methods to track revisions to documents:

- You can add change bars that identify new or changed material.

- If you receive a revised document with changes that have not been flagged by change bars, or if you want more specific information on the changes, you can compare the new version to an older version.

- You can use the Track Text Edit feature to track text edits in a document.

Also, you can use conditional text to include revision comments and comments to reviewers (see "Conditional text" on page 293)

About change bars

A *change bar* is a vertical line (usually in the margin) that visually identifies new or revised text. If you want all changes marked, you can have change bars appear automatically whenever you insert, change, or delete text.
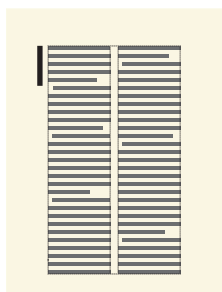
Change bars identify new or revised text.

At times, you may want to flag only the most important changes to your document rather than flag every change. For example, if you're sending out the second revision of a document for review, you may not want to call the reviewers' attention to every added comma or reorganized sentence. Instead, you probably want reviewers to focus on substantive changes. In these situations, you can select specific text to mark with change bars rather than add the change bars automatically.

When working with a structured document, adding change bars manually to particular text is useful for marking a few revisions or for identifying changes in structure, attributes, or formatting. Your custom application may have an element defined for this purpose.

Note: When working with structured documents, change bars do not detect changes that affect only structure (for example, if you unwrap an element), attributes, or formatting.

Later you may want to remove the change bars from text. For example, between drafts of a manual you'll want to remove the old change bars before adding new ones.

You can insert change bars in the newer of two versions of a document by comparing the versions. For information on adding change bars this way, see "Comparing document versions" on page 477.

Note: When you add change bars to an entire paragraph of text and then update the paragraph's format (for example, by importing formats from another document), don't remove format overrides during the update if you want to retain the change bars. Adding change bars to an entire paragraph alters the paragraph's format, and the alteration counts as a format override.

To add change bars automatically:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Choose Format > Document > Change Bars.

3 Specify the thickness of the change bars and the distance from the column of text to the change bars.

4 Choose the position of the change bars from the Position pop-up menu. Choose Side Closer to Page Edge or Side Farther from Page Edge if you want the position of the change bars to vary from side to side based on the page layout.

The position is relative to the edges of the column that contains the changed text, regardless of the number of columns on the page.

5 Choose a color for the change bars from the Color pop-up menu.

6 Select Automatic Change Bars, and click Set.

Automatic change bars don't detect changes in graphics imported by reference unless the imported file's name has been changed. Automatic change bars also don't detect changes that affect only formatting. For example, if you only change the tag of a paragraph from Body to Bullet, no change bar will appear. In this case you can add a change bar manually if necessary.

Note: If cross-references are updated when Automatic Change Bars is selected, change bars will appear next to all changed cross-references.

To add change bars manually to selected text:

❖ Select the text you want to mark and choose Format > Style > Change Bar. You can also use the Default Font properties in the Paragraph Designer.

To add change bars manually to entire paragraphs:

1 Click in a paragraph or drag through several paragraphs. (You don't need to select an entire paragraph.)

2 Choose Format > Paragraphs > Designer and display the Default Font properties.

3 Select Change Bar, and click Apply to Selection.

Using a character format to apply change bars

Another way to selectively apply change bars to text is by using a character format. Once you create the character format, you select the text and apply the character format to it (see "Applying predefined formats to text" on page 102). Using a character format also allows you to retain change bars when you update your document with new paragraph formats and remove format overrides.

If you mark text as changed by applying a character format that displays a change bar, you can remove the change bar in any of the ways described in the next section. However, the only way to remove the format's tag from the text is to select the text and apply the Default ¶ Font from the Character Catalog.

To create a character format that adds change bars:

1 Click in any paragraph and choose Format > Characters > Designer.

2 In the Character Designer, choose Set Window to As Is from the Commands pop-up menu.

3 Select Change Bar, and then choose New Format from the Commands pop-up menu.

4 Enter a tag name and click Store in Catalog.

5 Click Create.

Removing change bars

You can remove all the change bars in a document at the same time or selectively. You can remove the change bars for a single document or from selected files in a book.

To clear all change bars in a document:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Choose Format > Document > Change Bars.

3 Select Clear All Change Bars, and click Set.

To remove specific change bars:

❖ Do one of the following:

• Select the text and choose Format > Style > Change Bar. You can also use the Default Font properties in the Paragraph Designer. If some of the selected text isn't marked with a change bar, you need to choose Format > Style > Change Bar twice to remove the change bars.

• To remove a change bar applied by a character format, select the text and apply the Default ¶ Font from the Character Catalog (see "Applying predefined formats to text" on page 102).

To examine and change text marked with change bars, use the Find/Change command. You can search for text that has the Change Bar property set or for text that uses a character format that sets the Change Bar property. For information, see "Searching for any item" on page 77 and "Searching for character format properties" on page 80.

Comparing document versions

When you compare two versions of a document, FrameMaker creates the following documents:

• The *composite document* is a conditional document that combines the newer and older versions; it shows the differences side by side. You can specify the condition tag to apply to changed text, and whether changes should be flagged with change bars.

• The *summary document* contains a general summary and a revision list for each type of item being compared. You can create the summary as a hypertext document, with links to the actual pages where the changes occurred. By creating a hypertext summary document, you can quickly display changed pages for reading or editing.

For information on comparing books, see "Comparing books" on page 467.

Note: If you are comparing large documents or documents with tables, you may need to swap space (UNIX).

To compare two versions of a document:

1 Open both versions of the document. If the documents contain conditional text, all conditions must be visible.

2 In the newer version, choose File > Utilities > Compare Documents.

3 Choose the older version from the pop-up menu, and specify the documents you want FrameMaker to create. All open, named documents (except the current document) are listed in the Older Document pop-up menu.

4 Click Options, do the following, and click Set:

• Specify how to display inserted text in the Mark Insertions With area. You can use the default condition tag (Inserted), use a different condition tag, or choose not to mark inserted text.

• Specify how to display deleted text in the Mark Deletions With area. You can use the default condition tag (Deleted), use a different condition tag, or use text that you specify. To omit deleted text from the composite document, click Replacement Text and leave the text box empty.

• To mark all changes (insertions and deletions) with change bars in the composite document, select Mark Changes with Change Bars. FrameMaker uses the current change bar settings for the document.

If all you want to do is add change bars to the newer version of a document, select Mark Changes with Change Bars. Also click Replacement Text in the Mark Deletions With area and leave the Replacement text box empty.

5 Click Compare. When the comparison is complete, FrameMaker displays the summary and composite documents. If the two versions are the same, neither document is created.

For information on the items compared and on the form and content of composite and summary documents, see "About composite and summary documents" on page 479.

6 To make the summary report a hypertext document, select Create Hypertext Links in Summary. When you click the page number of a change in the summary, FrameMaker displays the page. You can display pages of the newer version, the older version, or the composite document that contains that change.

Comparing documents that contain multiple flows

You can compare documents with multiple flows. However, to prevent FrameMaker from comparing the wrong flows, make sure each flow has a unique tag and that the flows to compare have the same tag. For information on changing a flow tag, see "Changing flow tags and Autoconnect" on page 393.

If a document contains different flows with the same name (for example, separate flows named "A" on disconnected pages), an alert message lists the duplicate flows when you try to compare the documents. Flows will be compared only if there is one flow of the same name in both documents.

Comparing documents that contain conditional text

When you compare documents that contain conditional text, FrameMaker ignores hidden text and graphics that are not showing.

To compare documents containing conditional text:

1 Do one of the following:

• To compare the full texts of two documents that contain conditional text, show all conditions before performing the comparison. For more information, see "Changing the view of conditional documents" on page 303.

• To compare specific texts of two documents that contain conditional text, show conditions based on a specific expression before performing the comparison.

• To ignore conditional text while comparing documents, hide all conditions before performing the comparison.

2 Compare the documents (see "Comparing document versions" on page 477).

Any hidden conditional items in the newer document remain (and remain hidden) in the composite document that is produced.

Note: Any hidden conditional items in the newer document remain (and remain hidden) in the composite document that is produced.

About composite and summary documents

When you compare documents, FrameMaker creates two documents that display the results.

Composite document In the composite document, FrameMaker considers differences to be insertions or deletions. For example, if the contents of a graphic frame have changed, both versions appear in the composite. The older version is marked as deleted; the newer version is marked as inserted. Variables in the composite document use the newer definitions, but they aren't marked as changed. Only inserted and deleted variables are considered changes.

Summary document In the summary document (named Summary.fm), differences are considered to be insertions, deletions, or changes. If an item has moved, it's marked as deleted and inserted. FrameMaker displays the number of the page on which the change occurs in the newer version, the older version, and the composite document. For insertions, the page number given for the older version is the page where the item would be inserted to match the newer version. For deletions, the page number for the newer version is the page where the item would have appeared if it hadn't been deleted.

If your document contains duplicate markers, the first occurrence of the marker is listed in the summary document. You can find the other occurrences in the document by using the Find/Change command.

Note: If you create multiple summary documents, you should unlock each file by pressing Esc Shift+f l (lowercase L) k and using the Save As command to give each document a unique name.

Items compared

When comparing two versions of a document, FrameMaker checks the contents of flows with the same names on body and reference pages. It looks at text, footnotes, anchored frames, tables, variables and their definitions, cross-references and their formats, footnote text, marker types, and marker text. FrameMaker doesn't compare structure elements, but it does compare the element contents.

The following are some specific differences that FrameMaker can find.

Anchored frames FrameMaker compares the objects in the frame. If the objects are different, or if they are in different positions (for example, if you changed their front-to-back order), FrameMaker marks the entire anchored frame as changed.

Cross-references FrameMaker checks whether a cross-reference is external or internal. It also checks the cross-references format name, the marker text at the source, and the pathname of the referenced file (for external cross-references). If any of these are different, FrameMaker marks the cross-reference as changed.

Text insets FrameMaker compares the modification date, the filename, the relative pathnames of text insets, and the way the inset was imported (for example, whether the lines were merged into paragraphs). If any of these are different, it marks the entire text inset as changed.

Imported graphics FrameMaker compares the contents and dpi scaling of the imported graphic. For example, it checks whether the object has been flipped or rotated, and compares the size of the bounding box. It also compares how the graphic was imported—by reference or by copying. If the graphic was imported by reference, FrameMaker compares the pathnames. If any of these properties are different, it marks as changed the line that contains the anchored frame of the imported graphic.

Equations FrameMaker compares the size of the equation, the location of the equation within its graphic frame, and the math expressions. If any of these are different, it marks the entire equation as changed.

Tables FrameMaker checks the number of rows and columns, whether cells are straddled, and whether cells are rotated. If any of these are different, FrameMaker marks as changed the line that contains the table's anchor. If text in cells has changed, only the new table appears in the composite document and FrameMaker marks as changed the line in the cell that has changed. If more than 75% of the cells have changed, it marks the entire table as changed.

Both the English version of FrameMaker and the Japanese version running on a Japanese OS can compare Japanese text. FrameMaker doesn't compare master page flows (including header and footer flows) or untagged flows; graphic objects or text lines not in anchored frames; anchored frame positions; footnote properties or numbers; paragraph, character, or table tags; text or table formatting; tags in the Paragraph Catalog, Character Catalog, or Table Catalog; or the contents of text insets. Because FrameMaker doesn't check the formatting of text or tables, it won't notice different ruling or shading in a table or a different color assigned to text.

Determining the number of words and characters

You can determine the number of words or characters in a document. Counting the number of characters in a document is especially useful for Asian-language documents with double-width (multibyte) characters. The word count report gives the number of single-width characters, double-width characters, and the total number of characters.

To determine the word count in a document:

1 Choose File > Utilities > Document Reports.

2 Select Asian Character Count or WordCount, and then click Run.

Track Edited Text

You can use the Track Text Edits feature to track text edits in a document. The added and deleted text is highlighted for visual distinction. You can navigate through the edited sections and accept or reject specific edits. You can also preview the document to see its original or final state.

Note: Changes to formatting and element attributes are not tracked.

Table 1 - Tracked and untracked text edits in Unstructured documents

Tracked text edits	Untracked text edits
Adding and deleting text using the keyboard	Adding rows in tables
Adding text between deleted text	Modifying content in cross-references
Cutting, copying, and pasting text	Modifying content in markers
Inserting and deleting anchored frames	Modifying content in equations
Adding, editing, and deleting headers and footers	Adding or deleting text using APIs
Inserting and deleting footnotes	Inserting, modifying, and deleting graphics
Adding, editing, or deleting text within footnotes	Changing formatting

Table 1 - Tracked and untracked text edits in Unstructured documents

Tracked text edits	Untracked text edits
Modifying text using the Find/Change feature	Text within hypertext marker
Correcting spelling errors using the Spelling Checker feature	Adding and removing Page break
Replacing text using the Thesaurus feature	Converting table to text
Inserting, deleting, and pasting cross-references	Replacing variables
Adding and deleting markers	Replacing cross-references
Importing and deleting file by reference or by copying	Adding and deleting the Conditional Text marker
Inserting, pasting, and deleting variables	Importing by copying into MIF files
Editing text within a table cell	Inserting Rubi
Inserting, pasting, and deleting tables	
Inserting and deleting equations	
Changes to text in Rubi	

Table 2 - Tracked and untracked text edits in Structured documents

Tracked text edits	Untracked text edits
Inserting elements using the Return key	Deleting root element
Inserting or deleting text within an element	Editing attributes of an element
Deleting elements	Merging elements
Cutting, copying, and pasting text	Splitting elements
	Unwrapping and wrapping text
	Dragging or dropping elements in the structure view window

Turn on or off text edit tracking

You must turn on the Track Text Edit feature to track your edits to text. By default, the Track Text Edit feature is turned off.

To view the Track Text Edit Bar:

1 Open the FrameMaker document you want to edit or review.

2 Select View > Track Text Edit bar.

To turn on text edit tracking:

❖ Do one of the following:

• Select Special > Track Text Edit > Enable.

• Click the ⃝ icon in the Track Text Edit bar.

To turn off text edit tracking:

❖ Do one of the following:

• Select Special > Track Text Edit > Enable.

• Click the icon in the Track Text Edit bar.

💡 *Both editors and reviewers can use the Track Text Edit feature to track and show edits in the document.*

Tracking text edits

When you start typing text in a document where the Track Text Edit feature is turned on, the string "(FM8_TRACK_CHANGES_ADDED)" or "(FM8_TRACK_CHANGES_DELETED)" appears on the left side of the status bar of the document window. Text additions appear in a forest green font, and deletions appear in a red font with a strikethrough.

Saving a document with text edits as XML

You can save a document with tracked text edits as XML. You can open the XML document in FrameMaker, enable tracking of text edits, and then edit the document. When you save the FrameMaker document back to XML, the edited information is preserved through the XML roundtrip.

If the application used to edit and save the XML file disables roundtripping of ConditionalText PIs, then all Track Text Edit related information is lost during the XML roundtrip. By default, Conditional Text roundtripping is enabled for any XML application, unless you specify other settings for using the ConditionalText element in structured applications.

Find text edits in a document

You can find specific text edits.

Do one of the following:

• Select Special > Track Text Edit, and then select Show Next or Show Previous.

• Click the Show Next or Show Previous icons in the Track Text Edit bar.

Accept or reject text edits

You can accept or reject edits one at a time or all at the same time.

To accept or reject individual text edits:

1 Select the text edit, and then do one of the following:

• Select Special > Track Text Edit > Accept Edit.

• Click the icon in the Track Text Edit bar.

2 Select the text edit, and then do one of the following:

• Select Special > Track Text Edit > Reject Edit.

• Click the icon in the Track Text Edit bar.

To accept or reject all text edits:

Do one of the following:

- Select Special > Track Text Edit, and then select Accept All or Reject All.

- Click the Accept All or Reject All ![icon] icons in the Track Text Edit bar.

Once you accept a text insertion or deletion, that text edit becomes part of the file. If you accept an insertion of text, the inserted text is retained. If you accept a deletion of text, the deleted text is removed. If you reject an insertion of text, the inserted text is removed. If you reject a deletion of text, the deleted text is retained in the file. The inserted or retained text acquires the formatting of its surrounding text.

Preview a document with text edits

Before you accept all text edits, you can choose to preview the final document with all the text edits incorporated in the document. Alternatively, you can preview the original document without the text edits incorporated in the document.

You can view a document containing tracked text edits in two modes: Tracking mode and Preview mode. When you preview a document with text edits, the document display switches from the Tracking mode to the Preview mode.

By default, the preview of a tracked document is turned off (the Preview Off command under the Track Text Edit option in the Special menu is disabled). You must turn on the preview by selecting the Preview Final or the Preview Original option.

Note: You can't undo the Preview Final or Preview Original command in a document.

To preview the final document with text edits:

Do one of the following:

- Select Special > Track Text Edit > Preview Final.

- Click the ![icon] icon in the Track Text Edit bar.

To preview the original document with text edits:

Do one of the following:

- Select Special > Track Text Edit > Preview Original.

- Click the ![icon] icon in the Track Text Edit bar.

Accepted edits are implemented in the document. Rejected edits are deleted, and the document is restored to its original state.

Note: When you select the Preview Final or Preview Original option for the first time in your document, the Preview Off option is enabled.

If you modify the document where the Preview Final or Preview Original option is selected, and the Track Text Edit feature is turned on, FrameMaker switches from the Preview mode to the Tracking mode. If you modify text in this mode, you can't undo the changes you make.

To turn off the Preview mode:

❖ Do one of the following:

- Select Special > Track Text Edit > Preview Off.

- Click the icon in the Track Text Edit Bar.

Save and publish a document with text edits

When you save a document after inserting text edits, the suggested edits are retained.

When you publish the document as a PDF, the text edits are retained and published to the output. If you publish a FrameMaker document to HTML or RTF, the text edits are accepted, and the document is published with the edited content. If the Preview mode is turned on, then the document is published based on the Preview Final or Preview Original option you selected.

Print a document with tracked text edits

You can print a FrameMaker document with edited text, such as additions or deletions of text. Text editions are printed in the same way as they appear in the FrameMaker document.

Chapter 15: Managing files using WebDAV

File management using WebDAV (Windows)

FrameMaker supports the Web Distributed Authoring and Versioning (WebDAV) server technology. Using this technology, you can connect to a WebDAV server, download and upload documents, lock documents so others cannot work on them at the same time as you do, and add (upload) additional documents to your server. Use a WebDAV server to work in a collaborative environment without worrying about version control. WebDAV manages files so that documents will be not be accidentally overwritten, or updated, or lost.

How does WebDAV work?

WebDAV technology enables you to read and write files over a a modified hypertext transfer protocol. Files reside on the server within a directory structure and are "checked out" to your local machine. Your local machine has a directory structure that mirrors the WebDAV server structure, so when you check out files, the files are downloaded to your machine and placed in the mirrored folder.

When file is checked out, it is automatically assigned a Web address, or URL. This URL contains information about the location of the file within the directory structure and is used to track and access the file by using links to manage your documents. For more information about links, see "Managing document links" on page 491.

Why WebDAV?

WebDAV offers two distinct advantages over traditional file servers.

Workgroup management When a file is managed by a WebDAV server, multiple users can download copies of the file, but only one user at a time can *check out* the file. The user who checks out the file can share his or her work with other users by updating the file on the server; however, other users can't make changes to the managed file until it is checked in. This check out/check in system allows multiple users to access the same file but prevents users from overwriting each other's work.

This version control process of passing documents from one collaborator to another is called *workgroup management*.

Remote file management Because WebDAV works over Web accessible networks, location doesn't matter. Team members can share files regardless of their proximity.

Managed documents Managed documents are defined as FrameMaker documents and book files. Links are files, graphics, hypertext links within the document or book file.

Getting started with workgroup management

To use the workgroup management features in FrameMaker, you must be able to connect to a WebDAV server. Once connected, you must specify a URL for each document. This is all you need to manage your workgroup and successfully use WebDAV. In FrameMaker 8, you can author and edit XML files, and FM and MIF files, located on the WebDAV server. For XML files, you must download the read-write rules and all related files from the server, one at a time.

For more information about WebDAV, check out www.webdav.org.

WebDAV server requirements

Different WebDAV servers have different authentication requirements. Some servers require you to enter a user name and password for every transaction; other servers require authentication only the first time you check out a managed document. When the Authentication dialog box appears, enter your user name and password, and click OK.

When adding a new server to the workgroup environment, you will need to provide a unique server nickname (this will appear in the Workgroup Servers list), a URL for the server, and the local directory the server directory will map to.

Important: Firewall software can interfere with the process of connecting to a WebDAV server. Check with your system administrator, or refer to your firewall software documentation for information about setting firewall and proxy configuration settings to access outside servers.

To set up a server for use with FrameMaker:

1 Choose File > Workgroup > Workgroup Servers.

2 Select a current server listed in the dialog box, or click New Server to choose an additional server.

3 Add a server nickname and server URL. The user name and password entries are optional when setting up the server. However, when you upload and download files, you will need to enter a name and password.

4 Specify a folder in which you want to store local copies of managed documents. To change the default location, click Choose, and specify a different folder.

5 Click OK to save the server information.

6 Click Done to close the Workgroup Server dialog box.

Setting preferences for managed documents and their links

If your Workgroup Preferences are set to download all links, when you open a book file all the files in the book and all the links in each file will also be downloaded. If your Preferences are set not to download links, then you have to manually download each file and its links.

To set preferences for opening managed documents:

1 Choose File> Preferences> Workgroup.

2 Select the following options for Check Out from Server:

• *Always* automatically checks out the document when you open it.

• *Ask* displays a dialog box when you open a document that is checked in.

• *Never* opens the local copy of the document without displaying a dialog box and without checking it out.

3 Select one of the following options for Update from Server (affects only documents that are checked in):

• *Always* automatically downloads the latest version of the document from the server.

• *Ask* displays a dialog box if the document has been updated on the server.

• *Never* opens the local copy of the document without displaying a dialog box and without downloading the latest version of the document from the server.

4 Select one of the following options for Update Nonhypertext Links when the Document is Opened (this applies to imported graphics, text insets and other non-hypertext links):

• *Always* automatically updates links when you open a document.

• *Ask* displays a dialog box when you open a document that contains managed links.

• *Never* opens the local copy of the document without displaying a dialog box and without updating links.

5 Select one of the following options for Update Hypertext Links when the Document is Opened.

• *Always* automatically updates hypertext links when you open a document.

• *Ask* displays a dialog box when you open a document that contains hypertext links.

• *Never* opens the local copy of the document without displaying a dialog box and without updating hypertext links.

Note: If Always or Ask is selected, every link within an index or table of contents file will open. Depending upon the size of your file, choosing these options may cause your file to open very slowly.

6 Select one of the following options for Check In Links when Checking in Document:

• *Always* automatically checks in links when you check in a document.

• *Ask* displays a dialog box when you check in a document that contains links.

• *Never* does not check in the linked files when you check in a document.

7 Click OK.

To turn off WebDAV functionality:

1 Choose File > Preferences > Workgroup.

2 Uncheck the Enable Workgroup functionality option.

3 Click OK. The WebDAV options will not appear under the File menu until you turn on the functionality again.

Adding documents to the server

After you've connected to your WebDAV server, add a document to your server, or download a document from your server to begin your workflow.

To add a document to a WebDAV server:

1 Open the unmanaged FrameMaker document, choose File > Workgroup > Save As.

2 Select the server and folder where you want to place the file. You can also create new folders on the server by selecting the New Folder button.

3 Change the filename if necessary, select the Format if necessary and turn off the Keep Checked Out option if you do not want the file to be automatically checked out after uploading to the server.

4 Click Save. The file is copied to the server and to your managed files folder. Your document is now a managed document.

Opening documents from WebDAV

To begin modifying a managed document, you will need to download it to your local machine and then check it out.

To open a document from your WebDAV server:

1 Choose File > Workgroup > Open.

2 Select the file you want to open from your specified server and click Open. Your document is downloaded to your local machine and placed in a mirrored folder. Each local machine has a directory structure that mirrors the WebDAV server structure.

Note: Depending on your Workgroup Preferences settings, FrameMaker may download all the linked files automatically or ask if you want the linked files downloaded.

Saving documents in XML format on WebDAV

The WebDAV feature lets you author, edit, and save XML documents located on the WebDAV server.

1 In structured FrameMaker, select File > Workgroup > Save As.

2 In the Save To Server dialog box, select the server and folder where you want to place the file. You can also create new folders on the server by clicking the New Folder button.

3 Specify the filename and ensure that the extension is .xml.

4 Select the XML format.
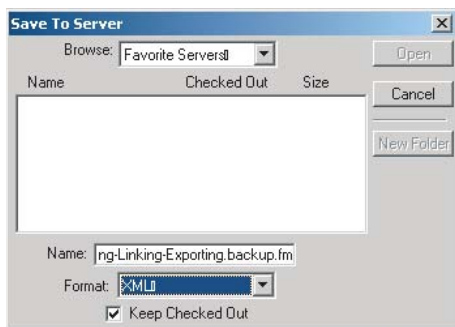
5 By default, the Keep Checked Out option is selected. You can deselect the option if you do not want the file to be automatically checked out after saving it to the server.

6 Click Save. The file is copied to the server and to your managed files folder. Your document is now a managed document. The title of the "Save" button changes to "Open".

Checking documents out and in

Checking out a document prevents other users from overwriting your work. When you're finished making edits, check the document in to update your changes to the server and release the lock on the managed document.

While you have a document checked out, you can save changes to the managed document on the server. This allows you to share your work with other users without giving up the lock on the document.

To check a document out

❖ Select File > Workgroup > Check Out.

To check multiple documents out:

❖ Hold down the Shift key and select File > Workgroup > Check Out All Open Documents.

Each open document will be checked out and downloaded to your local hard drive.

To cancel a check out:

❖ Choose File > Workgroup > Cancel Check Out.

You'll be prompted to verify that you want to cancel the check out.

Note: Once you save a file to the server, you cannot roll back to a previous version.

To cancel check out of multiple documents:

❖ Hold down the Shift key and select File > Workgroup > Cancel Check Out of Open Documents.

To check a document in:

❖ Choose File > Workgroup > Check In.

The file will be saved to the server, the lock release will be removed so someone else will be able to check the file out. Your local version will be locked and uneditable.

To check in multiple documents:

❖ Hold down the Shift key and select File > Workgroup > Check In All Open Documents. All open documents that are checked out will be checked in.

Editing a managed document

Edit a managed document exactly as you would any FrameMaker document.

Saving a managed document

When saving, you can save to your hard drive or to the WebDAV server.

To save a managed document to your hard drive:

❖ Click File > Save.

To save a managed document to a WebDAV server:

❖ Do one of the following:

• Click File > Workgroup > Save.

• Click File > Workgroup > Save As to save your managed Document, MIF, or XML document to a different location. Click Save.

Note: The Save As command will remove the management information from the document regardless of whether the document is being saved to a location in a managed folder or not.

Updating all open documents

While you have a document checked in, you can download the document from the server. This allows you to get the latest version from the server even if the document is checked out to another user.

To update an open document:

❖ Hold down the Shift key and Click File > Workgroup > Update.

To update all open documents:

❖ Click File > Workgroup > Update All Open Documents.

Reverting to server version

While you have a document checked out, you can roll back to the server version. This allows you to discard all changes made to your local file and replace it with the most current server version.

To revert an open document:

❖ Click File > Workgroup > Revert.

To revert all open documents:

❖ Hold down the Shift key and choose File > Workgroup > Revert All Open Documents.

Importing a file from a server

You can import a file directly from any server and add it to your Workgroup.

To import a file from the server:

1 Choose File > Workgroup > Import.

2 The Import from Server dialog displays, select the server and file that you want to import.

3 Select whether to Import by Reference or Copy into Document, and click Import. The file will be downloaded to your managed files folder. If there is a copy already in the managed file folder, you'll be prompted to overwrite it.

Accessing other files on a WebDAV server

You can download files from the WebDAV server that FrameMaker cannot open or import. You can also add such files to the server from FrameMaker. If you download a file that already exists at the download location, FrameMaker will update it with the latest version from the server.

To download a file from the WebDAV server:

1 Choose File > Get File from Server.

2 Select a server, a directory, and the file you want to download, and click Open.

Note: If you have a version of this document on your local hard drive, you'll be prompted to overwrite the file.

To upload a file to the WebDAV server:

1 Choose File > Put File on Server.

2 Select the file you want to upload along with the server, and click Save.

Managing document links

The WebDAV Links palette contains information both for local links (located on your hard disk) and for managed links (those located on a server). Links represent paths to your managed documents.

The Links palette is where you add, update, and save all your links and get information about your managed document and selected links.
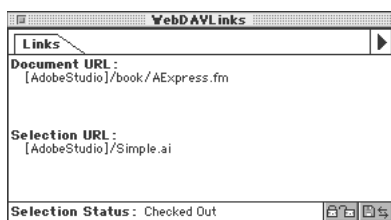
The links palette displays information about all of your managed document links.

There are three key items within the managed links palette: *Document URL, Selection URL, and Document/Selection Status*. Document URL displays the URL for your active document; Selection URL displays the URL of the selected link (for example, a file in a book or an imported graphic); Selection Status displays the state of the selected URL (for example, Checked In, Checked Out, or Not Managed).

To manage document links:

1 Choose File > Links to open the Links palette.

2 Select one or more links in the Links palette.

3 Choose Save Link in the Links palette menu.

To add and save links to the server:

1 Choose File > Links to open the Links palette.

2 Highlight the link(s) you want to add. This can be an imported graphic in a FrameMaker document, or a file in the book file.

3 Choose one of the following:

• Save Link As

• Save Selected Links As

• Save All Links As

4 You will be prompted for a filename for each link. You can use the default name or enter a different name. All links will be added to the same server and directory.

To add all links to the server:

1 Choose File > Links to open the Links palette.

2 Do not select any links in your document or book.

3 Select Save All Links As, then select the server and directory you wish to save the links to.

Note: You will be prompted for a filename for each link. You can use the default name or enter a different name. All links will be added to the same server and directory unless you choose a different location.

To save managed link updates:

1 Choose File > Links to open the Links palette.

2 Select the link you wish to save.

3 Choose Save Link in the Links palette menu.

To update or revert managed links to the latest version on the server:

1 Select one or more links in the Links palette.

2 Choose Revert Link.

To check in managed links to the server:

1 Select File > Links to open the Links palette.

2 Select the link(s) you want to check in.

3 Select one of the following:

• Check In Link

• Check In Selected Links

• Check In All Managed Links

To check out managed links to the server:

1 Select File > Links to open the Links palette.

2 Select the link(s) you want to check out.

3 Select one of the following:

• Check Out Link

• Check Out Selected Links

• Check Out all Managed Links

To cancel check out managed links:

1 Select File > Links to open the links palette.

2 Select the link(s) you want to cancel check out.

3 Select one of the following:

• Cancel Link Check Out

• Cancel Check Out of Selected Links

• Cancel Check Out All Managed Links

To revert managed links to the latest version on the server:

1 Select the links you want to revert.

2 Select Revert Link.

To update managed links to the latest version on the server:

1 Select one or more links in your document or book.

2 Select one of the following:

• Update Link

• Update Selected Links

• Update All Managed Links

Chapter 16: Importing, linking, and exporting

About importing files into FrameMaker

You can import other Adobe FrameMaker documents, documents created in other applications, text files, and graphic files. You can also import SWF files and 3D objects into FrameMaker documents. An imported object can simply be copied into the document. It can also be linked—such as when you import by reference—so that it remains tied to its source for easy updating.

You can export text and graphics to other applications by using a number of techniques, some of which are unique to the platform you're working on.

Choosing the right method for importing and linking

You can bring text or graphics into a FrameMaker document by doing the following:

- Use the Clipboard to copy and paste text or graphics from another application.
- Use File > Import > File.
- (Windows) Use Object Linking and Embedding (OLE).
- (Windows) Drag objects between windows.
- (UNIX) Use a graphic inset editor.

You use some of these methods for importing by copying and some for importing by reference. You use the File > Import > File command, available on all platforms, for both.

Importing by copying

You can import by copying by using the Clipboard or File > Import > File, or (in Windows) by dragging objects between windows.

Importing by copying makes it easy to transfer the imported material from one location to another, but it increases the document size. In addition, if you make changes to the source material, you must reimport it to update the document with the latest version.

Importing by reference

You can import by reference by using File > Import > File, OLE (Windows), or a graphic inset editor (UNIX).

When you double-click a graphic imported by reference you (Windows) open the application.

Importing by reference keeps the imported text or graphics linked to the source file. FrameMaker stores the pathname to the source file in the document. Each time you open the document, FrameMaker locates the file on the disk and re-displays it. If the source file was revised, FrameMaker updates the document with the latest version. Importing by reference can reduce total file size because it lets you use the same material in several places without storing the contents of imported images or text in the FrameMaker document. Text imported by reference is called a *text inset*.

For information on how the pathname is stored when importing by reference, see "Using pathnames when importing by reference" on page 501.

Using Copy and Paste

Perhaps the easiest way to import text and graphics is by copying to and pasting from the Clipboard. Note the following:

• You can convert tab-delimited text to a table using the Table > Convert to Table command.

• Text formatting is lost unless you're pasting into another FrameMaker document.

• (Windows) Choosing Edit > Paste Special sometimes offers you more options. For example, you can exchange formatted text between FrameMaker documents and Microsoft Word documents in RTF format by using Paste Special instead of Paste.

Using the Import command to import text

You can use the File > Import > File command to import text on all platforms. This method provides more flexibility than using the Clipboard.

However, if you're working on only one platform, you might want to use a platform-specific approach. For information, see "Using OLE (Windows)" on page 505.

The text you import can be formatted or unformatted. Unformatted text contains only the words; there is no information on fonts, indents, spacing, autonumbering, and so on. Formatted text contains these types of information.

Importing formatted text

You can import formatted text into a FrameMaker document by importing from the following sources:

• A text flow from another part of the same document

• A text flow from another FrameMaker document

• A text flow from another FrameMaker document that is a Maker Interchange Format (MIF) file (see "Importing MIF files" on page 499)

• A file created in another application, such as Microsoft Word, for which there is an installed filter

When you import text from another FrameMaker document, you also import cross-references, footnotes, variables, markers, tables, and anchored frames. Conditional text in the flow is also imported. When you import text from another application, some of these special items may be imported, depending on the capabilities of the other application and the filter used.

To import formatted text:

1 Click where you want to insert the text and choose File > Import > File.

2 Specify the file that contains the flow you want to import and the import method (see "Choosing the right method for importing and linking" on page 494).

3 Click Import.

4 If the Unknown File Type dialog box appears, select a file type and click Convert. The dialog box that appears next depends on the import method you chose in step 2. The Import Text Flow by Reference dialog box contains settings for specifying how to update the imported flow. Choose a body page flow or a reference page flow. Typically, the text you import will come from body pages. Reference pages can contain flows with boilerplate text or graphics for use on body pages.

5 Specify how to format the imported text by doing one of the following:

• To apply the current document's formats to the imported text whenever their tags match, click Reformat Using Current Document's Formats. If the tags don't match, the formatting of imported text is unaffected. Usually, you would also select the options to remove manual page breaks and other format overrides (such as font properties or tab settings) so that the imported text looks like text in the current document with the same tags.

• To remove the formatting from the imported text and apply the character and paragraph formatting used at the insertion point, click Reformat as Plain Text. (Text in tables or anchored frames retains the formatting it had in the source document.)

• To keep the formatting from the source document, click Retain Source's Formatting. Formats in the imported text aren't added to the current document's format catalogs. If you later modify the current document's formats, the imported text formats won't be affected—even if the tags in the current document and imported text match.

6 If you are importing the text by reference, specify how to update the text inset by doing one of the following:

• To update the text inset whenever you open the document, click Automatic.

• To update only when you specify, click Manual.

7 Click Import. If you imported the text by reference, it appears as a text inset. (A text inset is linked to the source document and can't be edited outside of that source document.)

Importing unformatted text

When you import the text from an unformatted text file, you specify whether to import it by copying or by reference and how to treat lines in the text file. The imported text adopts the character and paragraph formatting used at the insertion point.

To import a text file:

1 Place the insertion point where you want to insert the text, and then choose File > Import > File.

2 Specify the text file you want to import, and the import method. For information, see "Choosing the right method for importing and linking" on page 494.

3 Click Import. The dialog box that appears depends on the import method (Import by Reference or Copy into Document) you chose.

4 Specify how to treat the imported text by doing one of the following:

• To break the text into paragraphs only at blank lines, click Merge Lines into Paragraphs. Use this option for a paragraph-oriented text file such as a file containing document text.

- To break the text into paragraphs at the end of each line, click Treat Each Line As a Paragraph. Use this option for a line-oriented text file such as a file containing computer code.

- To convert the imported text to a table, click Convert to Table. Specify a table format and other settings. Use this option only if the file contains delimited text, such as text output from a database program.

5 If you are importing the text by reference, specify how to update the text inset by doing one of the following:

- To update the text inset whenever you open the document, click Automatic.

- To update only when you specify, click Manual.

6 If necessary, choose a character encoding from the Text Encoding pop-up menu. Do this only if you know the preselected encoding is incorrect. If you force an incorrect encoding, character substitution may occur or some characters may appear as question marks.

7 Click Import. If you imported the text by reference, it appears as a text inset.

Importing Adobe Illustrator files

You can import Adobe Illustrator 9.0 and 10.0 files into FrameMaker. FrameMaker imports the files in PDF; consequently, some complicated graphics, or graphics that use transparency may not print as expected on a PostScript Level 1 or non-PostScript printer.

The Adobe Illustrator import feature is available in Windows.

Note: Illustrator 9.0 and 10.0 files will be imported at the page size of the file, not the image size. Resize the anchored frame in order to crop any white space from the image.

Importing Microsoft Word files

You can import Microsoft Word documents with .doc or .docx file extensions into FrameMaker documents.

If you saved your Microsoft Word document in the Word 97-2003 format, you can import it using the Microsoft Word or the Microsoft Word 2007 filter. However, if you want to import a Microsoft Word 2007 document, you must use the Microsoft Word 2007 filter. You can import RTF files using the Microsoft RTF 1.6 filter in the Unknown File Type dialog box.

1 Place the insertion point in the document where you want to insert the text, and then choose File > Import > File.

2 Specify the file you want to import, select the Import by Reference or Copy Into Document option, and then select Import.

Depending on the document you are importing, the Microsoft Word or Microsoft Word 2007 filter is selected in the Unknown File Type dialog box.

3 Click Convert. The Import Text Flow by Copy or the Import Text Flow by Reference dialog box appears.

4 In the Flow to Import area, select a Body Page Flow or a Reference Page Flow.

5 In the Formatting of Imported Flow area, select one of the following options:

- To select the Remove Manual Page Breaks option and the Other Format Overrides option, click Reformat Using Current Document's Formats.

- To convert the imported content to plain text and then insert it in the document, click Reformat as Plain Text.

- To retain the imported content in its original format and then insert it in the document, click Retain Source's Formatting.

6 In the Import Text Flow by Reference dialog box, select one of the following options in the Updating of Imported Flow area:

• To update the imported flow area automatically, click Automatic.

• To update the imported flow area manually, click Manual.

7 Click Import.

Note: Bookmarks within Word documents become cross-reference markers; annotations in Word documents become conditional text with the condition "Comment" when imported by reference; hidden text in Word documents becomes conditional text with the condition "Hidden" when imported.

Importing Microsoft Excel files

You can import Microsoft Excel documents with .xls or .xlsx extensions into FrameMaker documents.

If you saved your Microsoft Excel document in the Excel 97-2003 Workbook format, you can import it using the Microsoft Excel or the Microsoft Excel 2007 filter. However, if you want to import an Microsoft Excel 2007 document, you must use the Microsoft Excel 2007 filter.

1 Click where you want to insert the file, and choose File > Import > File.

2 Specify the file you want to import, select Import by Reference or Copy Into Document option, and click Import.

Depending on the document you are importing, the Microsoft Excel or Microsoft Excel 2007 filter is selected in the Unknown File Type dialog box.

3 Click Convert. The Import Text Flow by Copy or the Import Text Flow by Reference dialog box appears.

4 In the Flow to Import area, select Body Page Flow or Reference Page Flow.

5 In the Formatting of Imported Flow area, select one of the following options:

• To select the Remove Manual Page Breaks option and the Other Format Overrides option, click Reformat Using Current Document's Formats.

• To convert the imported content to plain text and then insert it in the document, click Reformat as Plain Text.

• To retain the imported content in its original format and then insert it in the document, click Retain Source's Formatting.

6 In the Import Text Flow by Reference dialog box, select one of the following options displayed in the Updating of Imported Flow area:

• To update the imported flow area automatically, click Automatic.

• To update the imported flow area manually, click Manual.

7 Click Import.

Importing RTF files

FrameMaker now supports RTF 1.6 Import and Export.

Importing MIF files

MIF is a text format that lets you exchange information between FrameMaker and other applications. All types of format and page layout information are translated to MIF commands. FrameMaker interprets the commands in the MIF file, turning them back to formatting and layout properties.

You can import the text of a specified flow of a MIF file as you do any FrameMaker file (see "Importing formatted text" on page 495). When you import by copying, all reference and master pages are imported as well as the body pages. The body text appears on a disconnected page. For information on connecting pages and flows, see "Connecting text frames" on page 394. For information on MIF, see the online manual *MIF Reference*.

Importing PDF files

When you import a PDF file into a FrameMaker document, the PDF file is treated as a graphic. Only one page of the PDF file can be imported into the FrameMaker document at a time. Both process and spot colors can be displayed and printed.

Graphics that use transparency may not print as expected on a PostScript Level 1 or non-PostScript printer.

When a document that was created on a Windows platform contains an imported PDF file, and is then opened on a UNIX system, the PDF image displays as a gray box.

FrameMaker does not support PDF files that use multibyte (Asian-language) fonts.

To import a PDF file:

1 Specify the position of the graphic (for details, see "Using the Import command to import graphics" on page 501).

2 Choose File > Import > File.

3 Select the PDF file you want to import and click Import.

4 If the PDF file has more than one page, you will need to specify the page number in the Select PDF Page dialog box. Use the slider to display a thumbnail image of the page you want, and then click Select.

Viewing the properties or source of text insets

You can view the filename and file type of the source document, the date it was last modified, the date the text inset was last updated, and the inset's update setting. You can also display the source of a text inset.

To view the properties or source of a text inset:

1 Click the text inset to select it and choose Edit > Text Inset Properties. You can also double-click the inset.

2 If you want to open the source of the text inset, click Open Source. The source is opened as a FrameMaker document.

Controlling the updating of text insets

You can control how and when text insets are updated from their source documents. For example, you can specify either automatic or manual updating, and you can manually update a single text inset or several insets in the document.

Note: Text imported by reference is automatically updated only if its datestamp indicates that it is out of date. However, because the time settings may differ between file systems or networks, it's possible that an out-of-date text inset won't be updated automatically. In this case, you can manually update the inset.

To change the updating of a selected text inset:

1 Select the inset to update.

2 Choose Edit > Text Inset Properties and click Settings.

3 Specify manual or automatic updating and click Import.

To suppress the updating of all text insets in a document:

1 Choose Edit > Update References.

2 Choose Suppress Automatic Updating from the Commands pop-up menu, and then choose the items you don't want to be updated automatically.

3 Click Set and then click Done.

To suppress the updating of all text insets in selected book files:

1 In a book window, select the file or files you want to update.

2 Choose Edit > Suppress Automatic Reference Updating.

3 Select Suppress Automatic Updating and click Set.

To manually update a single text inset:

❖ Select the inset, choose Edit > Text Inset Properties, and then click Update Now.

To manually update multiple insets in a document:

1 Choose Edit > Update References.

2 Select the types of insets you want to update and click Update.

To interrupt the updating of text insets, press Control+c.

Converting text insets to editable text

When you convert a text inset to editable text, FrameMaker no longer updates it. You can convert a single text inset or all the text insets in a document.

To convert one or more text insets to editable text:

1 If you're converting one text inset, click it to select it.

2 Choose Edit > Text Inset Properties.

3 Click Convert to Text, specify whether to convert the selected inset or all insets in the document, and then click Convert.

Locating the source of unresolved text insets

If FrameMaker can't locate the source file for a text inset during updating (or if the format of the source file has changed since the last update), an alert message appears. After dismissing the alert message, you can locate the unresolved text inset and then re-import the text.

To locate the source of an unresolved text inset:

1 Choose Edit > Find/Change.

2 Choose Unresolved Text Inset from the Find pop-up menu and click Find to select the first unresolved text inset.

3 Choose Edit > Text Inset Properties, note the pathname and file type of the inset, and then click Cancel.

4 Using the pathname and file type information, re-import the text as described in "Importing formatted text" on page 495 or in "Importing unformatted text" on page 496.

If a document contains many unresolved text insets, it may be more convenient to generate a list of unresolved text insets. For information, see "Generating TOCs and other lists" on page 414.

Using pathnames when importing by reference

When you import by reference with File > Import > File, the pathname to the text or graphic can be either absolute or relative. A *relative pathname* begins at a current folder or one folder up the hierarchy and specifies the file's location from there. An *absolute pathname* begins at the root of the file system (the topmost folder) and fully specifies the file's location from there. The following table lists examples of absolute paths.

Platform	Absolute path
Windows	d:\Graphics\Mountain.gif
	\\DocServer\Graphics\Mountain.gif
UNIX	/usr/doc/graphics/mountain.rf

FrameMaker stores relative pathnames whenever possible so that it can find an imported file even when you move both the document and the source file—as long as you keep the files in the same relative locations. If you save the document in a different folder, FrameMaker adjusts the pathnames of the imported files accordingly. However, if the path to the imported file traverses the root (the topmost folder) of the file system, FrameMaker uses an absolute pathname that begins at the root.

To ensure that FrameMaker uses relative pathnames, make sure it does not have to traverse the root to locate the file.

Using the Import command to import graphics

You can use File > Import > File to import graphics on all platforms. (For information on the pathnames used when you import graphics by reference, see "Using pathnames when importing by reference" on page 501.)

However, if your documents will be edited only on a single platform, you might want to consider a platform-specific approach. For information, see "Using OLE (Windows)" on page 505, and "Using graphic insets (UNIX)" on page 507.

You can import a graphic into an anchored or unanchored graphic frame, into a rectangle that serves as a bounding box, or directly onto a page. If you want the graphic to move with text as you edit the document—for example, a graphic in longer documents or documents intended for HTML conversion—import the graphic into an anchored frame. If you want the graphic to stay where you put it—for example, if the graphic is the logo of a letterhead—import it onto the page and position it where you want it.

When you import a graphic, you sometimes specify an import filter on the basis of the graphic's format. When you import a bitmap image, you also specify its scale in dots per inch (dpi). The larger the dpi value, the smaller the graphic is on the page.

When you copy an image, or copy an image by reference, into a document, you can specify an HTTP path from which to import the graphic. The HTTP path is preserved in the XML roundtrip.

When you import an image, it is stored as a temporary file on the local computer. If you import the same file again, the file is not downloaded. If you modify the file after importing it into FrameMaker, the modifications will not take effect until you delete the temporary file and import the graphic again into the FrameMaker document, or set the value of the `AlwaysDownloadURL` flag in maker.ini to `On`. However, if you copy the FrameMaker document containing the imported graphic to another computer, the file is downloaded again when you import it by specifying the HTTP file path.

To import a graphic:

1 Specify the position of the graphic by doing one of the following:

• To place the imported graphic in a graphic frame, select an existing frame or put an insertion point in a text frame.

• To place the imported graphic directly on a page, click in the page margin.

• To use a drawn rectangle to define the size of the imported bitmap graphic, select an existing rectangle or draw one (do not select an anchored or unanchored frame). The graphic replaces the rectangle if the Fit in Selected Rectangle option is selected when you import; however, the aspect ratio of the graphic remains unchanged.

• To replace an existing graphic, select it.

2 Choose File > Import > File.

3 Select the graphic file you want to import, or specify the HTTP path of the graphic file to import, and the import method. For information, see "Choosing the right method for importing and linking" on page 494.

4 Click Import. If the graphic is not a bitmap, it now appears in the document and you're finished.

5 If the Unknown File Type dialog box appears when you click Import, select a file type in the scroll list and click Convert.

If the imported graphic is not a bitmap, it now appears in the document and you're finished.

6 If you're importing a bitmap graphic, choose a scaling option or Fit in Selected Rectangle and click Set.

Note: When you import a graphic into a structured document by specifying an HTTP path, the graphic is downloaded each time you import the graphic. The graphic's HTTP path is retained when the document is saved as an XML document.

For the best printed results, choose a dpi value that divides evenly (or leaves only a small remainder) into the resolution of your printer or typesetter. For the best screen representation, choose a dpi value that divides evenly into your screen resolution. (Windows screens typically have a resolution of 96 dpi, and UNIX is usually 90 dpi.)

For more information, see "Resizing objects" on page 336, and "Resizing imported graphics" on page 336.

Importing SVG files

When importing a Scalable Vector Graphic (SVG), the SVG Import dialog box allows the user to select the rasterization quality of the image. By increasing the rasterization quality, printed and PDF versions are crisper; however, increasing the rasterization also increases the file size of the image, and it takes longer to import it.

Imported SVG images will display as bitmaps. However, embedded imported animations will not be functional in FrameMaker.

To import an SVG image:

1 Choose File > Import > File.

2 Select the SVG image, and then click Import.

3 In the Import SVG dialog box, specify the Raster Quality.

4 Specify Image Dimensions if they are different than the default size (you can not scale proportionally in this dialog).

5 Click Set.

Note: Depending on the rasterization quality and your available memory, it may take several minutes for the SVG image to import.

Importing movies (Windows)

In Windows, you can add movies to documents by embedding .avi or .mov files. For details see "Using OLE (Windows)" on page 505.

When you print a document containing a QuickTime movie, only the movie's title appears.

Note: Don't move or delete the original QuickTime movie file, even if you used the Copy into Document option when you imported it. Even with this option, the entire QuickTime movie is not copied into your document.

Locating missing graphics

When you open a document that contains graphic files imported by reference, FrameMaker looks for the referenced graphic files. If it can't find a graphic file, it displays a dialog box.

To locate a graphic FrameMaker can't find:

1 When FrameMaker displays the Missing File dialog box, do one of the following:

• To find and display the graphic, use the scroll list to select it and click Update Document to Use New Path. FrameMaker continues to use the new path to try to find other missing files while opening the document. That way, if you move all your graphic files to a new location, you have to specify the new path only once.

• To skip the graphic file, click Skip This File. The skipped graphic appears as a gray rectangle in the document. The next time you open the document, FrameMaker tries to find the file again.

• To skip other graphic files if they can't be found, click Ignore All Missing Files.

2 Click Continue.

To view an imported graphic's filename:

❖ Select the graphic that has been imported by reference and choose Graphics > Object Properties. The graphic's name and path appear in the dialog box.

Changing the size of bitmaps

Changing the dpi value or the scaling factor changes the size of a bitmap graphic.

To make a bitmap larger or smaller:

❖ Do one of the following:

• Select the bitmap, choose Graphics > Object Properties, and click Set dpi.

• Select the bitmap, choose Graphics > Scale, and specify a scale factor.

• Shift-drag a corner handle of the bitmap. Holding down Shift while you drag maintains the proportions of the graphic.

Note: If the graphic is a TIFF file (or other format that uses dpi settings), scaling needs to be done through the Object Properties to ensure the dpi value is not lost when scaled using the Scale dialog.

Using drag and drop (Windows)

Import and export are greatly simplified when you can just drag an object to its new location.
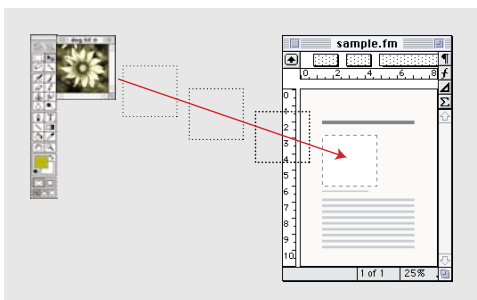
Drag a graphic from Photoshop into FrameMaker

FrameMaker supports the following drag-and-drop operations:

• You can move a graphic from one open FrameMaker document window to another by dragging the graphic. In Windows, you can also copy it by Control-dragging it or display a context (shortcut) menu when you drop it by right-dragging it.

• You can drag a graphic between a FrameMaker document window and any other application that supports drag-and-drop operations.

• You can drag a graphic file from a folder or the desktop into an open document window.

• In Windows, you can drag one or more document files into the application window to open the files, or you can drag a single file into a document window to embed that file (see "Embedding with OLE" on page 505).

Even though you can't drag and drop selected text, you can move text by dragging the frame that contains the text. This is a good way to manipulate small blocks of text in graphic frames, such as captions, callouts, and pull quotes.

Using OLE (Windows)

In Windows, you can use Object Linking and Embedding (OLE) as an alternative to the cross-platform File > Import > File command when importing by reference. Consider the following factors when deciding whether to import text and graphics by reference or to use OLE to embed or link them instead:

• If you want to collapse a linked file to an icon instead of displaying the full contents of the file in your document, use OLE linking.

• If the material you want to include is in a format that FrameMaker can't open, use OLE.

• If you edit or view your document on multiple platforms, use import by reference. OLE works only in Windows.

• If the text or graphics you want to include comes from an application that doesn't support OLE, use import by reference.

• If the material you want to include comes from another FrameMaker document, use import by reference. This provides many more import options.

Embedding with OLE

You can use OLE to embed text or graphics in a FrameMaker document. Embedded material retains its association with the application that created it (but does not retain a dynamic link to its source document). This lets you double-click an embedded object to open the object in the application that created it. Be sure to use an application that supports OLE as a server to create the object you want to embed.

You can also embed multimedia objects such as video or movie files (.avi or .mov files) and sound files (.wav files).

To embed only part of a file with OLE:

1 In its own application, open the file and copy the part you want to embed.

2 In FrameMaker, click where you want to embed the text or graphics, and choose Edit > Paste Special.

3 Click Paste, select a format for the object (look for a format that starts with "embedded"), and then click OK.

To embed a whole file with OLE:

❖ Click where you want to embed the text or graphics and choose File > Import > Object. You can then embed a new, empty file, or specify an existing one.

To embed by dragging with OLE:

❖ Do one of the following from an application that supports drag-and-drop features:

• To move text or graphics into a FrameMaker document, drag the object.

• To make a copy of an object instead of moving it, Control-drag the object.

• To choose between moving or copying when you release the mouse button, right-drag the object.

Linking with OLE

When you link to an OLE text or graphic object in a document, FrameMaker not only maintains information about the application that created the object but also keeps a dynamic association with the source document. If the source material changes, its representation in the FrameMaker document is updated as well. Be sure to use an application that supports OLE as a server to create the object you want to link to.

You edit linked text or graphics by editing the original source document. For information on editing linked text, see "Editing OLE objects" on page 506.

To link to only part of a file:

1 In its own application, open the file and copy the part you want to link to.

2 In FrameMaker, click where you want to place the linked text or graphics, and choose Edit > Paste Special.

3 Click Paste Link, select a format for the object (look for a format that starts with "linked"), and then click OK.

To link to a whole file with OLE:

1 Click where you want to place the linked file and choose File > Import > Object. Click Create from File and then select Link.

2 Specify the file you want to link to and click OK.

Editing OLE objects

You edit an OLE object by using the application that originally created it. When you finish editing, the changes appear in the FrameMaker window.

To edit an embedded OLE object:

❖ Double-click it. The object appears in the creating application where you can edit it.

To edit a linked OLE object:

❖ Do one of the following:

• Double-click the OLE object. Either the object appears in a new window in the application that created it or the menus in the FrameMaker window temporarily merge with the menus of the creating application. In either case, the changes you make are reflected in the original document.

• Edit the original document outside of FrameMaker, in the application that created it.

For information on editing linked text, see "Controlling the updating of OLE links" on page 506.

Controlling the updating of OLE links

You can control how and when OLE linked objects are updated from their source documents. For example, you can specify either automatic or manual updating, and you can manually update a single linked object or several objects in the document.

You cannot specify updating for OLE embedded objects because an embedded object is not dynamically linked with the original document.

To change the updating of a linked OLE object:

1 Select the object, and choose Edit > Links.

2 Select the linked source from the list, click either Automatic or Manual as the update type, and then click OK.

To suppress the updating of all linked OLE objects:

1 Choose Edit > Update References.

2 Choose Suppress Automatic Updating from the Commands pop-up menu, and then choose the items you don't want to be updated automatically.

3 Click Set, and then click Done.

To manually update a single OLE link object:

❖ Choose Edit > Links, select the source file you want to update, and then click Update Now.

Canceling OLE links

When you break an OLE link, the text or graphic remains in your document, but is no longer updated when the source changes. The text becomes editable.

To cancel an OLE link:

❖ Select the object, choose Edit > Links, and then click Break Link.

Using graphic insets (UNIX)

A *graphic inset* is a graphic created in a special UNIX application—a graphic inset editor—and then inserted in a document. You use the inset editor to create or modify the graphic inset, or you can start the editor from within FrameMaker.

Your system administrator can configure FrameMaker to use inset editors (see the online manual *Customizing FrameMaker* on the Adobe website: www.adobe.com/devnet/framemaker/pdfs/ Customizing_Frame_Products.pdf) and can provide more information on the inset editors you can use. In general, you work with graphic insets just as you do with other imported graphics—you can cut, copy, and paste them. (Avoid rotating an inset. When you reopen the graphic inset in the inset editor, and then paste it back into your document, the rotation might be lost.)

To create a graphic inset in UNIX:

1 Choose Special > Graphic Inset. If only one inset editor is available, an alert message asks whether you want to start the editor. If more than one inset editor is available, you can choose the editor to start.

2 Use the inset editor to create the graphic inset. For information, see the documentation for your inset editor.

3 Do one of the following:

• To place the inset in a graphic frame, select the frame or put the insertion point in a text frame.

• To place the inset directly on a page, click in the page margin.

4 Choose the command in the inset editor that places the graphic inset in a document.

To edit a graphic inset in UNIX:

1 Double-click the graphic inset. If prompted, click OK to start the editor.

2 Use the inset editor to modify the graphic inset.

3 Choose the command in the inset editor that places the graphic inset in a document.

Exporting text and graphics

You can use the following techniques to export text and graphics:

• Copy and paste between files and applications.

• Save a document in another format.

• Use print options to create a PostScript or EPS file. For information, see "Creating PostScript files" on page 30.

• Create a Portable Document Format (PDF) file (see "About Adobe PDF" on page 568).

• Save as HTML, which can convert a document's graphics to GIF, PNG, or JPEG format (see "Specifying graphics conversion" on page 564).

• Save as XML (see "About XML" on page 57).

• (Windows) Send the document as an e-mail attachment.

• (Windows) Use drag-and-drop techniques (see "Using drag and drop (Windows)" on page 504).

Note: (UNIX) Some graphics conversions are available using command-line utilities. For information, see the online manual Using Filters.

Using Save As to export to other formats

You can export a FrameMaker document to other applications by saving it in other formats (see "Saving documents" on page 24). When you save a document in a word-processing format, it can be used in that application with most of its formatting intact. The available formats depend on the platform you're using and the filters installed.

Two text-based file formats—Rich Text Format (RTF) and Maker Interchange Format (MIF)—are *interchange formats.* These are widely recognized by other programs and can often serve as a bridge from FrameMaker to an application that does not recognize the native format.

Saving MIF files

You can save FrameMaker files in the MIF 7.0 (MIF-Classic) or MIF 8.0 (MIF-Unicode) formats. When you choose to save a FrameMaker document as a MIF file, you can select the MIF 7.0 or MIF 8.0 option.

• **MIF-Classic:** Choosing this format generates a MIF that is similar to the original format, which is forward-compatible. All Unicode content that can't be represented in the earlier format is replaced with a character that you can configure using the configuration file (maker.ini on Windows).

• **MIF-Unicode:** Choosing this format generates a MIF that contains Unicode strings. All string data is in UTF-8 format.

You can also save a document as a HTML, XML, or PDF file.

Sending files in e-mail (Windows)

You can send a document as an e-mail attachment if a mail system compatible with the Messaging Application Programming Interface (MAPI) is installed on your Windows computer. If your computer is not yet configured for MAPI, Windows guides you through a number of dialog boxes when you first try to send a document. If you need assistance, ask your network administrator for help.

Note: The send e-mail menu and shortcut works only for single documents and not on a book file. You cannot send a book file via e-mail.

To send a document as an e-mail attachment in Windows:

1 Choose File > Send.

2 Pick an e-mail profile to use from the Choose Profile dialog box, and click OK.

3 Fill in the e-mail fields, and then send the message as you normally do.

Importing text into structured documents

You can import text into a structured FrameMaker document from the following sources:

• A text flow from another part of the document, from another structured FrameMaker document, or from a MIF file. Any conditional text in the flow, cross-references, tables, markers, footnotes, variables, and anchored frames are imported.

• A file created in another application for which an import filter is installed on your system. Special items such as cross-references and tables may also be imported—depending on the application and the filter used.

If the text you import is structured, you can retain or remove the structure. If the text is formatted, you can retain or remove the formatting, or reformat the text using formatting information in the current document.

Imported text can be copied into the document, which is equivalent to using the Copy and Paste commands, or it can be imported by reference as a *text inset*, in which case it retains a link to its source file. When you import by reference, the text inset displays in the document window but is not editable. If the inset is structured, its structure appears in the Structure View but is not editable.
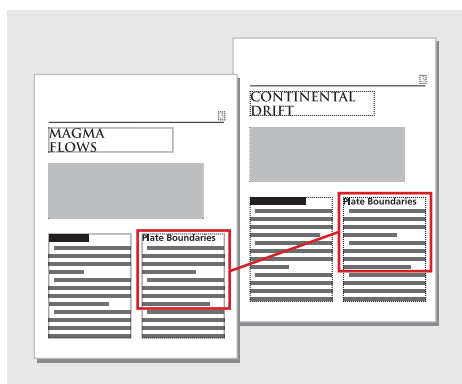
A text inset remains linked to its source document.

This section describes how to import text that is structured or formatted. For information on importing a text file or a MIF file, or on updating and working with a text inset after importing it, see "Using the Import command to import text" on page 495.

To import text:

1 Click where you want to insert the text.

2 Choose File > Import > File.

3 Select the file with the text you want to import, and specify whether to import by copying or by reference (see "Importing by copying" on page 494).

4 If the Unknown File Type dialog box appears, select a file type, and click Convert.

The dialog box that appears next depends on the import method you chose in step 3. The Import Text Flow by Reference dialog box contains settings for updating the imported flow.
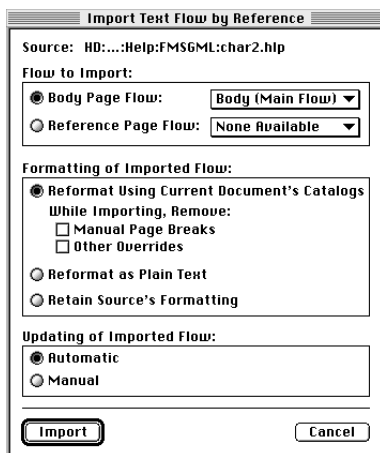
Specify how you want to format and update your import text flow.

5 Choose a body page flow or a reference page flow from a pop-up menu. Most often, you import text on body pages. Reference pages can contain flows with boilerplate text for use on body pages.

6 Specify how to handle the structure and formatting of the imported text by doing the following:

- To retain the structure of the flow and apply the current document's formats and element format rules to the text, select Reformat Using Current Document's Formats. If element tags in the two documents don't match, the formatting of the imported text is unchanged. Usually, you would select the options for removing page breaks and other format overrides so that the imported text looks like text in the current document.

- To remove the structure and formatting from the text, and apply the formatting used at the insertion point, select Reformat as Plain Text. (Text in tables or anchored frames retains the formatting it had in the source document.)

- To remove the structure but retain the formatting, select Retain Source's Formatting. Formats used in the imported text are not added to the current document's catalogs. If you later modify the current document's formats, the imported formats won't be affected—even if the tags in the current document and imported text match.

7 If you're importing by reference, specify how to update the text inset by doing one of the following:

- To update the text inset whenever you open the document, select Automatic.

- To update only when you specify, select Manual.

8 Click Import.

Inserting imported graphic elements into structured documents

Some graphic elements are defined for you to import a graphic along with the element. When you insert the element, FrameMaker displays an import dialog box. The graphic you import appears in an anchored frame below the line with the anchor symbol, and the frame is automatically sized just large enough for the graphic.

Imported graphic in an anchored frame

After inserting the element, you can edit the frame by moving it, resizing it, and so on (see "Editing anchored frames" on page 353).

You might also import a graphic into an existing anchored frame—for example, if you used a graphic element that placed an empty frame in the document.

When you import a graphic element, you can make it part of your document (imported by copying) or keep it linked to its original application or document (imported by reference). For more information, see "Choosing the right method for importing and linking" on page 494.

For information on inserting an imported graphic that's not an element (which you can do only in an unstructured flow), see "Using the Import command to import graphics" on page 501.

To insert an imported graphic element:

1 Click where you want to anchor the frame.

2 Select an imported graphic element in the Element Catalog, and click Insert.

You can also use File > Import > File to insert an element. Select a file and click Import. If more than one imported graphic element is available, choose the one you want from the Element Tag pop-up menu in the next dialog box that appears.

3 Select the graphic file you want to import and specify whether to import by copying or by reference (see "Importing by copying" on page 494).

4 Click Import.

5 If the Unknown File Type dialog box appears, select a file type in the scroll list and click Convert.

6 If the graphic you're importing is a bitmap, choose a scaling option from the pop-up menu and click Set (see "Changing the size of bitmaps" on page 504). The larger the dpi (dots-per-inch) value, the smaller the graphic is on the page.

An anchored frame with the imported graphic appears in the document window, with an anchor symbol ⊥ at the insertion point. A bubble with the text snippet <GRAPHIC> appears in the Structure View.

If no imported graphic element is available at the location you want, you might use an invalid element. After inserting the element, talk to your developer about making the element valid at this location.

To use an invalid imported graphic element:

❖ Do one of the following:

• To use an element that is valid in another part of the document, either insert the element in a valid location and then move it, or use the All Elements setting (see "Changing the scope of elements available in a structured document" on page 18) to make the element available everywhere and then insert the element where you want it.

• To insert an invalid element with the default tag GRAPHIC, use File > Import > File to import a graphic. (The element has a default tag if no defined imported graphic elements are available.)

To add an imported graphic to an existing anchored frame:

❖ Select the frame and use File > Import > File to import the graphic.

Platform-specific methods of importing graphic elements

Elements that are defined to import graphics use a file-import method available on all platforms. To import a graphic file by reference if you're working on a single platform, consider using OLE in Windows, or graphic insets in UNIX.

To use a platform-specific method of importing, insert an anchored frame element, select the frame, and specify the import method.

Using the File Import feature

You can import Adobe PageMaker®, QuarkXPress®, Adobe Photoshop, JPEG 2000, SVG, PDF (UNIX), and Adobe Illustrator (UNIX) files into FrameMaker.

"Importing PageMaker and QuarkXPress files" on page 512

"Importing Photoshop files" on page 514

"Importing JPEG 2000 files" on page 514

"Importing SVG images" on page 514

"Importing PDF and Illustrator files (UNIX)" on page 515

Importing PageMaker and QuarkXPress files

FrameMaker lets you import PageMaker 6.5 or 7.0 and QuarkXPress 3.3 or 4.1 documents.

FrameMaker imports the main components of PageMaker and QuarkXPress files as described below.

Master Pages FrameMaker adds a new master page for each master page in the document you are importing. All master-page items are placed on their corresponding master pages in FrameMaker. If you have custom-named master pages in PageMaker, FrameMaker uses the same name.

For QuarkXPress documents, FrameMaker imports all text objects on master pages as text flows, and preserves all body-page overrides. FrameMaker drops any overrides for other objects on body pages.

Sections FrameMaker ignores sections and imports their contents only.

Layers FrameMaker treats all layers in an imported document as one layer. The page items are drawn according to their stacking order on the page, starting with items on the master page and then items on the body page.

Character styles FrameMaker creates new character formats for the character styles in the document you're importing. If a character style has the same name as a character format in FrameMaker, the attributes in the character format are replaced by the corresponding attributes from the imported file. FrameMaker doesn't import PageMaker or QuarkXPress character attributes that aren't supported by FrameMaker.

Paragraph styles FrameMaker creates new paragraph formats for the paragraph styles in the document you're importing. If a paragraph style has the same name as a paragraph format in FrameMaker, the attributes in the paragraph format are replaced by the corresponding attributes from the imported file. FrameMaker doesn't import PageMaker or QuarkXPress paragraph attributes that aren't supported by FrameMaker.
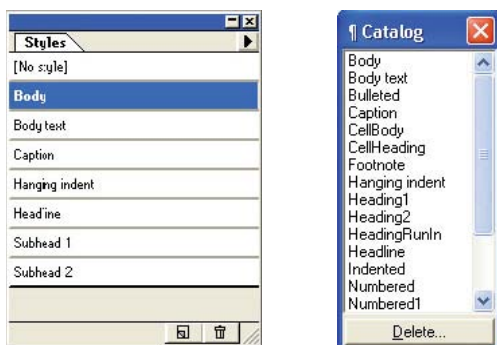
FrameMaker creates a paragraph format (right) for each paragraph style (left) in the PageMaker document you're importing.

Paragraphs with local overrides in the original document are also treated as overrides by FrameMaker.

Importing tagged text from PageMaker displays the actual tag names in the FrameMaker document. You should deselect Export Tags in the PageMaker Text Export dialog box to import the text only, not the tag name.

Paragraph rules FrameMaker imports paragraph rules as a single-line frame defined in the reference pages. All other settings applied to the rules, such as line colors, line styles, and so on, are not imported.

Drawing objects FrameMaker imports all drawing objects. If fill and stroke colors are different, the fill color is used for both stroke and fill. The runaround settings are dropped.

Non-printing objects FrameMaker doesn't import non-printing objects.

Tate-Chu-Yoko Because FrameMaker doesn't support vertical text, FrameMaker treats Tate-Chu-Yoko as horizontal text.

Color definitions FrameMaker creates color definitions to match custom colors or colors from a color library that are defined in the PageMaker or QuarkXPress file. However, if a color definition with the same name already exists in FrameMaker, the FrameMaker color is used, and no new color is created.

Graphics FrameMaker uses its filters to import linked (referenced) graphics files. If it doesn't have the appropriate filter, FrameMaker doesn't import the graphics files. In the case of embedded graphics, FrameMaker uses the image data to import the graphics.

When importing a floating graphic, FrameMaker positions the graphic at the same position as in the original file. When importing an inline graphic, FrameMaker positions the graphic in the text flow in the same text position as in the original file.

OLE objects FrameMaker supports OLE. FrameMaker imports OLE objects as long as FrameMaker supports the graphic format.

Grouped objects FrameMaker supports hierarchical grouping of objects.

Hyperlinks FrameMaker supports hyperlinks. For PageMaker documents, FrameMaker imports object and page item anchors as cross-references.

Table of contents FrameMaker imports the table of contents generated in QuarkXPress or PageMaker as regular text.

Pasteboards FrameMaker imports all pasteboard objects inline in their corresponding anchored frame. FrameMaker creates a separate section in the reference pages for the pasteboard objects it imports.

Indexing FrameMaker imports all index entry markers but treats the index as regular text.

To import a PageMaker or QuarkXPress file:

1 In FrameMaker, choose File > Open, and specify the PageMaker or QuarkXPress file you want to import.

2 Choose the appropriate file type in the Unknown File Type dialog box:

• If importing a PageMaker file, choose PageMaker *[version]* Document or PageMaker *[version]* Template.

• If importing a QuarkXPress file, choose QuarkXpress Document (3.3-4.1x).

3 Click Convert. If the Missing File dialog box appears, navigate to the folder that contains the missing file, click the name of the file, and click Continue.

Importing Photoshop files

FrameMaker supports importing of Adobe Photoshop (PSD) files. FrameMaker converts PSD files to native Frame-Image format and converts the color space (Photoshop RGB, CMYK, LAB, Indexed, Grayscale, or Bitmap) to RGB.

You import PSD files the same way you import other types of graphics.

Importing JPEG 2000 files

FrameMaker supports JPEG 2000, a version of the popular JPEG image-compression format.

When importing JPEG 2000 files, the filter converts the supported color modes of RGB, CMYK, Grayscale, and LAB and discards unsupported modes such as Index. The filter does not support 16-bit-per-channel images.

To import a JPEG 2000 file:

1 Choose File > Import > File.

2 Specify the file you want to import, and select Import By Reference or Copy Into Document.

3 Click Import. If the Unknown File Type dialog box appears, select JPC, J2C, JPX, JPF, J2K, or JP2, and click Convert.

Importing SVG images

FrameMaker prints SVG images to PostScript printers by rendering the images as vector graphics using Encapsulated PostScript (EPS). For non-PostScript printers, FrameMaker uses the FrameImage format.

In addition, when you create a PDF file from a document containing an SVG image, the image appears as vectors, which improves its look in Acrobat and allows you to zoom in on it without pixilation.

Note: Embedded SVG image animations aren't functional in FrameMaker.

To import an SVG image:

1 Choose File > Import > File.

2 Click Import.

3 Specify the file you want to import, and select Import By Reference or Copy Into Document.

4 Click Import.

5 In the Import SVG dialog box, specify the raster quality.

6 Specify image dimensions if they're different from the default size (you can't scale proportionally in this dialog box).

7 Click Set.

Note: Depending on the rasterization quality and available memory, it might take several minutes for the SVG image to import.

Importing PDF and Illustrator files (UNIX)

You can import Adobe PDF files and Illustrator 9 and 10 files into a FrameMaker document.

When you import a PDF or Illustrator file into FrameMaker, the file is treated as a graphic, and only one page can be imported at a time. You can import it either by copy or by reference. Both process and spot colors can be displayed and printed.

Note: Graphics that use transparency might not print as expected to a PostScript Level 1 or non-PostScript printer. If you run FrameMaker using the `-noapi` option (`./maker.exe -noapi`), you won't be able to import PDF files.

To import a PDF or Illustrator file:

1 In FrameMaker, choose File > Import > File, and specify the PDF or Illustrator file you want to import.

2 Select either Import By Reference or Copy Into Document.

3 Click Import.

4 If the file has more than one page, specify the page number you want by typing the page number into the text box.

5 Click Select.

Note: Illustrator 9 and 10 files are imported at the page size of the file. Resize the anchored frame to crop any white space from the image.

Importing SWF files into FrameMaker documents (Windows)

You can import SWF files (for example, Adobe Captivate demos) into FrameMaker documents by copying or by reference.

Note: Ensure that you have installed Adobe Flash Player on your computer to play SWF files.

1 Place the insertion point in your document where you want the SWF file to appear.

2 Select File > Import > File.

The Import dialog box appears.

3 Navigate to, and select, the SWF file you want to insert.

4 Select the Copy Into Document or Import by Reference option.

5 Click Import.

The Imported Graphic Scaling dialog box appears.

6 Select the desired DPI.

7 Click Set.

When you click Set, the first frame of the SWF file appears in the document. If you imported the file by reference, double-click the first frame to play the SWF file in a separate Adobe Flash Player window. If you copied the SWF file into the document, a bitmap image of the first frame is displayed. Click the frame to activate the SWF file. If the first frame is blank, the anchored frame containing the SWF file appears blank.

Note: You can't use any graphic operations on a SWF file in a FrameMaker document.

Saving a document containing SWF files

You can save a document containing SWF files in PDF, HTML, and XML formats. Also, you can print documents containing SWF files.

Saving documents containing SWF files as PDF

1 Select File > Open, and then open the FrameMaker book or file containing SWF files.

2 Select File > Save As PDF.

3 You can change the save location and the filename if you want, and then click Save.

4 Click Set in the PDF Setup dialog box to generate a PDF with the default settings. Or, set additional options, and then click Set. The SWF file imported into the book or file and it is saved. If you have installed Flash Player on your computer, you can open the PDF and play the SWF file.

Note: By default, FrameMaker is configured to embed SWF files in PDFs. However, you can disable this option. For more information, see "Enabling and disabling SWF file embedding in PDFs" on page 573.

When you open a PDF containing a SWF file, the Manage Trust For Multimedia Content dialog box appears. Select the Play The Multimedia Content This One Time or Play The Multimedia Content And Add This Document To My List Of Trusted Documents option and click Play. Ensure that you have installed Adobe Acrobat Reader® 7.0.7 or later, or Adobe Acrobat 3D version 7.0.7 or later, to view the generated PDF containing SWF files.

Saving documents containing SWF files as HTML

You can import a SWF file into a document and save it as an HTML file. When you do this, a CSS file generates automatically. If you imported a SWF file by copying it into an Unstructured document, the SWF files are saved as GIFs with the HTML file. If you imported a SWF file by copying it into a Structured document, the SWF files are saved separately. When you open the HTML file, click the SWF content to play it.

1 Select File > Open, and then open the FrameMaker book or file containing SWF files.

2 Select File > Save As HTML.

3 You can change the save location and the filename if you want, and then click Save.

Saving documents with SWF files as XML
You can save a FrameMaker file containing a SWF file as XML. When you open the XML file in FrameMaker, the SWF file is preserved through XML roundtrip. To ensure roundtripping of SWF files, make sure that the XML file contains correct read write rules before you save the file as XML.

Note: Ensure that you create or open an XML file containing a graphic element definition before importing a SWF file into it.

1 Select File > Open, and then open the XML file containing SWF files.

2 Select File > Save As XML.

3 You can change the save location and the filename if you want, and then click Save.

If the SWF content was embedded in the FrameMaker file, and the document is saved as XML, the SWF content is saved as an independent SWF file. In addition, a reference to SWF is created in the XML.

Printing a FrameMaker file with SWF files
You can print a FrameMaker document with SWF files. The SWF files are printed as frames. If the first frame contains an image, the bitmap of the image is printed.

1 Open the FrameMaker document containing SWF files.

2 Select File > Print.

3 Set the remaining print options as necessary, and then click Print. For information on the other options, see "Print options" on page 28.

Importing three-dimensional objects into FrameMaker documents (Windows)

You can import 3D objects (U3D format) into documents by copying or by reference. You can set parameters for the 3D object, such as default view, rendering mode, background color, and lighting scheme. You can also choose to render a 3D object in an anchored or unanchored frame.

1 Place the insertion point in your document where you want the 3D object to appear.

2 Select File > Import > File.

The Import dialog box appears.

3 Navigate to, and select, the U3D file you want to import.

4 Select the Copy Into Document or Import By Reference option.

5 Click Import.

The Imported Graphic Scaling dialog box appears.

6 Select the desired DPI.

7 Click Set.

When you click Set, the bitmap of the 3D object appears in the document. If you imported the 3D object by copying it, the U3D file is embedded in the document as a device-independent bitmap (DIB) in the document. If you imported the 3D object by reference, a bitmap image linked to the source U3D file is inserted in the document. Regardless of the method of importing the 3D file, the file is rendered in the DIB facet in the document.

When you import the 3D object into a document and save it in PDF or XML format, all information about the 3D object is preserved.

Saving a document containing 3D objects

You can save a document containing 3D objects in PDF and XML formats.

1 Select File > Open, and then open the FrameMaker book or file containing 3D objects.

2 Select File > Save As PDF.

3 You can change the save location and the filename if you want, and then click Save.

4 Click Set in the PDF Setup dialog box to generate PDF with the default settings. Or, set additional options, and then click Set. The U3D file imported into the book or file is saved along with all its views. When you open the PDF, the view you last selected for the 3D object in the document displays in the PDF.

Note: By default, FrameMaker is configured to embed 3D objects in PDFs. However, you can disable this option. For more information, see "Enabling and disabling 3D object embedding in a PDF" on page 574.

In the PDF, click the 3D object to view the 3D toolbar and to activate the interactive features of the 3D object. The Adobe Acrobat 3D toolbar, which is displayed above every 3D object in a PDF, lets you zoom, pan, rotate, and analyze 3D designs.

Saving documents containing 3D objects as XML

You can save a FrameMaker file containing a 3D object as XML. When you open the XML file in FrameMaker, the 3D object is preserved through XML roundtrip. The 3D object is extracted and saved as an independent U3D file, along with the XML file. When the file is opened again in FrameMaker, the 3D object appears at the location where it was inserted.

To preserve changes made to a 3D object during a roundtrip in an XML file, you must add a new attribute called `insetdata` with the following properties in the Graphic section of the DTD file, along with other attributes such as `Offset` and `DPI`:

```
insetdata CDATA #IMPLIED
```

Similarly, you must add the following lines in the XSD file:

```
<xsd:attribute name="insetdata" type="xsd:string" use="optional"/>
```

Note: The `insetdata` attribute does not support read/write rules.

If you don't modify the DTD and XSD files, U3D files can still be exported to XML. However, changes made to the U3D file in FrameMaker will not be preserved during a roundtrip.

1 Select File > Open, and open the FrameMaker file containing 3D objects.

2 Select File > Save As XML.

3 You can change the save location and the filename, and then click Save.

Note: When you open the XML file in a 3D compatible XML Editor, the relevant graphic element contains a reference to the U3D file, with the filename and location of the U3D file. If you open the XML file in FrameMaker, the 3D object appears as a bitmap image.

Printing a FrameMaker file with 3D objects

You can print a document with 3D objects. The 3D objects are printed as bitmap images.

1 Open the document containing 3D objects.

2 Select File > Print.

3 Set the remaining print options as necessary, and then click Print. For information on the other options, see "Print options" on page 28.

Configuring a 3D model imported into FrameMaker

You can configure a 3D model you have imported into a document by setting its background color, lighting schemes, changing views, and rendering mode.

Setting the background color for a 3D object

You can change the color that appears behind a 3D object. The default background color is white.

1 Select a 3D object.

2 Select Graphics > 3D Menu option > Background Color.

The Color dialog box appears.

3 Select the desired color.

4 Click OK.

Setting lighting schemes for a 3D object

You can select from a wide range of 3D lighting schemes to cast a 3D object using different light sources. The default lighting scheme for all 3D objects is Lights From File.

1 Select a 3D object.

2 Select Graphics > 3D Menu option > Lighting, and choose one of the following light sources: Lights From File, No Lights, White Lights, Day Lights, Bright Lights, Primary Color Lights, Night Lights, Blue Lights, Red Lights, Cube Lights, CAD Optimized Lights, or Headlamp.

Setting views for 3D objects in FrameMaker

The 3D object you import into a document can contain predefined views. You can change the view set for the object; the selected view is rendered when the document is saved. When you convert this FrameMaker document to a PDF, all predefined views of the 3D object are available in the PDF. The last view that you selected in the document before saving becomes the default view in the PDF.

1 Select a 3D object.

2 Select Graphics > 3D Menu option > Show Existing Views, and then choose a view from the list that appears in the dialog box.

3 Click OK.

The object is displayed in the selected view.

Note: If you save the document as a PDF, all views of the U3D objects will be available in the converted document.

Rendering a 3D object in a document

The rendering modes for 3D objects vary from the Wireframe, Solid, to Transparent Bounding box. The default rendering mode is Solid.

1 Select a 3D object.

2 Select Graphics > 3D Menu option > Rendering Mode, and then choose one of the following rendering modes: Bounding Box, Transparent Bounding Box, Transparent Bounding Box Outline, Vertices, Shaded Vertices, Wireframe, Shaded Wireframe, Solid, Transparent, Solid Wireframe, Transparent Wireframe, Illustration, Solid Outline, Shaded Illustration, or Hidden Wireframe.

The object is rendered in the selected mode.

Chapter 17: Hypertext and view-only documents

About online systems

You can distribute hypertext documents online as part of an online system. Readers can then page through the contents sequentially or explore at random, following the links you provide. You can create a simple online system from documents that you print (including a table of contents and index that contain hypertext links), or you can create a more elaborate online environment that contains extensive navigation aids such as document maps and navigation buttons.

When you set up an online system, you create a series of hypertext documents. In each document, you designate active areas. An active area contains a hypertext command that instructs FrameMaker how to respond when a reader clicks there.

For example, readers might click in a list to learn about a specific item, click part of a graphic for a more detailed drawing of that part, or click in an index for information about the indexed term. They can choose a topic from a pop-up menu, or they can click buttons to navigate through a document.
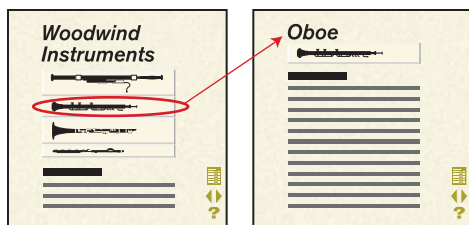
Click an active area to display related information.

Distributing hypertext documents

You can save a document in Portable Document Format (PDF) or in Hypertext Markup Language (HTML) format for distribution on the World Wide Web or on an intranet.

You can also distribute your hypertext documents to readers in View Only format. Readers can use FrameMaker to open, read, search, and print such documents and they can use the embedded hypertext links, but they can't edit the documents.

Planning online systems

Creating effective and easy-to-use online documents takes careful planning. You need to design a page size and layout that's appropriate for the type of computer the document will be read from and for the type of reader who will use it. Well-designed online systems often include graphics or symbols (in the same place on each page) that the reader can click to navigate through the system.
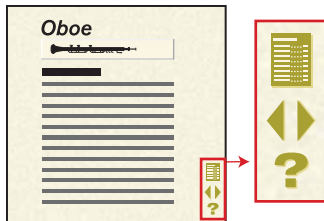
Navigation aids are important in an online system.

When creating documents for online distribution, follow these simple guidelines:

• Write several short documents rather than one long one. A long document takes longer to open.

• Keep all the documents that make up the system together in one folder. Then you won't have to keep track of pathnames for imported graphics and for hypertext commands that require filename specifications.

• If you'll distribute the documents as FrameMaker files, use fonts that are readily available. You may want to use fonts such as Times and Helvetica because these fonts are available on most computers and on all PostScript printers.

Preparing areas for becoming active

A reader navigates through a hypertext system by clicking active areas—areas containing hypertext commands—or by scrolling up or down. An active area can be a range of text, a graphic, or a part of a graphic. You can set up active areas on body pages, or you can set them up on master pages so they appear in the same location on all body pages. For example, you can set up navigational buttons on master pages. When a reader clicks on an active area, the area's hypertext command is executed.

Before you insert a hypertext command, you prepare the area. For example, you can prepare a range of text by making it visually different from surrounding text.

Instruments included in the
brass instruments family
are the trombone, trumpet,
French horn, tuba, cornet,
and bugle. Not only do they
attract attention with the
exciting sounds they
generate, but one is often

Underlined text on body page can be active.
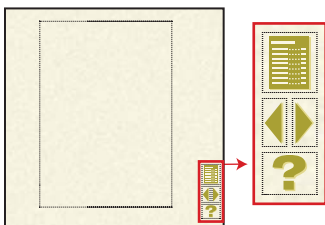
Graphics on master pages can be active.

Preparing text areas

A text area can be a word, a phrase, or an entire paragraph. If your reader clicks in a text area that contains a hypertext command, FrameMaker finds the hypertext command, highlights the area, and performs the command.

To prepare a text area:

❖ Do one of the following:

• To designate a word or a phrase as an active area, select the text and change its character format. Changing the character format defines the boundaries of the text area. Most formatting differences are recognized. Only pair kerning, spread, stretch, change bars, language, and case are ignored.

To designate a word or phrase as an active area without changing its appearance, use a character format that sets all properties to As Is (see"Using As Is" on page 105 and "Applying predefined formats to text" on page 102).

• To designate an entire paragraph as an active area, make sure the paragraph contains no character format changes. As long as the paragraph contains only one hypertext command and no character format changes, FrameMaker highlights the entire paragraph and performs the command when a reader clicks anywhere in the paragraph.

• To designate several adjacent words or phrases in a text string as active areas, use the same character format for the entire text string. Then insert the various hypertext commands. FrameMaker divides the text into active areas based on the locations of the markers. When a reader clicks in the text, FrameMaker determines which active area was clicked and executes the correct hypertext command.

Ttrombone, Ttrumpet, Tand tuba

Markers divide text into active areas.

Preparing graphics

Graphics often provide visual cues for hypertext actions. For example, readers can click an icon to display information on a topic, or an arrow to display the next page.

An active area over a graphic can contain a hypertext command that jumps to another location or one that divides the graphic into a matrix of hypertext commands.

Note: If you're preparing documents for distribution in HTML format, you can use active areas over anchored graphics to create image maps. Unanchored graphics on master and body pages won't be converted to HTML.

To prepare a graphic:

1 Draw a text frame that covers the entire graphic you want to make active. Later, you'll place a hypertext command in the text frame. (When the reader clicks an active text frame, FrameMaker will highlight the entire frame.) For information on using the Text Frame tool to draw a frame, see "Using text with graphics" on page 320.

Make sure that the graphic is not set to have text run around it (see "Running text around graphics" on page 325).

2 Set the text frame's fill and pen patterns to None (see "Applying and changing drawing properties" on page 315). This makes the text frame transparent so that readers see the graphic behind the frame.

3 Choose Graphics > Bring to Front to place the text frame in front of the graphic, if it isn't already there. (Unless you placed the graphic on the page after drawing the text frame, the text frame will already be in front of the graphic.)

Preparing the same area on multiple pages

You can create an area that appears in the same location on more than one page. You do this by setting up the area on a master page and inserting the hypertext command there. For example, you can create buttons on master pages that readers can click on body pages to display the next or previous page.
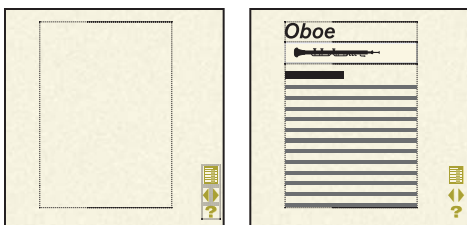
Navigation buttons on master page appear on body pages.

You can override active master page graphics on individual body pages if you want to send the reader somewhere else. For example, you can create a Next Page button with an override on the last body page of each document because there is no next page to display.

To have an active area appear on more than one page:

❖ Set up the area on a master page rather than on a body page (see "Preparing text areas" on page 523 and "Preparing graphics" on page 524). The active area appears in the background of corresponding body pages. When your reader clicks that area on a body page, the hypertext command on the master page is activated.

When you draw the text frame on a master page, FrameMaker asks whether you want to create a template frame or a background frame. Text frames for active areas should be background (untagged) text frames.

To override a master page command on an individual body page:

❖ Do one of the following:

• Put a graphic or a different hypertext command over the area on the body page. For example, you can create an inactive, shaded button covering the Next Page button on the last body page of each document.
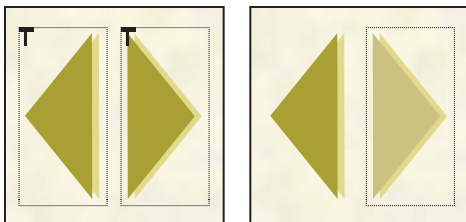
Master page commands can be overridden by graphics on body pages.

• Place a text frame that contains its own hypertext command over the graphic on the body page.

Inserting hypertext commands

You use a marker to insert a hypertext command in a prepared area. After you insert a command and save the document in View Only format, the area becomes active. When a reader clicks an active area, FrameMaker highlights the area and executes the command.

Hypertext commands let your readers navigate through the view-only documents. If you're distributing the documents in View Only format, hypertext commands can also display alerts, close documents, exit FrameMaker, and start other applications.
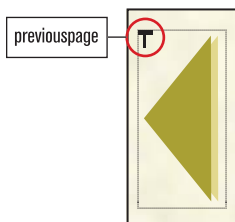
Hypertext command marker

After inserting a hypertext command, you can test the command without saving the document in View Only format (see "Working in view-only documents and books" on page 544).

Note: To insert a hypertext command in a text inset, insert the command in the text inset's source document.

To insert a hypertext command:

1 Click in a prepared area where you want to insert a hypertext command. (For details, see "Preparing areas for becoming active" on page 522.) You can insert hypertext commands in text frames but not in text lines (graphic objects created with the Text Line drawing tool). To prevent extra spacing in the hypertext command when exporting, insert your markers at the beginning or end of a word.

2 Choose Special > Hypertext.

3 Choose a hypertext command from the Command pop-up menu. The syntax for the command appears below the pop-up menu, and the command name appears in the text box. (For a description of the items in the Command pop-up menu, see "Hypertext commands" on page 527.)

4 Enter parameters in the text box as needed (for example, a filename and linkname). For details, see "Creating hypertext links" on page 529 and the sections that follow it.

Hypertext commands must always appear in lowercase. The parameters can be uppercase or lowercase, but they are case-sensitive. The entire command can be up to 255 characters long. (Each character in a Japanese font counts as two characters.)

Note: If you enter a filename parameter for a file that isn't in the same folder as the current document, you must specify a path to the document (see "About pathnames in commands" on page 528).

5 If you want FrameMaker to validate the command when you insert it, select Validate Command upon Insertion.

6 Click New Hypertext Marker. FrameMaker checks the syntax in the text box. If Validate Command upon Insertion is selected, FrameMaker also validates the command. For example, FrameMaker validates a Jump to Named Destination command by verifying that the destination link exists in the specified document.

If FrameMaker finds an error, an alert message describes it, but the command is still inserted in a marker of type Hypertext. A marker symbol ⊤ appears at the insertion point when text symbols are visible.

Note: Hypertext markers support the Unicode text encoding standard.

To edit a hypertext command:

1 If the document is in View Only format, do one of the following to change it to Document format:

• If the Hypertext dialog box is open, click Make Editable.

• Press Esc Shift+f l (lowercase *L*) k.

2 Choose Special > Hypertext if the Hypertext dialog box isn't open.

3 Select the marker that contains the command you want to edit. To select a marker in an otherwise empty text frame, double-click anywhere in the frame. You can also use the Find command to find and select hypertext markers. The hypertext command appears in the Hypertext dialog box.

If no other markers appear near the marker you want to edit, drag through the marker to display its hypertext command in the Hypertext dialog box.

4 Edit the command in the text box, and click Edit Hypertext Marker. Even if text around the marker is selected, only the command in the marker is affected.

5 If you want to return the document to View Only format, do one of the following:

• Click Make View Only in the Hypertext dialog box.

• Press Esc Shift+f l (lowercase *L*) k.

To delete a hypertext command:

❖ Select the marker that contains the command and press Delete. To select a marker in an otherwise empty text frame, double-click anywhere in the frame. You can also use the Find command to find and select hypertext markers.

Hypertext commands

FrameMaker supports the following hypertext commands. For a full description of each command and its syntax, see the cross-referenced information.

Alert Displays an alert box (see "Creating alert messages" on page 536).

Alert with Title Displays an alert box with a user-defined title (see "Creating alert messages" on page 536).

Specify Named Destination Marks the location that will be displayed when either a Jump to Named Destination or an Open Document command is executed (see "Creating links to specific topics" on page 530).

Jump to Named Destination Displays the location in the current or a different document that contains a corresponding destination link (see "Creating links to specific topics" on page 530). The page is displayed in the active window.

Jump to Named Destination & Fit to Page Displays the location in the current or a different document that contains a corresponding destination link and then resizes the window to fit the document page displayed (see "Creating links to specific topics" on page 530).

Jump to First Page Displays the first page of the current or a different document (see "Creating links to pages" on page 531). The page is displayed in the active window.

Jump to Last Page Displays the last page of the current or a different document (see "Creating links to pages" on page 531). The page is displayed in the active window.

Go to URL Launches browser and displays the specified Web page (see "Creating links to Web pages" on page 532).

Jump to Page Number Displays a specific page in the current or a different document (see "Creating links to pages" on page 531). The page is displayed in the active window.

Jump to Previous Page Displays the previous page of the current document (see "Creating links to pages" on page 531). The page is displayed in the active window.

Jump to Next Page Displays the next page of the current document (see "Creating links to pages" on page 531). The page is displayed in the active window.

Jump Back Displays the last location the reader viewed (see "Creating a way to retrace steps" on page 533). The page is displayed in the active window.

Jump Back & Fit to Page Displays the last location the reader viewed and then resizes the window to fit the document page displayed (see "Creating a way to retrace steps" on page 533).

Open Document Displays the page that contains the corresponding Specify Named Destination command (see "Creating links to specific topics" on page 530). In Windows, the page appears in a new window (leaving the active window open) only if the page is in a different document. In UNIX, the page always appears in a different window.

Open Document & Fit to Page Displays the page that contains the corresponding Specify Named Destination command and then resizes the new window to fit the document page displayed (see "Creating links to specific topics" on page 530). In Windows, the page appears in a new window (leaving the active window open) only if the page is in a different document. In UNIX, the page always appears in a different window.

Open Document as New Opens a document as a new, unnamed document (see "Creating links to new documents" on page 532). The document is displayed in a new window, leaving the active window open.

Open Document at First/Last Page Displays the first or last page (see "Creating links to pages" on page 531). In Windows, the page appears in a new window (leaving the active window open) only if the page is in a different document. In UNIX, the page always appears in a different window.

Open Document at Page Number Displays a specific page (see "Creating links to pages" on page 531). In Windows, the page appears in a new window (leaving the active window open) only if the page is in a different document. In UNIX, the page always appears in a different window.

Popup Menu Displays a pop-up menu of items, each containing a hypertext command (see "Creating pop-up menus" on page 534).

Button Matrix Allows the user to choose from a matrix of items that execute hypertext commands (see "Creating button matrices" on page 533).

Message Client Communicates with other applications (see "Creating ways to start or open" on page 537). Also creates a link to a URL (Universal Resource Locator) on the World Wide Web or an intranet for use in documents that are later converted to HTML (see "Setting up links to URLs" on page 551).

Close current window Removes the active window from the screen (see "Creating ways to close or exit" on page 539).

Close All Hypertext Windows Removes all view-only windows from the screen (see "Creating ways to close or exit" on page 539).

Exit Application Exits the FrameMaker application (see "Creating ways to close or exit" on page 539).

About pathnames in commands

Many hypertext commands can contain a pathname. In a pathname, folder levels are separated by a slash (/), even in Windows. In UNIX, the pathname can include environment variables, such as $HOME, to indicate the reader's home directory.

If your hypertext documents will be used on several platforms, use filenames that are valid on all the platforms. For information on file naming requirements on different platforms, see the online manual *Working on Multiple Platforms*.

Note: A hypertext command that contains a single-character filename may not work.

Relative pathnames FrameMaker searches for a relative pathname beginning in the folder that contains the current document. To go up one folder level, use two periods (..). For example, suppose a hypertext command refers to a document named Trombone that is stored in a folder named Brass. If the Brass folder is in the same folder as the current document, use the pathname Brass/Trombone.

If the Brass folder is at the same level as the folder that contains the current document, use ../Brass/Trombone.

Absolute pathnames FrameMaker searches for an absolute pathname beginning at the top of the file system. In Windows, the absolute pathname begins with the drive specifier, a colon, and a slash. In UNIX, an absolute pathname begins with a slash.

For example, suppose a hypertext command refers to a document named Trombone in a folder named Brass. In Windows, if the Brass folder is at the top level of drive E, use the pathname E:/Brass/Trombone. In UNIX, if the Brass folder is at the top of the file system, use the pathname /Brass/Trombone.

Absolute pathnames are not recognized across platforms, so you should always use relative pathnames if your hypertext documents will be viewed on multiple platforms.

Hypertext commands in HTML and PDF documents

When you convert a document to HTML or PDF, some FrameMaker hypertext commands work in the converted files in the same way that they work in view-only FrameMaker documents, while others do not. The differences are described in the following table.

Command	PDF	HTML
Alert, Alert with Title	Appears as a note, with no title	Does not work
Jump to Named Destination	Works as described in this chapter	Works as described in this chapter
Jump to Named Destination & Fit to Page	Works as described in this chapter, but doesn't fit to page	Works as described in this chapter, but doesn't fit to page
Jump to First Page, Jump to Last Page, Jump to Page Number, Jump to Previous Page, Jump to Next Page	Works as described in this chapter	Does not work
Jump Back, Jump Back & Fit to Page	Does not work	Does not work
Open Document	Works as described in this chapter	Works as described in this chapter
Open Document & Fit to Page, Open Document as New, Open Document at First Page, Open Document at Last Page, Open Document at Page Number	Works as described in this chapter, but doesn't fit to page or open a separate window	Works as described in this chapter, but doesn't fit to page or open a separate window
Pop-up Menu	Does not work	Does not work
Button Matrix	Does not work	Works as described in this chapter, if the text frame containing the command is in an anchored frame in the main text flow
Message URL	Works when PDF is opened in browser; however, the link may not work in Acrobat	Works as described in this chapter
Message Client	Does not work	Does not work
Close current window, Close All Hypertext Windows, Exit Application	Does not work	Does not work

Creating hypertext links

You can create links to information in different locations in the same document or in different documents. For example, you can create links that jump to specific topics or pages, and you can use FrameMaker cross-references as links. You can also allow your readers to retrace their jumps.

If your documents will be distributed in PDF or HTML format, some of the commands described in this section will not work. For details, see "Hypertext commands in HTML and PDF documents" on page 529.

Creating links to specific topics

You can create a link from one location in a hypertext document to a topic in another location. You use one command to specify the topic you want to display, and you use another to mark the spot on the linked page.
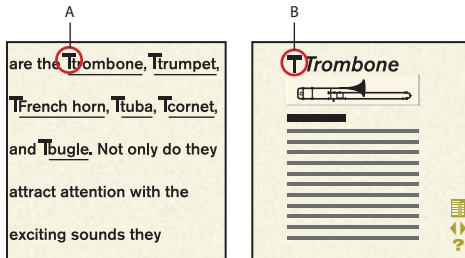
A. Specify the topic to display. B. Mark the topic.

FrameMaker can display the linked information in the same window or in a new window (leaving the active window open).

To identify a linked topic:

❖ Follow the instructions in "Inserting hypertext commands" on page 525 to insert a Specify Named Destination command. This command uses the following syntax:

```
newlink linkname
```

In this example, *linkname* is a word or phrase that identifies the destination. A linkname with a trailing space differs from a linkname without a trailing space. Also, the linkname is case-sensitive; *French Horn* is not the same as *french horn*.
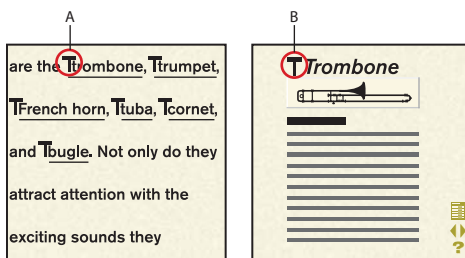
A. Jump to Named Destination command: gotolink trombone B. Specify Named Destination command: newlink trombone

Note: *If you omit the Specify Named Destination command, the Jump to Named Destination and Open Document commands do nothing when clicked unless they refer to a filename. In that case, the other file will open, showing the first page.*

To create a link to a specific topic:

❖ Follow the instructions in "Inserting hypertext commands" on page 525 to insert one of the following hypertext commands:

• To display the linked information in the same window, insert a Jump to Named Destination command. This command uses the following syntax:

```
gotolink filename:linkname
```

• To display the linked information in a different window, insert an Open Document command. (In Windows, the information appears in a new window only if it's in a different document.) This command uses the following syntax:

```
openlink filename:linkname
```

In this example, *filename* is the name of the document you want to display, and *linkname* is the descriptive word or phrase that you used in the corresponding Specify Named Destination command.

If the linked information is in a document whose page size differs from the current document's, you can display the information in a window that is resized to fit the page. To do this, use the Jump to Named Destination & Fit to Page command or the Open Document & Fit to Page command.

Creating links to pages

You can create a link to the first, last, previous, or next page in the same document or in a different document. You can also create a link to a specific page number.

You can create navigation aids for your readers by creating links to the next and previous pages on the master pages of a document.

To create a link to a page:

❖ Follow the instructions in "Inserting hypertext commands" on page 525 to insert one of the following hypertext commands:

• To display the linked page in the same window, insert a Jump to Page Number, Jump to First Page, or Jump to Last Page command. The commands use the following syntax:

```
gotopage filename:pagenumber

gotopage filename:firstpage

gotopage filename:lastpage
```

• To display the linked page in a different window, insert an Open Document at Page Number, Open Document at First Page, or Open Document at Last Page command. (In Windows, the page appears in a new window only if the page is in a different document.) These commands use the following syntax:

```
openpage filename:pagenumber

openpage filename:firstpage

openpage filename:lastpage
```

Note: When you insert a hypertext command to display a specific page number, use the actual page number in the document. For example, if the destination document MyDoc uses Roman numerals for page numbers and begins on page v, the command to display the third page would be openpage MyDoc:vii.

• To display the next or previous page of the current document, insert a Jump to Previous Page or Jump to Next Page command. (If the first page of the document is already displayed, Jump to Previous Page has no effect; if the last page of the document is displayed, Jump to Next Page has no effect.) These commands use the following syntax:

```
previouspage

nextpage
```

In these examples, *filename* is the name of the document you want to display, and *pagenumber* is the number of the page you want to display. When the page you want to display is in the current document, don't include the filename and colon. The following table contains examples of the commands.

Command	Effect
gotopage 8	Displays, in the same window, page 8 of the current document
openpage Trombone:8	Displays, in a different window, page 8 of the document Trombone in the current folder

Creating links to new documents

You can create a link to another document and have FrameMaker open the document in another window as a new, unnamed document. For example, you can create an online system for your site's document templates.

To create a link to a new document:

❖ Follow the instructions in "Inserting hypertext commands" on page 525 to insert an Open Document as New command. This command uses the following syntax:

```
opennew filename
```

In this example, *filename* is the name of the document you want to use as a template.

Creating links to Web pages

You can create a link to a Web page on the Internet or a company intranet.

To create a link to a Web page:

❖ Follow the instructions in "Inserting hypertext commands" on page 525 to insert a Go to URL command. This command uses the following syntax:

```
message URL address
```

In this example, *address* is the name of the URL you want to jump to, such as http://www.adobe.com.

Creating links using cross-references

You use FrameMaker cross-references as hypertext links. When the reader clicks a cross-reference in a view-only document, FrameMaker jumps to the source information. If a cross-reference is present in the same text area as a hypertext command, the cross-reference takes precedence over the hypertext command.

You can use MIF to specify that cross-references should not be active in your hypertext document. You can also specify that clicking an active cross-reference always causes FrameMaker to open a new window. For information on using MIF to customize hypertext documents, see the online manual *MIF Reference*.

Highlighting markers in view-only documents

When you click an active area in a view-only document, FrameMaker doesn't usually select the cross-reference marker or the hypertext marker that identifies the linked information. (If the document is in FrameMaker Document format, the marker is selected.) You can use MIF to specify that the markers should be selected. For information on using MIF to customize hypertext documents, see the online manual *MIF Reference*.

Creating a way to retrace steps

You can create hypertext commands that allow readers to retrace the links they followed in a document window. (FrameMaker maintains a stack of the last 255 links in each window.) For example, you might use these commands on master pages to create a navigation aid that lets readers retrace their steps (for example, a "Go Back" button).

To create a way to retrace steps:

❖ Follow the instructions in "Inserting hypertext commands" on page 525 to insert a Jump Back command. This command uses the following syntax:

```
previouslink filename:linkname
```

In this example, *filename* and *linkname* define the location FrameMaker should display when the stack is empty. If the stack is empty and if you haven't provided a filename and linkname, FrameMaker leaves the current page displayed.

If the linked information is in a document whose page size differs from the current document's, you can display the information in a window that is resized to fit the page. To do this, use the Jump Back & Fit to Page command.

Creating button matrices

You can create a button matrix of equal-sized cells that correspond to hypertext commands. When a reader clicks a cell in a hypertext document, FrameMaker highlights the cell and executes the corresponding hypertext command. For example, the button matrix could be a group of musical instruments.
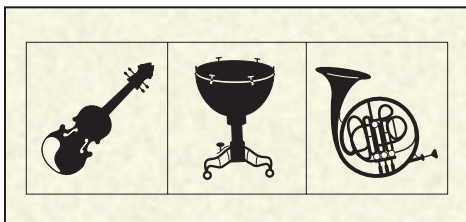
A button matrix with three cells

If the reader clicks one of the instruments, FrameMaker highlights the area around the instrument and executes the corresponding hypertext command.

To create a button matrix:

1 Put the graphic in your document. The graphic should be appropriate for setting up as a matrix of equal-sized cells.

2 Prepare the graphic to be an active area by drawing a single text frame around the entire graphic (see "Preparing graphics" on page 524).

3 Click in the text frame to place the insertion point.

4 Follow the instructions in "Inserting hypertext commands" on page 525 to insert a Button Matrix command in the text frame (leaving the frame otherwise empty). This command uses the following syntax:

```
matrix rows columns flowname
```

In this example, *rows* and *columns* are the numbers of rows and columns in the matrix, and *flowname* is the flow tag of a text frame you'll create on a reference page. The flowname cannot contain embedded spaces.

For the example shown earlier, with two rows and three columns, and with the corresponding hypertext commands in a reference page text frame whose flow tag is InstrumentTypes, the command would be as follows:

```
matrix 1 3 InstrumentTypes
```

5 Draw a text frame on a reference page and assign a flow tag that matches the flowname in the Button Matrix command. For information on using the Text Frame tool to draw a text frame, see "Using text with graphics" on page 320. For information on assigning flow tags, see "Controlling the flow of text" on page 393.

6 Click in the text frame to place the insertion point, and then type one hypertext command in each paragraph in the text frame. The commands should correspond to the items in the first row of the matrix, from left to right, followed by the second row, and so on. Each command must fit on one line. You can resize the text frame if necessary.

The following illustration shows possible contents of the text frame for the example discussed at the beginning of this section.
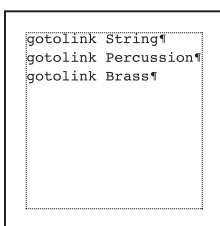
Text frame on reference page

Note: *You can use the Hypertext dialog box as an aid in identifying the syntax of the commands you need to type, but type the commands directly in the text frame. Don't use the Hypertext dialog box to insert a hypertext marker.*

Creating pop-up menus

Your hypertext document can display a pop-up menu from which readers can choose an item that links to related information. The pop-up menu can, in turn, contain one level of submenus.
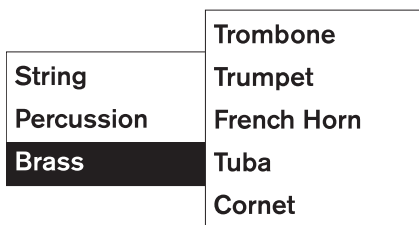
Hypertext pop-up menu and submenu

To create a pop-up menu of hypertext commands:

1 Create the graphic button that the reader will click to display the pop-up menu.

2 Prepare the graphic to be an active area by drawing a single text frame around the entire graphic (see "Preparing graphics" on page 524).

3 Follow the instructions in "Inserting hypertext commands" on page 525 to insert a Popup Menu command in the text frame (leaving the frame otherwise empty). This command uses the following syntax:

```
popup flowname
```

In this example, *flowname* is the flow tag of a text frame you'll create on a reference page. The flowname cannot contain embedded spaces.

4 Draw a text frame on a reference page and assign a flow tag that matches the flowname in the Popup Menu command. For information on using the Text Frame tool to draw a text frame, see "Using text with graphics" on page 320. For information on assigning flow tags, see "Controlling the flow of text" on page 393.

5 Click in the text frame to place the insertion point, type the menu name in the flow, and press Return. (The first item in the text frame will always be considered as the title of the pop-up menu.) The menu name appears in UNIX, but not in Windows.

6 Type a menu item in each subsequent paragraph. The contents of each paragraph will appear as a command in the pop-up menu. If necessary, widen the text frame so that each item fits on a single line.

7 Follow the instructions in "Creating hypertext links" on page 529 to insert a hypertext command in each line except the line that contains the menu name. For example, you can use a Jump to Named Destination command to display related information, an Alert command to provide a short message to your readers, or a Popup Menu command to display a submenu of items.

The text frame for the pop-up menu described at the beginning of this section might look like the following.
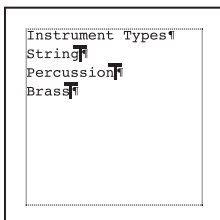
Text frame for sample hypertext pop-up menu

Note: You won't be able to open the pop-up menu until you insert at least one hypertext marker on the reference page.

To create a pop-up submenu of hypertext commands:

1 Locate the text frame on the reference page that describes the pop-up menu for which you want to create a submenu.

2 Follow the instructions in "Inserting hypertext commands" on page 525 to insert a Popup Menu command in the line for which you want the submenu to appear. This command uses the following syntax:

```
popup flowname
```

In this example, *flowname* is the flow tag of a text frame you'll create on a reference page. The flowname cannot contain embedded spaces.

3 Create the submenu by following steps 4 through 7 in "Hypertext commands" on page 527. However, you can't use a Pop-up Menu command in the submenu, because you can't create a submenu within a submenu.

The text frame for the submenu shown at the beginning of this section would have a flow tag of Seals. It might look like the following.
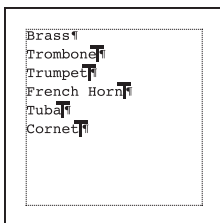
Text frame for sample hypertext pop-up submenu

Creating alert messages

You can create a hypertext command to display an alert box that contains a title and a message. If you don't specify a title in the command, the alert box contains the default title "FrameMaker—Alert".

You can also specify a default title for all hypertext alert boxes in a document.

To create an alert message:

❖ Follow the instructions in "Inserting hypertext commands" on page 525 to insert one of the following hypertext commands:

• To display a hypertext alert box with the default title, insert an Alert command. This command uses the following syntax:

```
alert message
```

• To display an alert box with a title other than the default, insert an Alert with Title command. This command uses the following syntax:

```
alerttitle title:message
```

In this example, *title* is the title of the alert box and *message* is the text you want to display in the alert box. The total number of characters in *title* and *message* cannot exceed 243 characters. (Each character in a Japanese font counts as two characters.)

For example, the following command displays an alert box whose title is "Unavailable" and whose alert message is "This document is currently under construction."

```
alertitle Unavailable:This document is currently under construction
```

To specify a default title for alerts in a document:

1 Draw a text frame on a reference page and assign the frame a flow tag of AlertTitle. For information on using the Text Frame tool to draw a text frame, see "Using text with graphics" on page 320. For information on assigning flow tags, see "Controlling the flow of text" on page 393.

2 Type the default title in the text frame. For example, if "Not Available Online" appears in the flow, that title, not "FrameMaker—Alert," appears in the title bar of any alert box created with the Alert command.

The default title will also appear in the title bar of any alert box created with the Alert with Title command in the following form, without a title:

```
alerttitle :message
```

Creating ways to start or open

You can use hypertext commands to start other applications. For example, a reader can start a database application from a view-only document to retrieve and display data.

You can also use hypertext commands to accomplish the following tasks:

• (UNIX) You can execute UNIX commands. For example, a reader can click an active area to remove backup files. You can also send messages to FrameMaker clients by using the Application Program Interface (API). For details, see the *FDK Programmer's Guide,* which is included in the Frame˚ Developer's Kit.

In addition, you can create hypertext commands that link to a Universal Resource Locator (URL) when the document is converted to Hypertext Markup Language (HTML). For information, see "Creating links to Web pages" on page 532.

To create a way to start another application in Windows:

❖ Follow the instructions in "Inserting hypertext commands" on page 525 to insert a Message Client. This command uses the following syntax:

```
message system application path,windowstate
```

```
message winexec application path,windowstate
```

In these examples, *application* is the application filename, *path* is an optional command-line parameter, and *windowstate* specifies the state of the window that is opened. The possible *windowstate* values are as follows.

State	Meaning
SW_HIDE	Hides the window and activates another window
SW_MAXIMIZE	Maximizes the specified window
SW_MINIMIZE	Minimizes the specified window and activates the next window in the Alt+Tab order
SW_RESTORE	Activates and displays the window (If the window is minimized or maximized, Windows restores it to its original size and position.)
SW_SHOW	Activates the window and displays it in its current size and position
SW_SHOWDEFAULT	Sets the show state based on the SW_ flag specified in the STARTU-PINFO structure passed to the CreateProcess function by the program that started the application
SW_SHOWMAXIMIZED	Activates the window and displays it as a maximized window
SW_SHOWMINIMIZED	Activates the window and displays it as a minimized window
SW_SHOWMINNOACTIVE	Displays the window as a minimized window (The active window remains active.)

State	Meaning
SW_SHOWNA	Displays the window in its current state (The active window remains active.)
SW_SHOWNOACTIVATE	Displays a window in its most recent size and position (The active window remains active.)
SW_SHOWNORMAL	Activates and displays a window (If the window is minimized or maximized, Windows restores it to its original size and position.)

If you omit the *windowstate* value, the window state is set to SW_SHOWNORMAL. For more information on window states, see the documentation for the Windows software development kit.

For example, to start PaintBrush and open the Ship.pcx file on drive C in a minimized window, you would use the following command:

```
message system pbrush.exe C:/Ship.pcx, SW_MINIMIZE
```

For an explanation of the use of the forward slash rather than the backslash, see "About pathnames in commands" on page 528.

To create a way to open a file or another application:

❖ Follow the instructions in "Inserting hypertext commands" on page 525 to insert a Message Client command. This command uses the following syntax:

```
message openfile pathname
```

In this example, *pathname* is the path to the file, application, or AppleScript script.

For example, to start the application that created the Tuba.eps file (located in the Graphics folder on the drive named HardDrive) and to open the file, use the following command:

```
message openfile /HardDrive/Graphics/Tuba.eps
```

To run the DocReport script (located in the Scripts folder on the drive named HardDrive), use the following command:

```
message openfile /HardDrive/Scripts/DocReport
```

For an explanation of the use of the forward slash in pathnames, see "About pathnames in commands" on page 528.

To create a way to execute commands in UNIX:

❖ Follow the instructions in "Inserting hypertext commands" on page 525 to insert a Message Client command. This command uses the following syntax:

```
message system command
```

In this example, *command* is the text of any UNIX command you can type in a UNIX window.

For example, the following command lists the contents of the folder in which the document resides when the reader clicks an active area that contains the command

```
message system ls ~
```

In this example, FrameMaker passes the command to sh(1) for execution; stdout and stderr are redirected to your UNIX window. FrameMaker waits for the command, script, or program to finish before continuing.

You can use the environment variables FMDOCDIR and FMDOCNAME with the message system command. When the reader clicks an active area that contains the command, FMDOCDIR is set to the folder that contains the current document and FMDOCNAME is set to the name of the current document.

To create a way to send messages to an application that is already running in UNIX:

❖ Follow the instructions in "Inserting hypertext commands" on page 525 to insert a Message Client command. This command uses the following syntax:

```
message application parameters
```

In this example, *application* is the name of the application, and *parameters* are any parameters to be passed to the application. For example, the following command causes an API client named ProductionCheck to process all files in the Guide folder:

```
message ProductionCheck Guide/*
```

Creating ways to close or exit

The hypertext commands for closing files and exiting FrameMaker work in the same way as the commands on the File menu.

If a reader executes a command to close a file that contains unsaved changes, FrameMaker prompts the reader to save the document before closing.

To create a way to close documents:

❖ Follow the instructions in "Inserting hypertext commands" on page 525 to insert one of the following hypertext commands:

• To create a way to close the current view-only document, insert a Close active window command. This command uses the following syntax:

```
quit
```

• To create a way to close all open view-only documents, insert a Close All Hypertext Windows command. The Close All Hypertext Windows command also closes view-only documents that have already been closed to an icon. This command uses the following syntax:

```
quitall
```

To create a way to exit FrameMaker:

❖ Follow the instructions in "Inserting hypertext commands" on page 525 to insert an Exit command. This command uses the following syntax:

```
exit
```

Testing and troubleshooting hypertext documents

After writing the document and inserting hypertext commands, test the commands. To speed up your testing of hypertext commands, you can execute commands without first changing a document to View Only format and you can force the destination of a hypertext jump to appear in a separate window.

You can also have FrameMaker validate all the commands in a document.

Note: In UNIX, to switch several documents at a time between View Only format and Document format, use fmbatch (see "Starting fmbatch" on page 624).

To execute a hypertext command without changing the document to View Only format:

❖ Do one of the following:

• (Windows) Control-Alt-click an active area.

• (UNIX) Control-right-click an active area.

FrameMaker executes the hypertext command as if the document were view-only.

To force the linked destination to appear in a different window:

❖ Do one of the following:

• (Windows) If the document is view-only, Shift-click an active area. Otherwise, Control-Alt-Shift-click an active area.

• (UNIX) If the document is view-only, Shift-click an active area. Otherwise, Shift-Control-right-click an active area.

To validate all the commands in one or more documents:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.

2 Press Esc v h. FrameMaker checks each hypertext command. For example, if a command refers to another document, FrameMaker attempts to open the document; and if the command refers to a named destination, FrameMaker verifies that the destination exists. If any problems are found, an alert message describes the first error in the document. In a book, all errors are written in the Book Error Log.

Generating a list or index of hypertext markers

You can quickly check the text of hypertext commands by generating a list or index of hypertext markers. The generated list will contain the text of all hypertext markers inserted on body pages and their page numbers.

To generate a list or index of markers:

❖ Use the Special > List of > Markers or Special > Index of > Markers command. For information on generating from a document, see "Generating TOCs and other lists" on page 414 and "Generating indexes" on page 425. For information on generating from a book, see "Adding files to books" on page 456 and "Updating books" on page 466.

Troubleshooting hypertext documents

Errors in hypertext commands or in their placement in the document, or formatting errors in active areas can cause problems with the behavior of the commands. For example, an incorrect linkname will prevent a hypertext command from being executed correctly.

This section describes some common hypertext problems and possible solutions.

Clicking an active area has no effect Check for the following possible problems:

• The document might not be in View Only format.

• If the active area is highlighted correctly when you click, a command may contain a linkname that doesn't match the corresponding link at the destination.

• If the active area isn't highlighted when you click, the marker that contains the hypertext command may not be of type Hypertext.

• If the active area is over a graphic, the text frame containing the hypertext marker may not be in front of the graphic.

The jump goes to the wrong page The command may contain a correct filename but an incorrect linkname or an invalid page number.

Only part of the active area is highlighted Check for the following possible problems:

• If you're trying to make a range of text active, the text may contain an extra hypertext marker or the character format may change within the range of text.

• If you're trying to make an entire empty text frame active, the frame may contain an extra empty paragraph, or extra characters or markers.

Items are missing from a pop-up menu The hypertext commands for missing menu items are incorrect. If the pop-up menu does not appear, no commands are correct.

Adding hypertext links to generated files

When you generate an index or a list such as a table of contents, FrameMaker can insert hypertext links in the generated file. These links can greatly enhance the usefulness of an online index or table of contents. When you click a topic or page number in the generated file, the appropriate page in the linked document is displayed.

You can use generated hypertext documents for the following purposes:

• To distribute a generated table of contents or index in View Only format as a navigation tool for your online documents.

• To debug documents. (For example, when creating an index, you can generate the index with hypertext links and then quickly fix index marker errors by jumping to the exact locations of the markers.)

Generating a list of hypertext markers produces a list of markers drawn only from body pages. Hypertext markers on master pages are not included.

You can activate the hypertext commands in a generated document without changing the document to View Only format (see "Testing and troubleshooting hypertext documents" on page 540).

To add hypertext links to a generated file:

❖ Do one of the following:

• From an individual FrameMaker document, select Create Hypertext Links when you use the File > Utilities > Compare Documents command.

For more information, see "Comparing document versions" on page 477.

• When adding a generated file to a book, turn on Create Hypertext Links in the Set Up dialog box. If the generated file has already been created, select the generated file in the book window and choose the appropriate Set Up command from the Edit menu (such as Set Up Table of Contents).

For complete information on generating lists and indexes, see "Generating TOCs and other lists" on page 414 and "Generating indexes" on page 425.

Adding linked thumbtabs to indexes

You can make a generated online index easier to navigate by adding thumbtabs. Readers click on a thumbtab letter to display the page in the index that contains entries starting with that letter.

To add thumbtabs to a generated index:

1 Generate the index with hypertext links. See "Adding hypertext links to generated files" on page 541.

2 In the index, choose View > Master pages.

3 On a master page, use the Text Line tool to create the thumbtab letters and then draw a text frame over each thumbtab letter (see "Using text with graphics" on page 320).

4 Insert a Jump to Named Destination command in the text frame for each thumbtab letter (see "Creating links to specific topics" on page 530). For example, in the text frame over the thumbtab letter *A,* insert a Jump to Named Destination command with the syntax *gotolink A*. (Each group title in the index already contains a corresponding Specify Named Destination command as a result of generating the index with hypertext links.)

If the index contains a collapsed group title, such as *P–R,* insert a Jump to Named Destination command with the same syntax for each of the thumbtab letters in the range. For example, insert *gotolink P-R* in the three text frames for *P, Q,* and *R*.

5 If the index uses more than one master page, copy the thumbtabs to the other master pages.

6 Save the index in View Only format.

Controlling how source documents are displayed

When you click an active area in a generated hypertext document, FrameMaker opens a new window and displays the correct page in the linked document. The linked marker or paragraph is highlighted and centered in the window. You can change the display of the linked document—for example, to display the document in the active window.

To control how a linked document is displayed:

1 Generate the hypertext document (see "Adding hypertext links to generated files" on page 541).

2 In the generated file, choose View > Reference Pages and display the reference page that contains the special flow for the generated file.

The flow tag of the special flow is the same as the document's suffix. For example, the special flow for a table of contents is tagged TOC, and the special flow for an index is tagged IX. To determine a flow's tag, click in the text frame and look in the Tag area of the status bar.

Your flow tags are displayed in the tag area of the status bar.

3 In the special flow, find the paragraph that controls how the linked document is displayed.

In a table of contents, the paragraph's tag is ActiveTOC; in an index, it's named ActiveIX. The paragraph will look something like this:

openObjectId <$relfilename>:<$ObjectType> <$ObjectId>

To determine a paragraph's tag, click in the paragraph and look in the Tag area of the status bar.

4 Edit the paragraph so that it contains the display command you want.

For a list of the commands you can use, see "Display commands for generated documents" on page 543. In addition to the commands in the list, you can use the Message Client command to send messages to applications that use the Application Program Interface (API). For details, see the *FDK Programmer's Guide*, which is included in the Frame Developer's Kit.

5 Save the generated file, and then regenerate it.

Display commands for generated documents

When the reader clicks an active area in a generated hypertext document, FrameMaker displays the correct page in the linked document. The following table lists some of the hypertext commands you can use to control how the linked document is displayed. You should type the commands exactly as shown. Use the <$relfilename> building block to create a relative pathname from the generated file to the linked document, and use <$fullfilename> for a full pathname. (The following examples show only the <$relfilename> building block.)

To display	Type
The linked marker or paragraph centered in the active window	gotoObjectId <$relfilename>:<$ObjectType> <$ObjectId>
The linked marker or paragraph centered in the active window resized to fit the page	gotoObjectIdFitWin <$relfilename>:<$ObjectType> <$ObjectId>
The linked marker or paragraph centered in a new window	openObjectId <$relfilename>:<$ObjectType> <$ObjectId>
The linked marker or paragraph centered in a new window resized to fit the page	openObjectIdFitWin <$relfilename>:<$ObjectType> <$ObjectId>
The page containing the linked marker or paragraph, with nothing highlighted, in the active window	gotopage <$relfilename>:<$pagenumonly>
The page containing the linked marker or paragraph, with nothing highlighted, in a new window	openpage <$relfilename>:<$pagenumonly>
An alert that displays the filename of the linked document	alert <$relfilename>

Overriding the generated file's display command

You can specify how a specific document is displayed, overriding the display command contained in the ActiveTOC or ActiveIX paragraph in the generated file. For example, you may want a generated index that references several files, including a glossary file, to display the glossary in one window and all the other files in another window.

To override the display command for a linked document:

1 Draw a text frame on a reference page in the linked document, and assign the frame the flow tag HypertextLinks. For information on using the Text Frame tool to draw a text frame, see "Using text with graphics" on page 320. For information on assigning flow tags, see "Changing flow tags and Autoconnect" on page 393.

2 Do one of the following:

• To display the document in the same window, type **gotoObjectId**

• To display the document in a different window, type **openObjectId**

3 Save the document and regenerate (see "Generating TOCs and other lists" on page 414 and "Generating indexes" on page 425). When you click in the generated file, the linked document will be displayed using the command specified in the HypertextLinks flow, rather than using the command in the ActiveTOC or ActiveIX paragraph.

Incorporating generated files into an online system

If you're using a generated hypertext document as a debugging tool, the document is ready to use when you generate it. If, however, the generated file is going to be part of a hypertext online system, you may want to do the following before distributing the documents to your readers in View Only format:

• Set up links from the documents back to the generated file. You can use any of the hypertext commands. For example, you can create an Index or Table of Contents button that jumps back to the generated file.

• Add active areas to the master pages of documents for navigating through the online system. For example, you can create buttons for paging forward and backward.

• Add links to other parts of the online system in the source documents and in generated files.

Working in view-only documents and books

You distribute online documents and books in View Only format. Readers can view, search, copy, and print—but not edit—a view-only document or book using FrameMaker.

Readers will see the contents of a view-only document exactly as it appeared when you made it view-only. Before changing a document to View Only format, use the View menu to turn off the display of the grid, the ruler, text symbols, and borders. To display a view-only document without the menu bar or scroll bars, see the online manual MIF Reference.

To save a document in View Only format:

1 Choose File > Save As.

2 Specify View Only format and click Save.

To switch several documents at a time between View Only format and Document format, select the files in the book and press Esc Shift+f l (lowercase L*) k. Choose the check box, and click Continue.*

To save a book in View Only format:

1 In the book window, choose File > Save Book As.

2 Specify View Only format and click Save.

When a view-only book is open, you can click ⊞ and ▪▪ to toggle between displaying filenames and text.

To change a document to View Only format without saving it:

❖ Do one of the following:

• Choose Special > Hypertext and click Make View-Only.

• Press Esc Shift+f l (lowercase *L*) k. This keystroke also works for a book.

To change a view-only document to Document format:

❖ Do one of the following:

• If the Hypertext dialog box is open, click Make Editable.

• Press Esc Shift+f l (lowercase *L*) k. This keystroke also works for a book.

To make a view-only book editable or an editable book view-only:

1 In the book window, select any documents that you want to change from view-only to Document format.

2 Press Esc Shift+f l (lowercase *L*) k.

3 To make the selected files editable, click the check box. To make the selected files view-only, deselect the check box.

4 Click Continue.

Navigating to specific pages

You can display pages in view-only documents by following links in the documents, by using controls in the document window, or by using menu commands.

To navigate to specific pages in view-only documents:

❖ Do one of the following:

• Click any active area whose hypertext command jumps to a different location.

• Click the page buttons in the status bar.

• Use the scroll bar or the Page Up and Page Down keys.

• Use the commands on the Navigation menu.

• Right-click anywhere in the document window and choose a command from the context menu.

If you customized your view-only window environment as described in the online manual *MIF Reference,* some viewing methods may not be available.

Jumping backward or forward

You can jump back to previous links and then jump forward again.

To jump backward:

❖ Do one of the following:

• Click an active area with a Jump Back or Jump Back & Fit to Page command.

• Choose Navigation > Go Back.

• Right-click anywhere in the document window and choose Go Back from the context menu.

To jump forward:

❖ Press Esc v Shift+n. You can jump forward only if you have previously jumped backward.

Opening a new window

If a link is set to display a document in the active window, you can force FrameMaker to open a new window instead.

To open a new window when following a link:

❖ Shift-click an active area. In Windows, FrameMaker doesn't open a new window unless the link is to a different document.

Using menu commands

Some FrameMaker commands are available in view-only documents. For example, you can copy text and graphics from a view-only document and paste them in an editable document, search for text and paragraph tags, and print.

View-only document windows use four FrameMaker menus: File, Edit, Navigation, and Windows. In order to use some menu commands, you have to place an insertion point. Other menu commands, such as Edit > Copy, require you to select items. View-only book windows use three FrameMaker menus: File, Edit, and Windows.

If you customized your view-only window environment, some commands may not be available. For information on disabling commands, see the online manual *MIF Reference*.

To place the insertion point or to select an object in a view-only document:

❖ Control-click.

To select in a view-only document:

❖ Hold down Control and select text as you would in an editable document.

Working with FluidView format

A document in FluidView™ format appears as one continuous page, without headers, footers, or margins. When you resize the document window, the text is reformatted to fit within the width of the new window.

In most cases, you work with FluidView documents just as you work with view-only documents. For example, you can click hypertext links to navigate within and between documents. A FluidView document differs from a view-only document in the following ways:

• Because the document appears on-screen as one continuous page, clicking the Page Up or Page Down button on the bottom of the document window displays the previous or next screenful of text instead of the previous or next page.

• The printed version of a FluidView document may not match what you see on the screen. You can use headers and footers, multiple columns, and other page layout options to optimize the printed appearance of the document.

To change a document to FluidView format:

1 Click in the text flow that you want to display in FluidView format. Only one text flow in a document can appear in FluidView format at a time.

2 Press Esc Shift+v Shift+f. This hides the headers, footers, margins, page breaks, and any background graphics; removes multicolumn formatting; and makes the document view-only.

3 Close the document, and when an alert message prompts you to save the document, click Save.

When you save the document in FluidView format and then reopen it, the main text flow (usually tagged *A*) will always appear, even if a different text flow was visible when you changed the document to FluidView format. However, when you click an active area that points to another flow, the new flow appears in the FluidView document.

To change a FluidView document back to Document format:

❖ Press Esc Shift+f l (lowercase *L*) k.

To restore margins, headers, and footers to a FluidView document but keep it view-only:

❖ Press Esc Shift+v Shift+f.

Creating documents for use in FluidView format

Keep in mind the following points as you create FluidView documents:

• When users open a FluidView document that contains more than one text flow, the main flow always appears in the document window. However, you can create links to other flows in the document. When a user clicks an active area that points to another flow, the new flow appears in the FluidView document.

• Although a FluidView document may be as long as any FrameMaker document, try to keep the length of each document under 200 inches. A page break will appear every 200 inches, and footnotes and graphic frames anchored at the bottom of a column will appear at these page breaks instead of at the end of the document.

• Set anchored frames in your document to one of three anchoring positions: Below Current Line, At Insertion Point, or Run into Paragraph. Frames anchored at positions other than these may produce unexpected results.

• You can change the view-only window display or selectively disable menu commands. These expert controls are available through a Maker Interchange Format (MIF) file. For information on using MIF to set up the view-only window, see the online manual *MIF Reference*.

Changing side-head area setup

You can use side heads in one format and not in the other. For example, you can display headings in the side-head area in FluidView and in the body-text area in the printed copy.

To set up different side-head areas in Document format and FluidView format:

1 Use Format > Page Layout > Column Layout to turn side-head formatting on or off while the document is in Document format (see "Creating side heads" on page 122).

2 Press Esc Shift+v Shift+f to change the document to FluidView format.

3 Press Esc j p Shift+s to turn side-head formatting on or off in FluidView. For information on setting up side heads, see "Formatting text as headings" on page 121.

Inserting hypertext command elements in structured documents

A hypertext document is the same as any other Adobe FrameMaker document except that it is saved in View Only format so that readers cannot edit it. The document can have structure, and you can use elements to embed hypertext commands in the active areas. But the structure does not have any effect on how the reader works with the finished document.

When working with structured documents, you can insert a hypertext command using an element; in all other respects, you set up a hypertext document as described for structured documents the same as unstructured documents.

To insert a hypertext command using an element:

1 Click in an area that has been prepared for hypertext.

2 Select a hypertext element in the Element Catalog and click Insert.

3 If the Attributes for New Element dialog box appears, enter attribute values for the element and click Insert Element (see "Inserting elements" on page 36).

4 Choose a hypertext command from the Command pop-up menu (see "Hypertext commands" on page 527 for details). The syntax for the command appears below the pop-up menu, and the command name appears in the text box.

5 Enter parameters in the text box (for example, a filename and linkname).

Hypertext commands must be in lowercase. The parameters can be in uppercase or lowercase, but they are case-sensitive. The entire command can be up to 255 characters long (127 characters on a Japanese-language system).

Note: If you enter a filename parameter for a file that isn't in the same folder as the current document, you must specify a path to the document.

6 If you want FrameMaker to check for errors in the command, select Validate Command upon Insertion.

7 Click New Hypertext Marker. If text symbols are showing, a marker symbol ⊤ appears in the document window. A bubble for the marker appears in the Structure View, with a text snippet that shows the hypertext command.

FrameMaker checks the syntax for errors. If Validate Command upon Insertion is selected, it also checks the command. For example, if the command is Jump to Named Destination, FrameMaker verifies that the destination link exists in the specified document. If it finds an error, an alert message describes the error but the command is still inserted.

Chapter 18: HTML, XML, and Adobe PDF conversion

About HTML

HTML provides a set of elements that describe how each part of a document is used. For example, the P (paragraph) element is a normal body paragraph; the H1 element is a first-level heading.

HTML elements are conceptually similar to Adobe FrameMaker formats. For example, HTML documents contain body paragraph elements and heading elements, while FrameMaker documents contain paragraphs that use formats designed for body paragraphs and headings.

FrameMaker document before and after HTML conversion

However, HTML elements differ from FrameMaker formats in the following ways:

• HTML documents use a standard set of elements, while FrameMaker documents can contain any number of formats and use any names for the formats.

• HTML elements describe the structure of a document, not its format. A Web browser such as Netscape Navigator or Microsoft Internet Explorer displays each element in a predefined format. Two browsers may display the same element in different ways.

HTML documents can contain hypertext links to locations in the same file, or to other files anywhere on the Internet or on an intranet. Most of the FrameMaker hypertext commands are automatically converted to HTML hypertext commands when you save a document as HTML. (See "Hypertext commands in HTML and PDF documents" on page 529.)

Preparing documents for conversion to HTML

You can write a single version of a document and then use that version to create HTML, XML, and PDF documents. You don't have to reformat or rewrite your document to produce Web pages.

HTML is an online format optimized only for certain kinds of presentation. For example, you can't easily create a two-column layout in HTML. For this reason, don't expect your HTML documents to look identical to the FrameMaker originals. If design items in your documents have no acceptable equivalents in HTML, consider converting to PDF instead of HTML. For information, see "About Adobe PDF" on page 568.

What is converted

When you save a document as HTML, FrameMaker converts only the contents of the main text flow (the flow tagged A). Make sure the text in flow A is the one you want and that all of flow A is connected. (See "Connecting text frames" on page 394.)

If your document has multiple flows that you want preserved, consider saving as PDF instead. (See "Saving documents and books as Adobe PDF" on page 568.) When you save as PDF, each flow can be converted to an Acrobat article thread.

The contents of anchored frames in the flow are converted to graphics (including the text within anchored frames). Graphics and text not in the main flow—whether they appear on master pages (such as headers and footers) or directly on body pages (such as graphics placed directly on the page)—are not converted to HTML. If you want to duplicate the effect of headers so that text or graphics appear at the top of every HTML document (for example, text for a logo or navigation buttons), use macros, as described in "Using HTML conversion macros" on page 561.

Some FrameMaker hypertext commands convert to equivalent HTML links. For details, see "Hypertext commands" on page 527.

HTML export issues

When you export to HTML, note the following issues:

- Vector graphics and text frames in anchored frames are converted to bitmaps. If the text in the converted graphic is greeked, you can change the Greek Text Smaller Than setting in the Preferences dialog box.

- If you scale or crop GIF graphics that have been imported by reference, these settings will be lost when converted to HTML.

- (Windows) HTML files produced by FrameMaker do not display line breaks when opened in Notepad. To view the HTML file correctly, use FrameMaker, WordPad, or a browser that lets you view the source code.

- (UNIX) If you change the background color in FrameMaker to any color but white, exported graphics may include this color. If necessary, reset the background to white and save as HTML again.

- If the document uses paragraph or character tag names that contain accented characters, you may have problems viewing the characters with some browsers. To avoid this problem, rename paragraph or character tags to use unaccented characters, or delete the cascading style sheet (.css) file that was created with the HTML file.

Using templates that map well to HTML

To minimize fine-tuning when you save documents as HTML, create your documents from one of the supplied FrameMaker templates. The formats of these templates map easily to HTML equivalents.
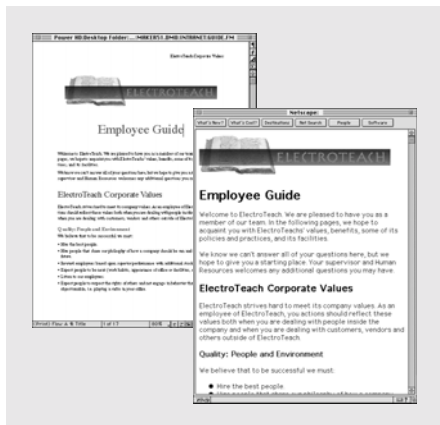
Sample chapter template before and after HTML conversion

Using Web-safe colors

The Online color library provides 216 "Web-safe" colors that have a consistent appearance on all platforms when viewed with a Web browser. For more information, see "Using color libraries" on page 358.

Changing format overrides to new formats

Accurate conversion depends on the consistent use of formats in your FrameMaker documents. Results will not be as good if your documents use format overrides instead of defined formats stored in the catalogs. For example, a document that uses a Body format for both regular paragraphs and headings will not convert to HTML accurately. If your documents use overrides extensively, you should create and apply a new set of formats based on the overrides.

To create and apply a new set of formats based on the format overrides in a document:

1 Choose File > Utilities > Create & Apply Formats, and then click Continue. Any format used in the document but not stored in a catalog is added to the catalog. Also, if the document uses a format with a format override, a separate format based on the override is added to the catalog.

For example, if a document contains a Body paragraph with an override (for example, a left indent), that paragraph will be tagged Body1. If another override is used for Body (for example, a default font change), any paragraph using that override will be tagged Body2.

2 Open the Paragraph Catalog and Character Catalog to inspect the new tags. You may want to rename some formats to make them easier to interpret. For example, you could rename Body1 to BodyIndent.

Setting up links to URLs

A uniform resource locator (URL) is the location of a document anywhere on the Internet or on an intranet. You can embed a special marker in a FrameMaker document that becomes a link to a URL when the document is saved as HTML or PDF.

To add a link to a URL:

1 Select the text you want to be linked to a URL and apply a character format to it. For example, you might apply an underline format to the words "Click here for more information."

For more information, see "Preparing areas for becoming active" on page 522.

2 Click in the formatted area, and choose Special > Hypertext.

3 Choose Message Client from the Command pop-up menu and enter the following in the Syntax text box: **message URL** *url_name*

Replace *url_name* with the URL you want to link to. For example, to link to the Adobe Systems home page, you would enter the following:
message URL http://www.adobe.com

4 Click New Hypertext Marker. When the document is converted to HTML, XML, or PDF, clicking on the formatted text displays the location specified by the URL.
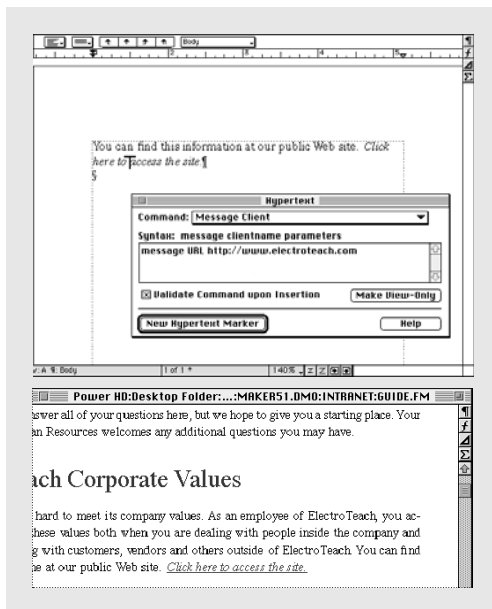
FrameMaker marker (top) and after conversion to an HTML link (bottom)

Setting up links for imagemaps

Imagemaps on a Web page are graphics with areas defined as links. Imagemaps can add visual interest to otherwise plain text-only links to Web pages.

When you convert a FrameMaker document to HTML or XML, graphics in the main text flow are automatically converted to imagemaps if you have set them up correctly. They convert in these cases:

• When a graphic in an anchored frame has one or more text frames on top of the graphic, and these text frames have valid hypertext markers in them. For details, see "Preparing graphics" on page 524.

Graphics converted to imagemaps

• When a graphic in an anchored frame has a rectangular matrix of links over it. For details, see "Creating button matrices" on page 533.

Saving documents as HTML

To convert a FrameMaker document to HTML, simply save it as an HTML file. Saving as HTML sets up definitions for how each FrameMaker format will convert, or *map,* to an HTML element. You can also save a whole book as HTML. (See "Converting books to HTML files" on page 565.)

FrameMaker automatically creates the mappings of formats to HTML elements upon initial conversion to HTML, but you can fine-tune them, and make further customizations, by creating conversion macros. For information, see "Adjusting HTML mappings" on page 554 and "Fine-tuning mappings by editing reference pages" on page 558.

Even if you plan to fine-tune the conversion, you should begin by saving as HTML. You can then fine-tune the automatic mappings as needed.

To save a document in HTML format:

1 Choose File > Save As and choose HTML from the pop-up menu.

2 Give the filename an extension of .html, specify the file location, and click Save. The converted file is saved where you specified.

3 Open the HTML file in a Web browser to examine the converted file. If it meets with your approval, you're done.

If you'd like to refine some mappings, continue by following the steps in "Adjusting HTML mappings" on page 554.

Preserving the FrameMaker look by using stylesheets

HTML was designed not as a formatting language but as a way of presenting the structure of a document (its semantics). In some cases, however, you may be concerned with the format of a document as well as its semantics. You may want to preserve the look of your FrameMaker document more than is possible with regular HTML elements alone.

For example, suppose you have a document that uses blue 20-point type for the first letter of a chapter. An HTML *stylesheet* can preserve unique formatting of this kind.

An HTML cascading stylesheet is created for you with the same name as the main HTML file but with an extension of .css. It is a standardized file format that many Web browsers can use and interpret. A .css stylesheet contains formatting specifications that can duplicate the font, style, size, indents, spacing, and margins of the original document.

The HTML file contains a reference to a .css stylesheet. If the browser finds the stylesheet, it uses the information to format the Web page. If the browser doesn't support stylesheets, it uses only the built-in formatting defined for each HTML element.

To use an HTML stylesheet:

1 Save your document as HTML. (See "Saving documents as HTML" on page 553.) A .css file is automatically created in the same folder as the HTML file.

2 Copy the HTML stylesheet (.css file) to the Web server in the same folder as your HTML files.

Note: Stylesheets are sometimes called "cascading" because their format rules can overlap—and collide—with rules in other stylesheets, such as a personal stylesheet set up by someone viewing your converted document. The stylesheet that FrameMaker creates takes precedence over other stylesheets.

Adjusting HTML mappings

You can change the following HTML mappings:

• Paragraph formats map to HTML elements to define paragraph-level formatting (including formats for body paragraphs and headings).

• Character formats map to HTML elements to define character-level formatting (including common mappings for bold or emphasized text).

• Cross-reference formats map to HTML conversion macros to specify how cross-references will be displayed in HTML.

After you save a document in HTML format, you may want to refine the mappings.

Note: A few mappings cannot be changed. For example, a FrameMaker table always converts to an HTML table, and an anchored frame always becomes an image with an IMG tag.

To set up or modify HTML mappings:

1 Choose File > Utilities > HTML Setup. FrameMaker either loads the current mappings into the HTML Setup dialog box or, if no mappings have been created yet, creates default mappings.

2 From the Map pop-up menu, choose the type of formats to map (paragraph, character, or cross-reference).

3 Specify a mapping by choosing a FrameMaker format from the From pop-up menu and an HTML element or macro from the To pop-up menu.

For information on the contents of the To pop-up menu, see "Paragraph-based HTML elements" on page 556 and "Mappings for cross-reference formats" on page 557.

You can click in the document to select a format to adjust. The HTML Setup dialog box immediately shows the current mapping for the format you click.

4 Choose from the following options:

• If you're mapping paragraph formats and want to include the paragraph autonumber in the converted text, click Include Autonumber. (You don't have to include an autonumber for items in a list.)

• If you're mapping to Heading (AutoLevel) and want to start a new Web page whenever this format is found, click Start New, Linked Web Page. For more information on mapping headings, see "Autolevel mappings for headings" on page 555.

Use this option to break up a long FrameMaker document into several HTML files, each linked to a single file. Whenever the specified format is found, FrameMaker leaves the heading in the original file (the *parent* file) and makes it a link to a *subdocument* whose content starts at the heading format and continues until the next instance of the format. For information on using this setting to simulate a table of contents, see "Creating links that simulate a TOC" on page 566.

• If you're mapping to the List Item element for either a bulleted or numbered list, and want to specify how many levels deep the item is (which usually translates as how much the item should be indented), enter a Nest List at Depth value. For more information on mapping lists, see "Mappings for lists" on page 556.

5 Click Change to accept the mapping.

6 Repeat steps 2 through 5 as needed.

7 When you finish specifying mappings, close the dialog box and save the document as HTML, as described in "Saving documents as HTML" on page 553.

If you want to edit the mapping tables on the HTML reference page, be sure to close the HTML Setup dialog box first. Keeping the dialog box open results in an error when you try to edit the tables on that page.

Autolevel mappings for headings
HTML supports six levels of headings. You can convert any FrameMaker paragraph format to a heading by mapping it to Heading (Autolevel). With this special mapping, headings in the document are mapped to H1, H2, and so on, according to their relative levels and based on the highest-level mapping in that file. The advantage of this method is that if the document is broken into separate HTML files, each will always have an H1 mapping and an appropriate hierarchy of headings under that H1.

For example, suppose your document uses Title1, Title2, and Title3 formats. When you convert to HTML, you might want to break up the document into two files, and the second file might contain only instances of Title2 and Title3. The autolevel feature ensures that Title2 maps to H2 in the first file but maps to H1 in the second file.

For more information on how the autolevel headings work when you choose to split a document into separate HTML files, see "Using the Headings reference page" on page 558.

If you want to fine-tune the autolevel mechanism or override the autolevel function and make mappings to specific heading levels, you must edit special tables on reference pages of the FrameMaker document. For more information, see "Using the Headings reference page" on page 558 and "Editing the HTML Mapping table" on page 560.

Mappings for lists

FrameMaker automatically maps bulleted lists to HTML unordered lists and numbered lists to HTML ordered lists. If you want to override the automatic mapping, you must edit a table on the HTML reference page of the FrameMaker document. (See "Editing the HTML Mapping table" on page 560.)

In the HTML Setup dialog box, you can define the level of a list by specifying a value for Nest List at Depth. Typically, a browser displays different levels with different amounts of indentation.

You can include a FrameMaker autonumber in the converted text by choosing Include Autonumber. However, most browsers provide their own bullet characters and numbers with lists, so you are unlikely to use this option when converting lists.

Paragraph-based HTML elements		
Mapping name in the HTML Setup dialog box	**Equivalent HTML element**	**Recommended use and typical appearance in a Web browser**
Heading (AutoLevel)	H1, H2, H3, H4, H5, H6	Six levels of headings, with H1 the largest and most prominent
Paragraph	P	Normal body paragraphs
Preformatted Text	PRE	Text that closely matches the original's line breaks and spacing; usually achieved by using multiple spaces and a fixed-width font
Address	ADDRESS	Text set off from the rest denoting an e-mail address or the like; usually indented or italicized
Block Quote	BLOCKQUOTE, BQ	A quotation set off by indenting
List Item	LI	Item preceded by a bullet character when it is part of an unordered list (UL), or by a sequential number when it is part of an ordered list (OL)
List Item (Continued)	P	Body paragraph within a list (not preceded by a bullet or number)
Data Term	DT	Item (such as a term in a glossary) that is to be defined by a DD element
Data Definition	DD	Definition of a term (a DT), such as in a glossary item
Data Definition (Continued)	P	Body paragraph within a data definition
Throw Away	None	Discarded during conversion to HTML

Character-based HTML elements		
Mapping name in the HTML Setup dialog box	**Equivalent HTML element**	**Recommended use and typical appearance in a Web browser**
Blink (Netscape)	BLINK	Blinking text (may not work in non-Netscape browsers)
Citation	CITE	A citation, usually displayed in italics or underlined
Code	CODE	Computer-program code, usually displayed in a fixed-width font such as Courier
Definition	DFN	Definition of a term, usually displayed in italics
Emphasis	EM	Emphasized text, usually displayed in italics or underlined
Keyboard	KBD	Text that a user types, usually displayed in a fixed-width font such as Courier
Sample	SAMP	Text that appears in a fixed-width font such as Courier

Character-based HTML elements		
Mapping name in the HTML Setup dialog box	**Equivalent HTML element**	**Recommended use and typical appearance in a Web browser**
Short Quotation (Intl)	Q	Quotation of less than a full paragraph, usually displayed in quotation marks (may not be recognized by all browsers)
Span (CSS)	SPAN	Text that is displayed as specified in an HTML stylesheet (by browsers that recognize stylesheets) or without special formatting (by other browsers). For use when no other mapping is appropriate—for example, for a drop cap.
Strong	STRONG	Emphasized text, usually displayed in bold
Typewriter	TT	Text in a fixed-width font such as Courier
Variable	VAR	A special term or, in programming contexts, the name of a variable, usually displayed in italics or bold italics
Plain Text	None	Text that cancels any previous character mapping, displayed as appropriate for the paragraph mapping
Throw Away	None	Discarded during conversion to HTML

Mappings for cross-reference formats

A typical cross-reference in a printed document such as "See "Syntax" on page 8 for more information" loses its meaning in HTML documents, which don't use page numbers. For this reason, cross-references are mapped by default to a predefined cross-reference conversion macro called See Also. The See Also macro changes the cross-reference so that it refers to the text of the paragraph but not to the page number (for example, "See "Syntax" for more information"). The cross-reference text in the original document becomes an HTML link in the converted document regardless of what format is used.

You can modify the See Also macro, or you can create your own macros and then map cross-reference formats to them.

When you first map a cross-reference, the See Also macro is the only macro in the To pop-up menu in the HTML Setup dialog box. If you create other conversion macros, they will appear in this menu as well. For information on how to create and edit cross-reference macros, see "Using HTML conversion macros" on page 561.

Two other choices in the To pop-up menu let you map a cross-reference in other ways:

• Choose Original Cross-Reference Format to leave the text of the cross-reference unchanged.

• Choose Throw Away to delete the text of the cross-reference.

Fine-tuning mappings by editing reference pages

You can fine-tune the HTML conversion by editing tables on two special FrameMaker reference pages: the Headings page and the HTML page. If you're converting a book, the reference pages are BookHeadings and BookHTML. (See "Converting books to HTML files" on page 565.) For general information on reference pages, see "Working with reference pages" on page 397.

Note: Don't edit the information on the HTML reference page unless you're familiar with HTML coding. Most users won't need to edit the tables on this page.

The reference-page tables are set up automatically the first time you save as HTML or the first time you choose File > Utilities > HTML Setup. The Headings reference page contains one table, the Headings table. The HTML reference page contains the following tables:

• The HTML Mapping table. (See "Editing the HTML Mapping table" on page 560.)

• The HTML Options table, which contains the settings you make in the Options dialog box. (See "Specifying graphics conversion" on page 564.)

• The HTML System Macros table, the HTML Cross-Reference Macros table, and the HTML General Macros table. (See "Using HTML conversion macros" on page 561.)

• The HTML Character Macros table. (See "Converting special characters" on page 563.)

If the tables are large, the HTML reference page will continue on for as many pages as needed.

Using the Headings reference page

The Headings table on the Headings reference page identifies which tags should be used for headings and what their hierarchy is.

Headings Table

Heading Level	Paragraph Format	Comments
1	**Title1**	
2	*Title2*	
3	*Title3*	
4	Subhead	

The Headings Table sets up the relative hierarchy of the headings.

Using this table, you can modify the mappings for headings and the relative levels of those headings.

To help you identify heading formats, text appears in the same font and point size as the headings do on the body pages of the document.
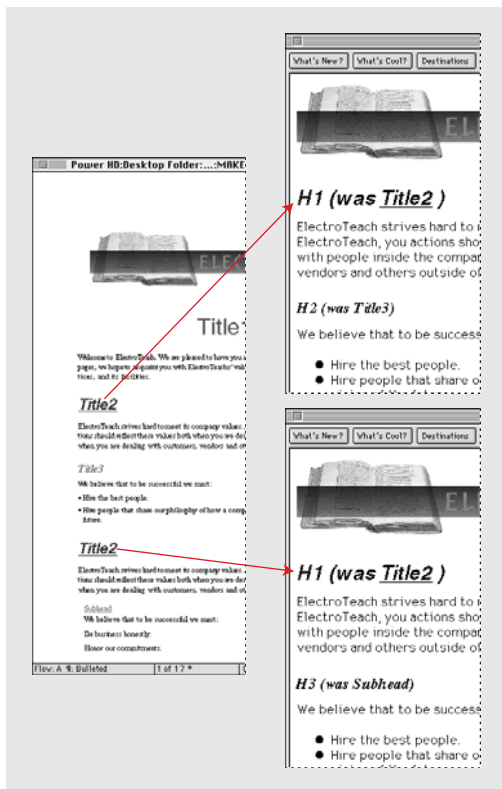
If you break up the document at Title2, you will produce two subdocuments. Whatever format you split on, that format becomes H1 in the subdocuments. FrameMaker preserves the relative levels of headings even though they always start with H1. For example, in the second subdocument, Subhead appears as an H3.

To edit the Headings table:

1 Choose View > Reference Pages and display the Headings page. (The Headings page will not exist until you save the document as HTML, or choose File > Utilities > HTML Setup.)

2 Edit the table by doing the following:

• To map a different paragraph format to a heading level, change the paragraph tag in the second column but don't change the heading level number. For example, if a Tip format is mapped to a level-6 heading but you want the Warning format to be mapped at that level instead, just change *Tip* to *Warning* in the second column.

• To change the relative levels of headings, change the numbers in the Heading Level column. For example, to promote the Warning format to a higher heading level, change the 6 to a 5 in the Heading Level column. (You don't have to change the order of the rows when you do this, but you might want to so that the table is easier to read.)

• To map several formats to a single level of heading, use the same number in the Heading Level column. For example, the Note and Warning formats are both level-6 headings in the following Headings table.

Heading Level	Paragraph Format	Comment
6	Note	
6	Warning	

- To add a format to the Headings table, press Control+Return to add a row and then fill in the Heading Level and Paragraph Format columns.

3 If you removed or added formats in the Headings table, change their mappings in the HTML Mapping table as well. For example, you might change the entry of a SubHead format from H* to P in the HTML Mapping table. For more information on editing this table, see the next section.

Editing the HTML Mapping table

The HTML Mapping table on the HTML reference page contains the mappings you assign using the HTML Setup dialog box. (Mappings for headings appear here too, as well as in the Headings table.) You usually don't need to edit this table directly, but you might want to edit it in the following situations:

- To bypass the autolevel mapping of headings and instead map a format explicitly to a heading level such as H1 or H2. (See "Autolevel mappings for headings" on page 555.)

- To change many mappings quickly or globally by using Edit > Find/Change.

- To change a bulleted list to a numbered list, or the reverse.

- To use an HTML element that is not available through the HTML Setup dialog box.

- To document the mappings in the Comments column of the table.

The first column of the Mapping table contains a FrameMaker source item prefixed with a letter that indicates the type of item: *P* for paragraph format, *C* for character format, or *X* for cross-reference format. The second column can contain the name of an HTML element or an HTML conversion macro name.

The HTML Mapping table on the HTML reference page

For information on defining macros, see "Using HTML conversion macros" on page 561.

To edit a mapping using the HTML Mapping table:

1 Choose View > Reference Pages and display the HTML page.

2 Locate the Mapping table on that page, and find the format whose mapping you want to change.

3 Make the following changes as needed:

- In the Element column, enter the name of the HTML element or conversion macro that the format is to be mapped to. If you're not sure of the correct HTML element name, see the tables in "Mappings for lists" on page 556. Enter **H*** to map to an autolevel heading.

- In the New Web Page column, enter **Y** for Yes to create a separate HTML document whenever this format is found. Otherwise, enter **N** for No.

- In the Include Auto# column, enter **Y** or **Yes** to include the full autonumber text of this format in the conversion. Otherwise, enter **N** or **No**.

- In the Comments column, enter any text to document the purpose of the mapping, special cases, and so on. You can leave this column blank.

An edited row might look like this.

FrameMaker Source Item	HTML Element	New Web Page?	Include Auto#?	Comments
P:Fnote	FOOTNOTE	N	N	Won't work in all browsers

Using HTML conversion macros

You can use the following tables on the HTML reference page to define HTML conversion macros:

• The HTML System Macros table, which contains eight predefined macro names you can use to perform special functions at the start or end of Web pages.

• The HTML Cross-Reference Macros table, which contains replacement text for FrameMaker cross-references.

• The HTML General Macros table, which contains general-purpose macros that you define (for example, the title of the converted document).

Note: You cannot alter the System or General HTML macros in the HTML Setup dialog box.

After a macro is defined, you can use it by name in other macros, or you can map to it in the HTML Mapping table. The macro name appears in the To pop-up menu in the HTML Setup dialog box, so you can map a format to it without editing the Mapping table directly.

For examples of HTML conversion macros, see the reference pages of the templates that are included with FrameMaker.
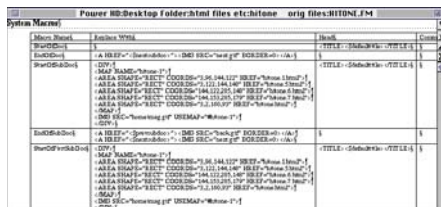
Sample conversion macros

To create or edit an HTML conversion macro:

1 Choose View > Reference Pages and display the HTML page.

2 Edit a macro in a table, or create a new row (by pressing Control+Return) and enter a new macro starting with a macro name. (You can't add macros to the HTML System Macros table; you can only edit their replacement text.)

Replacement text can contain any mixture of text, HTML codes, and FrameMaker building blocks. (See "Using building blocks in HTML conversion macros" on page 562.) Be sure you enter valid HTML code; FrameMaker doesn't check the HTML syntax.

Using building blocks in HTML conversion macros

You can use the following building blocks in HTML conversion macros to include special types of text.

Building block	Description
<$paratext>
<$paratag>
<$paranum>
<$paranumonly>	See "Using building blocks for source information" on page 204 and "Using building blocks for character formats" on page 205 for details.
<$variable[*varname*]>	Contains the text of the variable
<$defaulttitle>	Contains the text of the first heading that appears in the current document
<$nextsubdoc>	Contains the URL of the next HTML subdocument
<$prevsubdoc>	Contains the URL of the previous HTML subdocument
<$parentdoc>	Contains the URL of the parent HTML document

Building blocks are enclosed in angle brackets (< >) and begin with a dollar sign ($). Enter these building blocks in all lowercase letters.

Note: The General Macros table has a column labeled "Head." Use this column to define a title (see "Customizing titles" on page 564) or to include special, advanced information about the HTML document (such as keywords that a search engine might use). To fill in this column, you need to know the HTML elements that are permitted in the HEAD section of an HTML document.

Redefining HTML system macros

HTML system macros are a special case because you can redefine them, but you cannot add new ones.

These macros are especially useful when splitting up documents into separate HTML files. For example, you can define the StartOfSubDoc macro so that your company logo appears at the top of every new Web page.

In these descriptions, the *parent* document refers to the first Web page and *subdocument* refers to a document linked to the parent document.

System macro	Use
StartOfDoc	Inserts text at the top of the topmost Web page
EndOfDoc	Inserts text at the end of the topmost Web page
StartOfSubDoc	Inserts text at the top of each subdocument except the first and last
EndOfSubDoc	Inserts text at the end of each subdocument except the first and last
StartOfFirstSubDoc	Inserts text at the top of only the first subdocument created
EndOfFirstSubDoc	Inserts the replacement text at the end of only the first subdocument
StartOfLastSubDoc	Inserts the replacement text at the top of only the last subdocument created
EndOfLastSubDoc	Inserts the replacement text at the end of only the last subdocument

Converting special characters

The FrameMaker character set and the character set used by HTML and the Web are not identical. Because of this, some characters are mapped to substitutions when converted to HTML. Some mappings are internal and rely on special HTML codes called *entities*. (For example, curved quotation marks are changed to the entity for straight ones.) Other substitutions are defined in the Character Macros table. For example, an em dash is defined as two hyphens. If no mapping exists, the character is ignored.

The following characters either have special predefined mappings or are treated specially.

Character	Default mapping	Where defined
… (ellipsis)	... (three periods)	Character Macros table
—— (em dash)	-- (two hyphens)	Character Macros table
— (en dash)	- (one hyphen)	Character Macros table
¢ (cent)	¢ (HTML character reference)	Character Macros table
© (copyright)	© (HTML character reference)	Character Macros table
® (registered)	® (HTML character reference)	Character Macros table
? (degree symbol)	° (HTML character reference)	Character Macros table
< and > (angle brackets)	< and > (HTML entities)	Internal
" and " (curved quotation marks)	" (HTML entity for ")	Internal
& (ampersand)	& (HTML entity)	Internal

You can add or change mappings for characters by adding or editing entries in the Character Macros table. As the previous table illustrates, you can map characters to text or to HTML character and entity references (which begin with an ampersand and end with a semicolon).

To add or change a mapping for a special character:

1 Choose View > Reference Pages and display the Character Macros table on the HTML page.

2 Edit a mapping, or create a new row (by pressing Control+Return) and enter a new mapping.

If you're unsure how to type a special character in the first column, look up its keystroke.

For example, to set up mappings for the dagger character, the trademark symbol, and the ae ligature, you could add the following rows.

Character	Replace With	Comments
†	*	Dagger symbol
™	(tm)	Trademark symbol
æ	æ	ae maps to the HTML entity reference for that symbol

Specifying graphics conversion

When you save documents as HTML, all graphic files imported by copying into anchored frames are converted to GIF format unless you specify that all the graphics be saved to another format. Each graphic is saved to a separate file. Text in anchored frames is also converted to GIF.

Graphic files imported by reference are left in their original locations unless you specify that copies should be made. In that case, the formats are inspected and converted as needed (preserving the dpi scaling of a graphic). The new files are created in the same folder as the HTML document.

To specify the file format for converted graphics:

1 Choose File > Utilities > HTML Setup and click Options.

2 Specify the graphic file format you want. You can choose from the following formats:

• GIF is best used for nonphotographic images with no more than 256 colors.

• JPEG format is best used for images with a wide range of color, such as a 24-bit photograph.

• PNG format is a public-domain format that's becoming more widespread on the Web. Like GIF, it is best used for images with no more than 256 colors.

3 Click OK.

To specify that graphics imported by reference be copied and converted:

1 Choose File > Utilities > HTML Setup and click Options.

2 Select Copy Files Imported by Reference.

Customizing titles

The title of an HTML document appears in the window's title bar. When you add a bookmark to that page, it also appears in the bookmark list. Initially, the <$defaulttitle> building block is used for the title, which uses the first heading in an HTML file as the title for that file. Usually, the default titles are satisfactory. However, you can specify a different title by editing macro tables on the HTML reference page.

System macros and general macros can define two sets of replacement text—one that appears in the body of the code and one that is inserted in the head area.

You can modify the default title, or you can remove the default title and set up your own titles.

To modify the default titles:

1 Choose View > Reference Pages and display the HTML reference page.

2 In the HTML System Macros table, locate the four system macros that set up the default titles. Initially, they use the <$defaulttitle> building block to assign the first heading in the file as the title. You can change any or all of them.

Macro Name	Replace With	Head	Comments
StartOfDoc		<TITLE><$defaulttitle></TITLE>	

3 Change the default macro for Head. For example, the following macro changes the text of the title to static text.

Macro Name	Replace With	Head	Comments
StartOfDoc		<TITLE> My Book</TITLE>	

To set up your own titles:

1 Choose View > Reference Pages and display the HTML reference page.

2 Remove the four default title replacement texts from the HTML System Macros table.

3 In the HTML General Macros table, define a macro that uses the <TITLE> HTML element in the third column, the Replace With (in HEAD) column. For example, the following macro uses a paragraph autonumber and text for the title, and also as paragraph text in the document.

Macro Name	Replace With	Head	Comments
MyTitle	<P><$paranum><$paratext></P>	<TITLE><$paranum><$paratext></TITLE>	

4 Map the macro to the format that you're splitting the HTML document on. (See "Adjusting HTML mappings" on page 554.)

Converting books to HTML files

You follow the same basic procedure to save a book in HTML format that you use to save a single document. (See "Saving documents as HTML" on page 553.) When FrameMaker maps the files in the book, it stores the mappings on reference pages added to the first file in the book. You can edit the tables on the reference pages in the same way you edit the tables on reference pages of individual documents.

The files in a book may not remain separate files when the book is saved as HTML. To break up a book file into separate HTML files, use the Start New, Linked Web Page option. For information on using this option to simulate a table of contents, see "Creating links that simulate a TOC" on page 566.

To save a book in HTML format:

1 Open the book file and choose File > Save Book As.

2 Choose HTML from the pop-up menu.

3 Give the filename an extension of .html and click Save. The converted files of the book are saved where you specified.

4 Examine the converted files by opening them in a Web browser. If they meet with your approval, you're done.

5 If you'd like to refine some mappings, open the first file in the book file and display its BookHeadings or BookHTML reference page. Edit the tables there. (See "Fine-tuning mappings by editing reference pages" on page 558.) Then save the file and save the book file as HTML again.

If you fine-tuned the mappings for a document and want to use these mappings for a whole book, remove the tables on the BookHeadings and BookHTML reference pages in the book file's first file. Then copy the tables on the document's Headings and HTML reference pages and paste them onto the BookHeadings and BookHTML reference pages.

Creating links that simulate a TOC

You can convert a large file into a series of small HTML subdocuments that are linked to one parent document. The parent document can then function as a linked table of contents for the subdocuments.
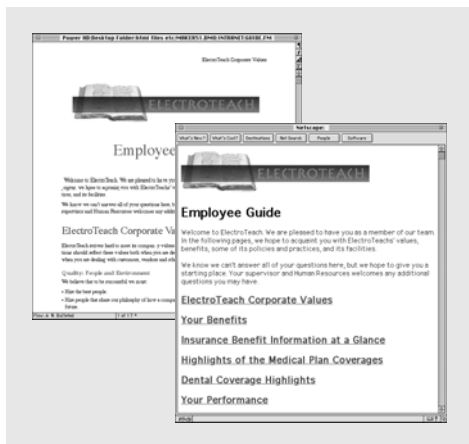
FrameMaker document and the simulated TOC in a Web page

Subdocuments are automatically named sequentially. For example, when you save MyDoc to HTML, the parent document is called MyDoc.html, the first subdocument is MyDoc.1.html, the second one is MyDoc.2.html, and so on. Don't rename the files; otherwise, the links will become invalid.

The hierarchy of heading levels in the subdocuments is controlled by the Headings table.

To simulate a TOC:

1 Adjust your document's mappings so that a heading starts a new file. Do this by using the Start New, Linked Web Page option in the HTML Setup dialog box. (See "Adjusting HTML mappings" on page 554.)

Note: Look for a heading whose contents are neither too large nor too small. (Readers might get lost if they have to do too much scrolling or might be frustrated if the page they jump to has only one paragraph.) Also, you may want to make sure some text appears before the first instance of the heading you choose so that there's an introduction to the list of links.

2 Give readers an easy way to return from the linked subdocuments to the parent document by defining the EndOf-SubDoc or StartOfSubDoc system macro. The text or graphics defined by this macro will appear at the end or the start of each linked Web page as in the following example.

Macro Name	Replace With
EndOfSubDoc	\<HR>\<P>\<A HREF="\<$parentdoc>"> Return to main page\</A>\</P> \<P>\<A HREF="\<$prevsubdoc>"> Go to previous page\</A>\</P> \<P>\<A HREF= "\<$nextsubdoc>"> Go to next page\</A>\</P>

3 Save the file or book as HTML. The parent document will contain the linked table of contents.

Inserting HTML code

You may want to insert special HTML code into your document (for example, the code that defines a Java applet).

To insert HTML code in a document:

1 Choose View > Reference Pages and display the HTML reference page.

2 In the HTML General Macros table, define a macro whose content is the HTML code.

3 Choose View > Body Pages and place the insertion point where you want to insert the HTML code.

4 Choose Special > Marker and choose HTML Macro as the marker type.

5 Enter the name of the general macro as the marker text and click New Marker.

For example, you could enter the following Java code as a macro definition.

Macro Name	Replace With
MyCode	<applet code="Bullets.class" width="600" height="6" codebase="classes/bullets/" > <param name="bgColor" value="White"> </applet>

Where you want to insert this applet, you insert a marker whose marker type is HTML Macro and whose marker text is MyCode.

Troubleshooting and tips on HTML conversion

Follow these guidelines to ensure a smooth conversion to HTML:

• When converting a book, open all documents before starting. This ensures that there will be no error messages that might interrupt the conversion process.

• Make sure the table formats you use have regular ruling lines defined for at least one body row. Otherwise, the HTML tables will have no lines around table cells.

• Make sure your documents contain no unresolved cross-references before you save as HTML. Unresolved cross-references appear as broken links in HTML. For information on resolving cross-references, see "Resolving cross-references" on page 207.

• If text or graphics don't convert when they should, make sure they're on body pages and not master pages, that they are part of the main text flow (flow A), and that they're in anchored frames.

• If you want to import the HTML conversion settings from one document to another, use the File > Import > Formats command to copy reference pages. For details on importing reference pages, see "Importing and updating formats" on page 408.

Saving structured documents as HTML

The procedures for saving structured documents as HTML are the same as for unstructured documents, with the exception of mappings. In structured documents, all mappings are based on elements and attributes, rather than character, paragraph, and cross-reference formats. Structured FrameMaker elements map to HTML elements to define formats for containers. Structured FrameMaker attributes map to HTML attributes to define cross-references, cascading stylesheets, languages, and alt-text for images.

About Adobe PDF

You can save a FrameMaker document or book file as Adobe PDF, and distribute it in that format. Your readers can view it with Acrobat, Acrobat Reader, or any other application that supports Adobe PDF files.

Important: *Use version 7.0.7 or later of Acrobat or Reader when viewing converted files.*

FrameMaker document before and after Adobe PDF conversion

When you save a FrameMaker document as Adobe PDF, the following changes occur:

- Cross-references and hypertext commands become links in the PDF file.

- In structured documents, elements you specify in the PDF Setup dialog box become bookmarks in the PDF file.

- Hypertext alert messages become notes in the PDF file.

- Hypertext URL messages (see "Setting up links to URLs" on page 551) become Web links in the PDF file.

- Other hypertext commands convert to equivalent HTML links. (See "Hypertext commands in HTML and PDF documents" on page 529.)

- Paragraphs you specify in the Bookmarks panel of the PDF Setup dialog box become bookmarks in the PDF file. In structured documents, element tags become bookmarks. (See "Saving structured documents as Adobe PDF" on page 576.)

- Text flows used on body pages can become article threads in the PDF file.

- The PDF file contains tagged PDF information if you select the Generate Tagged PDF option. (See "Defining a tagged Adobe PDF file" on page 575.)

- The PDF file can include document information such as the author's name and keywords. See "Adding metadata to a document" on page 27.

Saving documents and books as Adobe PDF

You convert a FrameMaker document to Adobe PDF by setting options in the PDF Setup dialog box, and then saving the document as PDF. You can also print the document to a PostScript file, and then convert it. For information on printing to a PostScript file, see "Creating PostScript files" on page 30.

- **Windows** Be sure to keep the Adobe PDF Creation Add-On printer instance.

• **Solaris** Be sure to keep the Normalizer 8 printer instance.

You can also use the Save As PDF option in the File menu.

To save a document or book as Adobe PDF:

1 Open the document or book you want to save as Adobe PDF.

2 If there are references to FrameMaker documents in other books, also open those book files. This ensures that links will work properly when all the books are converted to PDF.

3 In the original document or book file, do one of the following:

• Select File > Save As PDF. In the Save Document dialog box, click Save.

• Select File > Save As (or File > Save Book As), and choose PDF from the pop-up menu. Replace the filename extension with .pdf. You can also change the save location and the filename. Then click Save.

4 Click Set to generate PDF with the default settings in the PDF Setup dialog box. Otherwise, set additional options, and then click Set.

To save a set of interlinked books as PDF:

1 Open all the books you want to convert to PDF. This ensures that links will work properly when all the books are converted to PDF.

2 In the first book file, do one of the following:

• Select File > Save As PDF. In the Save Document dialog box, click Save.

• Select File > Save Book As, and then choose PDF from the pop-up menu. Replace the filename extension with .pdf. You can also change the save location, but be sure to make the relative nesting of the converted PDF files the same as the nesting of the original book files. Then click Save.

3 Set up bookmarks and article threading.

4 Repeat the process for the other linked books.

The options in the PDF Setup dialog box are grouped into four categories: Settings, Bookmarks, Tags, and Links.

Specifying general settings

Use general settings to set such options as registration marks, page size, and color conversion.

To specify general settings:

1 In the PDF Setup dialog box, choose Settings from the pop-up menu, or click the Settings tab (Windows/UNIX).

2 Choose an option from the PDF Job Options pop-up menu for creating Adobe PDF files. The options include predefined settings plus any custom job options you created in Adobe PDF Creation Add-On (Windows), or Normalizer 8 (UNIX). For descriptions of the predefined settings, see "Job options" on page 571.

In a book, the job options saved with the first file are applied to all files in the book. To get the results you want in the exported PDF file, open the first file, choose Format > Document > PDF Setup, adjust the settings, and then click Set.

3 Type an opening page number and choose a zoom level.

4 Choose an option from the Registration Marks pop-up menu. You can choose between Western and Tombo (Japanese) crop marks.

5 Specify a default page size. (FrameMaker uses the unit of measure specified using View > Options.)

6 Specify the pages to convert to Adobe PDF. You can convert all of the pages in the file, or enter numbers representing a range of pages. You can leave the End Page text box empty to create a range from the page number you enter in the Start Page text box to the end of the file.

Note: To ensure that the exported PDF file includes bookmarks, tags, and hypertext links, you must select All for the Page Range.

7 (UNIX) By default, FrameMaker converts CMYK colors to RGB when it prints and creates PDF files. To control color conversion, do one of the following:

• To convert CMYK colors to RGB, select the option by the same name. If the color library you're using has RGB equivalents for CMYK values, those values will be used. If no equivalents are available, FrameMaker calculates the RGB values. You can also control this setting in an Acrobat Distiller PDF job options file. However, the setting in the PDF Setup dialog box takes precedence over the setting in the PDF job options file.

• To convert CMYK colors to sRGB, CalRGB, or another type of RGB, keep this option unselected and set the values in the Acrobat Distiller PDF job options file. Deselecting this option lets you override the default conversion of CMYK colors to RGB so that FrameMaker can preserve CMYK colors, which might result in better printing quality.

Note: This option is not available in FrameMaker (Windows); CMYK colors always convert to calculated RGB values in Windows.

Setting bookmarks
Use the bookmarks options to define bookmark levels, create bookmarks from paragraph tags, and set up article threading.

To set bookmarks:
1 In the PDF Setup dialog box, choose Bookmarks from the pop-up menu, or click the Bookmarks tab (Windows/UNIX).

2 Select Generate PDF Bookmarks.

3 To specify at which level bookmarks appear expanded in the exported PDF, select an option from the Bookmarks Expanded through Level pop-up menu. You can type a value, such as 2, to specify that you only want the top two levels expanded.

4 To indicate which paragraphs should be converted to PDF bookmarks, move paragraph tags between scroll lists. The paragraphs in the Include Paragraphs scroll list will have bookmarks in the PDF file. To move a tag between scroll lists, select the tag and click an arrow or double-click the tag. To move all the tags from one scroll list to the other, Shift-click an arrow. To omit bookmarks, deselect Generate PDF Bookmarks.

5 To change bookmark levels for the included paragraphs, select a paragraph tag and click a Bookmark Level arrow. To change the level of all items, Shift-click a Bookmark Level arrow. If the indent for a tag exceeds six levels, *n*> precedes the paragraph tag, where *n* is the indentation level of the paragraph tag.

6 To include paragraph tags along with the paragraph text in the bookmarks, select Include Paragraph Tags in Bookmark Text. Use this option to check the assigned levels of bookmarks in a draft of the PDF file. (Deselect this option when you print the final draft of the document.)

7 Set up article threading by doing one of the following:

• To have the reading order of each article follow the same order that the insertion point moves, select Articles and choose Thread by Column from the pop-up menu. This setting is usually the most appropriate in multi-column formats.

- To have the reading order of each article go from text frame to text frame, select Articles and choose Thread by Text Frame from the pop-up menu. This setting is usually the most appropriate in single-column formats.

- To create no article threads, deselect Articles.

To create PDF bookmarks from structured documents, see "Saving structured documents as Adobe PDF" on page 576.

Generating a tagged Adobe PDF file
FrameMaker lets you create Adobe PDF files with logical document structure and extensive metadata for repurposing content. For more information about the benefits of tagged PDF, see "About tagged Adobe PDF" on page 574.

To generate a tagged PDF:
1 In the PDF Setup dialog box, choose Tags from the pop-up menu, or click the Tags tab (Windows/UNIX).

2 Select Generate Tagged PDF. For details, see "Defining a tagged Adobe PDF file" on page 575.

Adding links from other documents
When you save a document as a PDF file, you can use *named destinations* to identify paragraphs that are referenced by cross-references and hypertext links. If you intend to add links to the document from other documents after you create the PDF files, select this option. Note that selecting this option increases the size of the PDF file.

If this setting is deselected and you add a link or cross-reference from one FrameMaker document to another, you should resave both documents as PDF.

Note: If your document was created with a version of FrameMaker earlier than 6.0, you need to optimize the PDF file size to take advantage of this option. (See "Optimizing files created in previous FrameMaker versions" on page 572.)

To add links from other documents after creating a PDF file:
1 In the PDF Setup dialog box, choose Links from the pop-up menu, or click the Links tab (Windows/UNIX).

2 Select Create Named Destinations for All Paragraphs.

Job options
FrameMaker uses the Adobe PDF Creation Add-On job options on Windows and Normalizer 8 on the Solaris platform.

Adobe PDF Creation Add-On job options:

- High Quality Print
- PDFA 1b 2005 CMYK
- PDFA1b 2005 RGB
- Press Quality
- Smallest File Size
- Standard

Normalizer 8 job options:

- eBook
- High_Quality
- PDFX1a

- PDFX3

- Press

- Press_Quality

- Print

- Screen

- Smallest_File_Size

- Standard

Note: If you open a FrameMaker 7.0 document with the old Distiller job options and choose File > Save As PDF, you might receive an alert that the specified PDF job options (Distiller job options) file don't exist.

Reducing PDF file size

You can control PDF file size by using a variety of methods:

- You can deselect the Create Named Destinations for All Paragraphs option on the Links page of the PDF Setup dialog box. (See "Adding links from other documents" on page 571.)

- Embedding fonts, especially Asian fonts, increases the size of a PDF file. To control font embedding, you can create or modify a job options file using the Adobe PDF Creation Add-On (Windows), or Normalizer 8 (Solaris), and then select it in the Settings page of the PDF Setup dialog box. For more information, see "Job options" on page 571.

- If you don't intend to repurpose the PDF file, you can deselect the Generate Tagged PDF option in the Tags page of the PDF Setup dialog box. This option is on by default.

- You can also reduce file size by selecting Optimize when saving a PDF file.

Optimizing files created in previous FrameMaker versions

FrameMaker allows you to create named destinations only for paragraphs that are referenced in hypertext links or cross-references, thereby reducing file size. However, documents created in versions of FrameMaker earlier than 6.0 must undergo a special conversion to take advantage of this method of marking.

FrameMaker includes two optimization commands: Options and Optimize File. The Options command lets you change the default optimization options, which remain in effect until you change them, even if you exit and restart FrameMaker. The Optimize File command uses the settings specified in the Optimization Options dialog box to prepare your documents for reducing PDF file size.

To set optimization options:

1 Choose Format > Document > Optimize PDF Size > Options.

2 Do the following:

- Specify whether you want to optimize the size of all linked documents (documents that are targeted by hypertext links or cross-references of the specified document), or the specified document only.

- If a document has been optimized previously, select Force Optimization to reoptimize. If this option is selected, also select Clear Existing Optimization Info to remove previous optimization changes.

- To display a prompt that asks if you want to open linked files, select Prompt When Opening.

- To display a prompt that asks if you want to save a linked document that has been opened for optimization, select Prompt When Saving. If selected, specify whether you want a prompt to appear for each file you save, or only for previously optimized files.

- Specify whether you want to overwrite existing files (recommended), or to write files to a directory you specify (for testing) when you click Browse.

- To stop optimization in case of an error, select Cancel On Error.

3 Click Set.

To optimize documents for PDF file size:

1 Choose Format > Document > Optimize PDF Size > Optimize File.

2 Select the document or book you want to optimize and click Select.

Specifying PDF-conversion settings without saving as PDF

You can specify PDF-conversion settings for a document without actually saving it as a PDF file. You may want to do this in a document so you can then import those settings to other documents, prior to conversion.

To specify PDF-conversion settings without saving as PDF:

1 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect, or select the book icon if you want the Document Information changes to affect the book.

2 Choose Format > Document > PDF Setup, specify the settings, and then click Set.

Importing PDF-conversion settings

You can import all the settings in the PDF Setup dialog box from one document to another.

To import PDF-conversion settings:

❖ In a document or book with selected files, choose File > Import > Formats and select Document Properties and Paragraph Formats. For details on importing settings from one document to another, see "Importing and updating formats" on page 408.

Enabling and disabling SWF file embedding in PDFs

By default, FrameMaker is configured to embed SWF files in PDFs. If you insert an SWF file in a document and generate a PDF, the SWF file is embedded as a bitmap image in the PDF. You can open the PDF, locate the image, and then click the BMP to play the SWF file. However, if you select the Don't Embed Adobe Flash File In PDF option, the PDF will contain a BMP image, which is inactive.

To prevent embedding of SWF files in a PDF:

1 Select File > Preferences > General.

The Preferences dialog box appears.

2 Select the Don't Embed Adobe Flash File In PDF option.

3 Click Set.

Note: To generate a PDF in which SWF files are played when the PDF is opened, ensure that the Don't Embed Adobe Flash File In PDF option is not selected.

Enabling and disabling 3D object embedding in a PDF

By default, FrameMaker is configured to embed 3D objects in PDFs. If you insert a 3D file in a document and generate a PDF, the 3D file is embedded as a bitmap image in the PDF. You can open the PDF, locate the image, and then click the BMP to view the 3D file. However, if you select the Don't Embed 3D Model File In PDF option, the PDF will contain a BMP image, which is inactive.

To prevent embedding of 3D objects in a PDF:

1 Select File > Preferences > General.

The Preferences dialog box appears.

2 Select the Don't Embed 3D Model File In PDF option.

3 Click Set.

Note: To generate a PDF with active 3D objects, ensure that the Don't Embed 3D Model File In PDF option is not selected.

About tagged Adobe PDF

Tagged PDF lets you create Adobe PDF files from FrameMaker with logical document structure and extensive metadata for repurposing content. *Logical structure* refers to the organization of the document, such as the title page, chapters, sections, and subsections. The logical structure can indicate the precise reading order and improve navigation, particularly for longer, more complex documents.

For example, tagged Adobe PDF:

• Ensures that information is in the correct reading order on a page.

• Includes paragraph attributes needed to correctly reflow your documents' contents into different-sized devices, such as eBook reading devices.

• Ensures the reliable translation of text into Unicode, which is a standardized approach to describing text characters regardless of font. This approach recognizes ligatures and hyphens, so that all characters and words can be read correctly by a screen reader for Windows.

• Recognizes alternative text descriptions for graphics in anchored frames.

• Enables the document to be exported more reliably to Rich Text Format (RTF) and XML from Acrobat 7.0 for reuse in other documents.

Tagged Adobe PDF files include the author's content, including pages, articles, paragraphs, tables, and graphics in anchored frames. Tagged PDF files do not include the following information found in standard PDF files:

• Comments, such as online notes, graphic markups, and text markups.

• Pagination artifacts, including all content that comes from master pages (such as page numbers and running headers), and any graphic objects outside anchored frames.

• Layout and typographic artifacts, such as colored bars between columns of text, horizontal lines separating footnotes from text, and table borders.

• Printing artifacts, such as crop marks, registration marks, and page information printed outside of the crop marks.

Comments and artifacts aren't referenced by the logical structure tree, because they're not considered useful when repurposing the document's content.

For more information on the advantages of using tagged PDF, see the Adobe Web site.

Defining a tagged Adobe PDF file

The Generate Tagged PDF option in the PDF Setup dialog box provides improved access to content in PDF files. For more information, see "About tagged Adobe PDF" on page 574.

Important: The Generate Tagged PDF option works only if you're using Acrobat Distiller 5.05 or later (Windows), or the internal distillation process (UNIX), which are part of your FrameMaker installation.

To define a tagged PDF file:

1 Open the PDF Setup dialog box as explained in "Saving documents and books as Adobe PDF" on page 568.

2 Choose Tags from the pop-up menu, or click the Tags tab (Windows/UNIX).

3 Make sure that Generate Tagged PDF is selected.

4 Set up the paragraph structure level by doing the following:

• To change structure levels for the included paragraphs, select a paragraph tag and click a Logical Structure Level arrow. To change the level of all items by one level, Shift-click a Logical Structure Level arrow. If the indent for a tag exceeds six levels, *n>* precedes the paragraph tag, where *n* is the indentation level of the paragraph tag.

• To indicate which paragraphs should be included in the PDF structure, move paragraph tags between scroll lists. The paragraphs in the Include Paragraphs scroll list will be used to define the structural relationship between FrameMaker's paragraph tags in the PDF file. To move a tag between scroll lists, select the tag and click an arrow or double-click the tag. To move all the tags from one scroll list to the other, Shift-click an arrow.

5 Click Set.

Troubleshooting and tips on PDF conversion

Follow these guidelines to ensure a smooth conversion to PDF:

• For the best display of bitmap graphics, import them into the FrameMaker document at a dpi value that divides evenly into the resolution of the intended display device.

• To improve the display performance of PDF files, avoid using complex master pages that contain multiple complex graphics. You can also improve graphics display and reduce file size by selecting Optimize when saving a PDF file in Acrobat. (See Acrobat online Help.)

• If you're converting a book that has a table of contents or an index, be sure to include the TOC or index file in the book file before you save as PDF.

• If performance is slow when viewing a large document converted to PDF, reopen the FrameMaker document or book and deselect Articles. Then convert to PDF again.

• If you're printing a book as separate files, all PDF files will be created in the same folder, regardless of where the original documents are. For this reason, be sure that all the original documents in the separate folders have unique names before saving as PDF. Otherwise, some files will overwrite others.

- If the PDF file is too large, see "Reducing PDF file size" on page 572.

- If you're working with documents created with a version of FrameMaker earlier than 6.0, make sure you optimize the document to reduce file size. See "Optimizing files created in previous FrameMaker versions" on page 572.

- Make sure you don't remove the Adobe PDF Creation Add-On (Windows), or Normalizer 8 (Solaris) printer instance, as they are used to create PDF files from FrameMaker documents.

- (Windows) Set the output format of the PostScript driver to Optimize for Portability.

- (Windows) Do not create hypertext links to filenames that use accented characters in their names. Such filenames may change when you save as PDF, causing the hypertext links to fail.

- To include graphic content in tagged Adobe PDF files, put graphic objects in anchored frames. Add alternate text descriptions for the graphics. (See "Preparing anchored frames for tagged PDF" on page 354.)

Saving structured documents as Adobe PDF

The procedures for saving structured documents as Adobe PDF are the same as for unstructured documents, with the exception of setting bookmarks. In structured documents, you create bookmarks from element tags, rather than from paragraph tags.

Important: Tagged PDF is based on paragraph format tags. Each tag is mapped to an element in the PDF structure. A FrameMaker structured document won't retain the structure when exported to Tagged PDF. Note that the paragraph levels in the Tags panel of the PDF Setup dialog determine the relative structure level of the PDF file.

To set bookmarks in structured documents:

1 Open the document or book you want to save as PDF.

2 If there are references to FrameMaker documents in other books, also open those book files. This ensures that links will work properly when all the books are converted to PDF.

3 In the original document or book file, choose File > Save As (or File > Save Book As), and choose PDF from the pop-up menu. Replace the filename extension with .pdf. You can also change the location and the filename. Then click Save.

4 In the PDF Setup dialog box, choose Bookmarks from the pop-up menu, or click the Bookmarks tab (Windows).

5 Select Generate PDF Bookmarks.

6 To specify at which level bookmarks appear expanded in the exported PDF, select an option from the Bookmarks Expanded through Level pop-up menu. You can type a value, such as 2, to specify that you only want the top two levels expanded.

7 Choose Elements from the Bookmark Source pop-up menu.

8 Indicate which elements to convert to PDF bookmarks by moving element tags to the Include scroll list. To move an element tag between scroll lists, select the tag and click an arrow, or double-click the tag. To move all tags from one scroll list to the other, Shift-click an arrow. To omit bookmarks, deselect Generate PDF Bookmarks.

Some element tags may have *context labels* that provide information about the element's location in the structure. For example, if Section elements can be nested within other Section elements, context labels might identify whether the elements are first-, second-, or third-level sections.
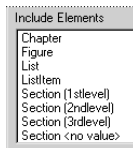
Context labels

If an element uses context labels, a <no value> entry also appears in the scroll list for occurrences not described by the labels. In the example above, Section (<no value>) represents Section elements that are at a fourth level or lower in the document.

9 To include element tags along with text in the bookmarks, select Include Element Tags in Bookmark Text. Use this option to check the levels of bookmarks in a draft of the PDF file. Deselect this option when you print the final draft.

10 Click Set.

To set other PDF options, see "Saving documents and books as Adobe PDF" on page 568

Defining PDF job options

FrameMaker uses the Adobe PDF Creation Add-On job options on Windows and Normalizer 8 job options on the Solaris platform.

Adobe PDF Creation Add-On job options:

• High Quality Print

• PDFA 1b 2005 CMYK

• PDFA1b 2005 RGB

• Press Quality

• Smallest File Size

• Standard

Normalizer 8 job options:

• eBook

• High_Quality

• PDFX1a

• PDFX3

• Press

• Press_Quality

• Print

- Screen

- Smallest_File_Size

- Standard

Using the View Generated PDF in Acrobat option

The option, View Generated PDF in Acrobat in the PDF Setup dialog box, lets you specify whether to automatically start Acrobat and open the generated PDF file. (The PDF Setup dialog box opens when you click PDF Setup in the Print Document dialog box.)
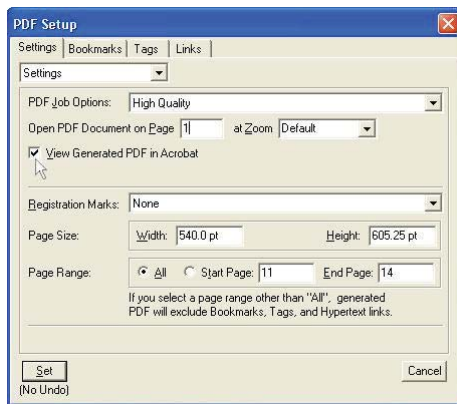
Selecting the View Generated PDF in Acrobat option

Using the Convert CMYK Colors to RGB option (UNIX)

By default, FrameMaker converts CMYK colors to RGB when it prints and creates PDF files. You can change this setting in the PDF Setup dialog box. Deselecting this option lets you override the default conversion of CMYK colors to RGB so that FrameMaker can preserve CMYK colors, which might result in better printing quality.

About the Adobe PDF printer (Windows)

If you have the Adobe PDF Creation Add-On (Windows), or Normalizer 8 (Solaris) installed, you can still convert documents to PDF by creating a PostScript file and then distilling that file yourself. The name of the printer you use to create PostScript files is Adobe PDF.

Chapter 19: Processing XML

Migration from unstructured FrameMaker to XML

Implementing structured FrameMaker is both an opportunity and a challenge. You can combine the powerful features of Adobe® FrameMaker® 8 with structured authoring to create a sophisticated workflow. Within this new authoring environment, you can automate formatting. You can also create, edit, and publish XML-based content, and enforce required document structures.

The challenge is that building a structured workflow requires you to master new tools (such as the structure features in FrameMaker), new concepts (structured authoring), and new technology (XML, structure definitions, and perhaps Extensible Stylesheet Language (XSL) transformation). If you have no immediate need for XML, you can implement structure in FrameMaker without providing support for XML import or export. This approach has a smaller learning curve.

It is assumed that you are already working in unstructured (paragraph-based) FrameMaker and are considering a move to structured FrameMaker.

What is XML?
Extensible Markup Language (XML) is a vendor-neutral, open format managed by the World Wide Web Consortium (W3C). Like HTML, XML consists of tags enclosed in angle brackets (such as *<example>*), is relatively easy to learn, and is stored in a text file. Aside from their superficial similarities, HTML and XML are used very differently.

HTML coding is often done on the fly, but XML requires a rigorous approach. A fundamental rule for an XML file is that it must be *well-formed,* which means that the XML document follows XML syntax rules. For example, all tags must be opened and closed properly:

```
<p>This version is correct.</p><p>Each paragraph is opened and closed.</p>
```

```
<p>This is not allowed.<p>The first paragraph must be closed before the second paragraph
starts.
```

Well-formed documents are predictable, which makes it easier for software to process the XML files automatically.

Note: It's possible to create well-formed HTML, but it's not required in most environments. Web browsers can usually render HTML that is not well-formed. XML must always be well-formed.

XML lets you define tags, thus creating your own markup language to describe document content. For example, in a proposal document, you could create tags such as ProjectDescription and Costs.

The XML file is human-readable, but it can be tedious to identify where each tag begins and ends. In the following example, the tags are bolded to make them easier to find.

```
<?xml version="1.0" encoding="utf-8"?>

<Proposal>

    <Title>Proposal for Widget Production</Title>

    <ExecSummary>

        <Title>Executive Summary</Title>

        <Para>Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Nunc
ultrices.</Para>

    </ExecSummary>

    <ProjectDescription>

        <Title>Project Description</Title>

        <Para>Duis vel libero. Integer venenatis nibh non magna. Morbi id leo.</Para>

    </ProjectDescription>. . .

</Proposal>
```

Structured FrameMaker gives you a tree view of the document that arranges the elements hierarchically. It's easy to see the relationships among the tags.
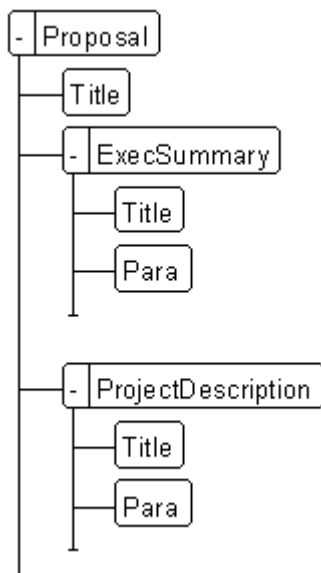
FrameMaker renders the XML tags in a tree view

Capturing information hierarchy

Instead of style-based, paragraph-oriented word processing and desktop publishing, XML provides a foundation for *structured authoring;* content is described by elements that are organized in a hierarchical tree. In word-processing environments (such as unstructured FrameMaker), the relationship among the various document components is apparent through formatting on the page. The document file, however, does not capture these relationships because a word processor document is made up of a string of paragraphs. The relationship between a Body paragraph tag and the preceding Heading1—the Body tag is logically subordinate to the Heading1—is not represented in an unstructured FrameMaker file. Structured authoring, however, does capture the hierarchical relationships among the document components.

The following figure shows unstructured and structured representations of the same document. The unstructured paragraph tags are in a flat list; the structured elements are grouped to show relationships. The Graphic and Caption element, for example, share a common Figure parent. Step elements are subordinate to the Procedure element.
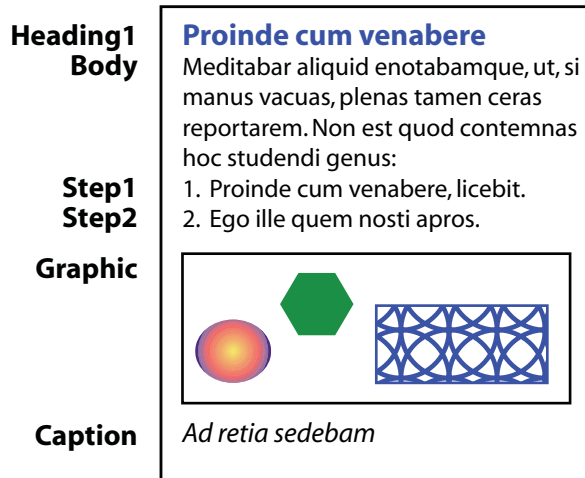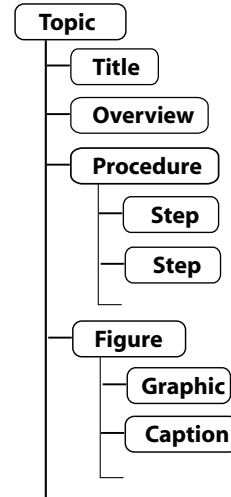
Word processing versus structured authoring

Embedding metadata in XML

Elements in XML can have attributes, which enables you to store additional information about an element. For example, you could provide an attribute that specifies the classification level for a topic:

```
<topic classification="secret">Secret information here</topic>
```

Often, attributes are used for basic document metadata, such as the name of the author and the last revision date of a particular document.
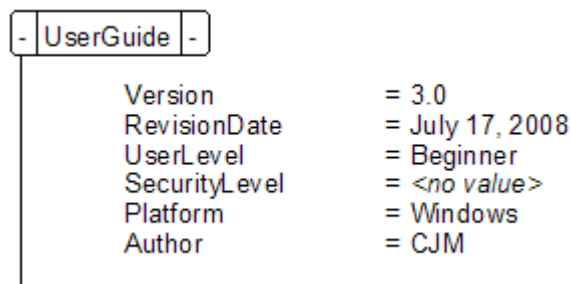
Embedding document metadata

Why XML?

Creating an XML-based workflow is a significant effort, but it opens up some exciting new opportunities, such as improving the consistency and organization of your files, reusing content, and reducing publishing costs. The following sections provide some details.

Enforcing consistent organization

In unstructured FrameMaker, a template specifies which formatting components are available in your files. Along with the template, you provide usage rules. For example, you might specify that a simple proposal should have the following content sequence:

1 Proposal title

2 Executive summary

3 Project description

4 Schedule

5 Cost

You cannot enforce this required sequence in an unstructured template. Instead, you create a style guide, which authors are supposed to read and comply with. To verify that a particular document follows the rules in the style guide, a human editor must read the proposal and verify that each section is in the proper order.

XML technology lets you describe the required organization of the content with structure rules. A file that follows these rules is *valid.* You can use software to validate your file and verify that it conforms to the rules you've established, so that instead of a human reading the file to check its organization, the software can do the validation work.

Structured and unstructured workflow to create a document

In addition to built-in validation features, structured FrameMaker also provides *guided editing,* which supports authors by displaying only the allowed elements as they are working. In other words, you can now enforce your document organization through the template (rather than by human review).

For a proposal document, the structure rule would read as follows:

```
Title,ExecSummary,ProjectDescription,Cost,Schedule
```

This rule indicates that a syntax reference section *must* contain one Title, followed by one ExecSummary, and so on. You can then specify further structure inside each element. For example, you can require that the ExecSummary element contains a title and a paragraph:

```
Title,Para
```

A document that omits one of these items, or that uses a different order for the elements, is not allowed. FrameMaker's structure view indicates in real-time where required content is missing, as shown in the following figure:
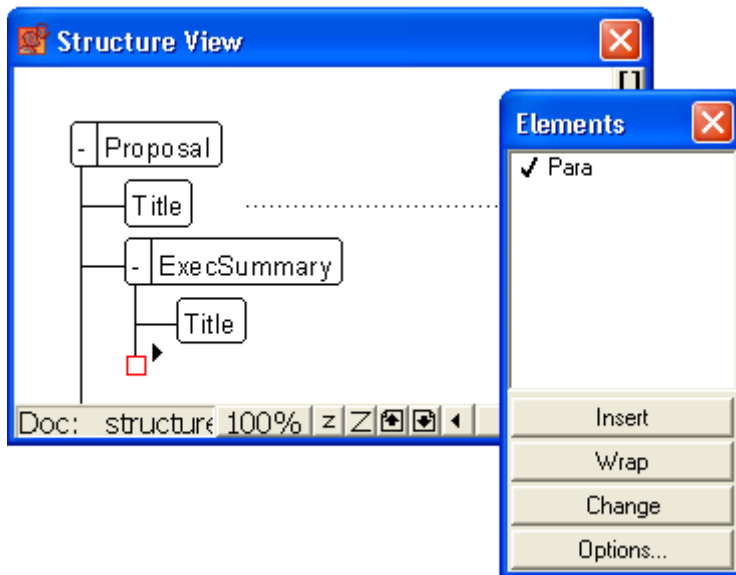
FrameMaker's structure view indicates that a required element is missing with a small red square. The Elements catalog indicates that a Para element is allowed here.

Automating and enforcing formatting

In structured FrameMaker, authors do not work with formatting components such as paragraph and character tags. Instead, they insert elements and element content into their documents. Document formatting is applied automatically based on formatting information that is embedded in the structured template. The structured template is made up of two components: formatting information and structure definitions. The structure definitions are stored in an element definition document (EDD), which in turn references formatting information.
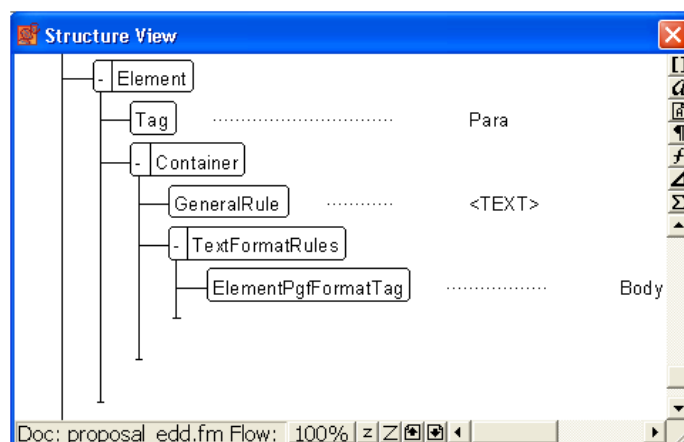
Formatting specifications in structured FrameMaker

Element formatting is context-sensitive; that is, a single element can appear with different formatting in different structured positions. A single ListItem element, for example, can replace half a dozen (or more) paragraph tags. The following figure shows how formatting of the ListItem element changes based on its position and the value of the parent List element's Type attribute.

Note: Formatting in this example is controlled both by the nesting level of the ListItem and by the value of the Type attribute on the container element List.
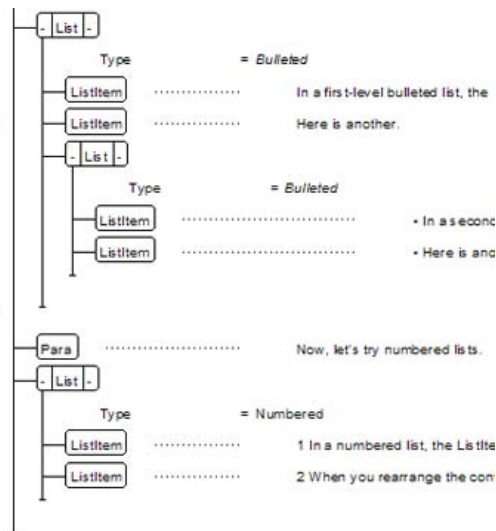
ListItem formatting in different contexts

As you position information in the structure, the context-sensitive formatting is updated immediately based on the element position. This dynamic formatting is extremely powerful when combined with FrameMaker's WYSIWYG interface.

Using metadata for versioning

At the document level, metadata provides keywords and other descriptions of a document. You can also use metadata to identify information that is unique for a particular version of a deliverable. This technique lets you use a single set of source documents to deliver highly customized information for each version. Consider, for example, the problem of customized software development. If your company customizes its products for each client, you need a way to identify what information belongs to each client. Using metadata, you can specify which clients each topic applies to. When you are ready to deliver the information, you filter based on the metadata to create the appropriate deliverables.

Source files

```
<topic client="A">
...
</topic>
```

```
<topic client="A,B">
...
</topic>
```

```
<topic client="B">
...
</topic>
```

```
<topic client="A,C">
...
</topic>
```
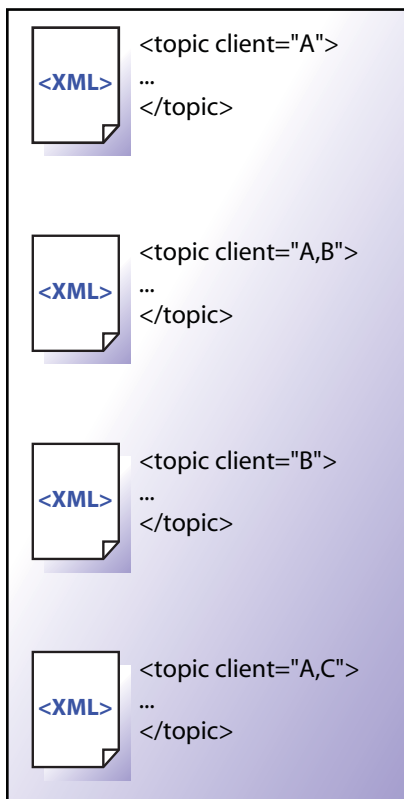
Client A

```
<topic client="A">
...
</topic>
```

```
<topic client="A,B">
...
</topic>
```

```
<topic client="A,C">
...
</topic>
```
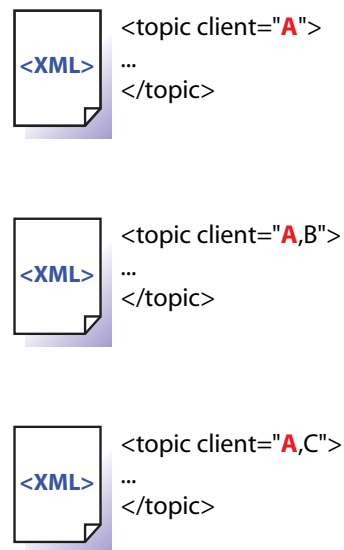
Filtering to produce client-specific deliverables

Publishing to multiple output formats

Many FrameMaker users are already familiar with single-sourcing workflows. In a structured FrameMaker environment, you can take advantage of FrameMaker's powerful print and PDF capabilities, and then generate XML to create other outputs, such as HTML and online help formats.
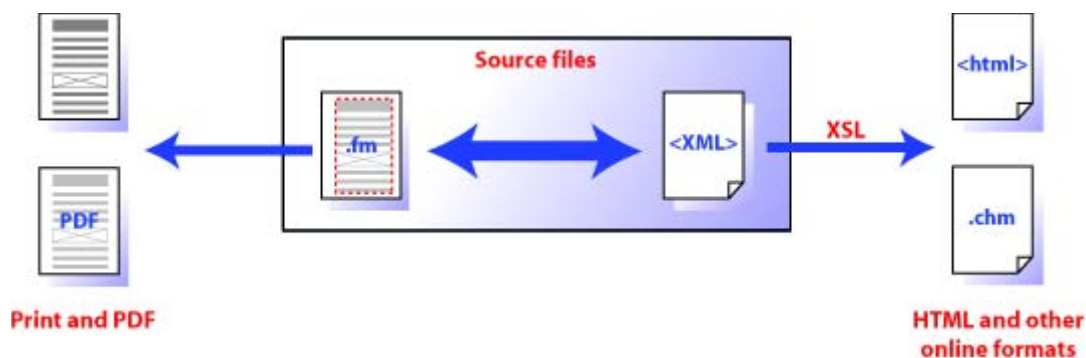
Structured FrameMaker and XML in a multichannel workflow

You can also continue to use single-sourcing workflows that are based on unstructured conversion tools.

Supporting content reuse and exchange with XML

XML lets you move information from one authoring tool to another without losing information. You can develop information in FrameMaker, save it out to XML, and then open the XML files in another tool. Perhaps a technical writing group (which uses FrameMaker) needs to share information with a training group (which uses an XML-based learning management system). You can use XML to exchange content between two otherwise incompatible applications.

Reusing content between FrameMaker and a learning management system (LMS)

Reducing localization cost

When content is localized, the desktop publishing component is a significant part of the cost. Exact numbers will vary for specific projects, but as a general rule, about half the total localization cost is for publishing and production. A publishing workflow built on XML and structured authoring lets you automate much of the publishing effort, so you can greatly reduce the ongoing costs associated with localization.

Simplifying database publishing

Instead of connecting directly into a database, you can use XML as an intermediate format. From the database, you generate an XML file that contains the information you want to publish. On the FrameMaker side, you set up an import application that provides formatting information for the XML elements. You then open the XML file in FrameMaker, and the database information is formatted automatically.

Database publishing with FrameMaker and XML

For more information about database publishing, refer to the "Adobe FrameMaker 7.1 Database Publishing" at www.adobe.com/go/documentation.

Note: To enable you to build automated, server-based solutions, Adobe offers the FrameMaker Server license. For more information, visit the FrameMaker Server page, www.adobe.com/products/fmserver/main.html.

Complying with required document structures

The ability to enforce structure based on explicit rules improves consistency for any document. In regulated industries, the ability to verify that the required structures are being followed is critical. If your organization is required to comply with specific structures due to government or industry standards, structured authoring can help you ensure that your documents conform.

Why structured FrameMaker?

Structured FrameMaker produces a user-friendly structured authoring environment that lets you create XML. Authors making the transition from unstructured FrameMaker will find many familiar publishing features. Both versions of FrameMaker excel in creating, editing, and producing complex content, so authors can easily create PDF files with bookmarks and hyperlinks, cross-references, tables of contents, and indexes. Moving to structured FrameMaker gives you the best of both worlds—you can take full advantage of XML without giving up the powerful authoring environment you appreciate in unstructured FrameMaker.

Migrating from unstructured FrameMaker to structured FrameMaker

The transition from unstructured, paragraph-based authoring to structured, element-based authoring can be challenging. Authors must shift from the desktop publishing model to working with a tree view of a document. Moving authors who are familiar with unstructured FrameMaker into structured FrameMaker reduces the learning curve. Although the authoring experience changes, knowledge from unstructured FrameMaker is helpful when working in the structured environment. For example, authors still insert cross-references with the Cross-Reference dialog box, but instead of choosing paragraph tags and paragraph instances, they choose elements and element instances.
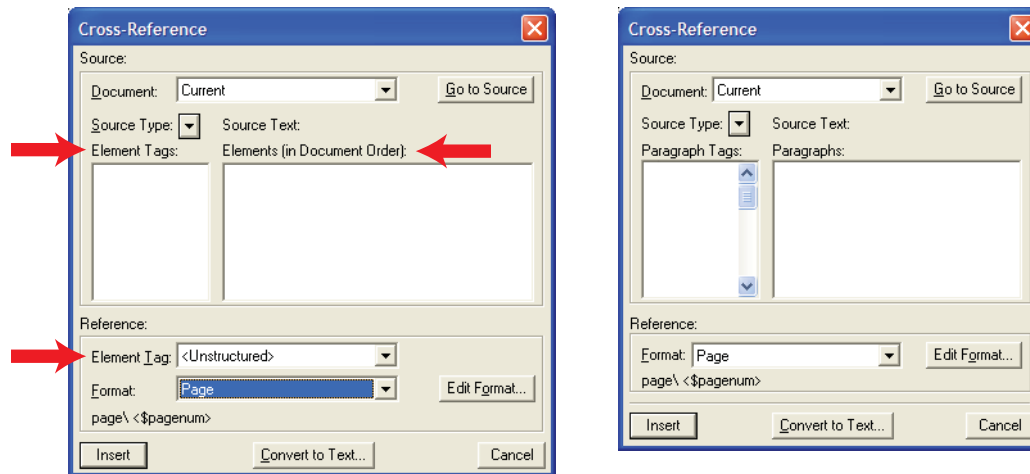
| **Structured FrameMaker** | **Unstructured FrameMaker** |

Knowledge of cross-references from unstructured FrameMaker is helpful in structured FrameMaker

If you are working in unstructured FrameMaker, it's likely that your documents follow a template with minimal formatting overrides. This document consistency makes it easier to convert to structured documents. If, however, authors create content with no accountability for consistent, repeatable formatting, then document conversion will be a challenge. Most authors in FrameMaker-based environments are accustomed to following template rules, and that discipline makes the transition to structured authoring easier.

Authoring visually

Structured FrameMaker gives you several different ways to look at your document. The document window is almost identical to the document window in unstructured FrameMaker. Inside the document window, you have the option to display element tags for a structured document.
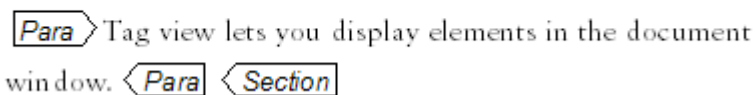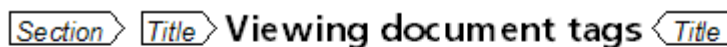
Viewing element boundaries as tags

Creating excellent print and PDF output

Structured FrameMaker provides everything you need to create high-quality print and PDF output. Many other XML authoring tools do not include a high-quality print solution, and designing a layout for print and PDF is much more complex than publishing to the web. FrameMaker supports printing for structured documents and also lets you create PDF files with bookmarks automatically built from a document's element or paragraph tagging.

Relatively low licensing cost

FrameMaker 8 gives you everything you need to build a structured authoring environment. You can build and configure the environment before you deploy it to other authors. This gives you the ability to create a structured environment without making a huge commitment to new software. You can scale the implementation by rolling out FrameMaker and your structure configuration files to additional authors as needed.

Relatively low implementation effort

Implementing any structured authoring environment requires a significant effort. Reusing an existing formatting template reduces the implementation effort required. FrameMaker also provides tools to help you convert your unstructured documents into structured documents.

XML implementation options

You can combine structured FrameMaker and XML in several different ways. FrameMaker does not lock you into a single workflow. Your options include the following:

- *FrameMaker authoring with XML support.* With this option, you use FrameMaker as your main authoring tool. As needed, you save your files from FrameMaker out to XML, and then use that XML as needed. All content changes are made in FrameMaker; when you need new XML files, you save out to XML again.

- *FrameMaker authoring with XML source files.* With this option, you use FrameMaker as your main authoring tool. Your source files are XML. You open the XML files in FrameMaker, make changes, and save. When you save, your XML source file is updated.

- *FrameMaker and XML authoring.* With this option, you produce content in FrameMaker and in other XML tools. When you are ready to publish to print, you combine the XML created outside FrameMaker with FrameMaker-based content, and then produce your final print or PDF deliverable. This workflow is useful in an environment with many occasional content contributors. The content contributors may not need a powerful publishing environment. Therefore, they may choose to produce their content in a low-end XML editor, and then deliver the XML files to the FrameMaker-based publishing team. This workflow is also relevant if you have XML generated from a database or another line-of-business application.

- *XML authoring with FrameMaker publishing.* With this option, you work mainly in another XML authoring tool, and XML content is produced by a database system or other line-of-business application, or you are receiving XML from outside your organization. When content is finished, you produce print and PDF by bringing the XML into FrameMaker. You might build a server-based application with FrameMaker Server to automate this process.

Components of a structured authoring environment

In unstructured FrameMaker, setting up an authoring environment requires only a template file. When you define the template and distribute it, authors are ready to begin work. In structured FrameMaker, you must provide some additional files to authors.

Authoring only in structured FrameMaker

You can implement structure in FrameMaker without providing support for XML import or export. If you have no immediate need for XML, this approach lets you experiment with structured authoring.

To establish a basic structured authoring environment in FrameMaker, you must create an element definition document (EDD) that specifies the elements in your structure. Additionally, you need to link the element definitions with formatting information. There are three ways to link elements in the EDD to formatting:

- *Formatting template.* You can assign formatting based on the various tags (paragraph tags, character tags, and so on) in a template. If you already have a formatting template, you can reuse information in that template.

- *Format change lists.* You can create named formatting definitions in the EDD. The format change lists lets you provide partial formatting specifications and inherit the rest from a few base paragraph tags. You can reuse format change lists for related elements.

- *Embedded formatting.* You can specify formatting by writing the formatting into each element definition.
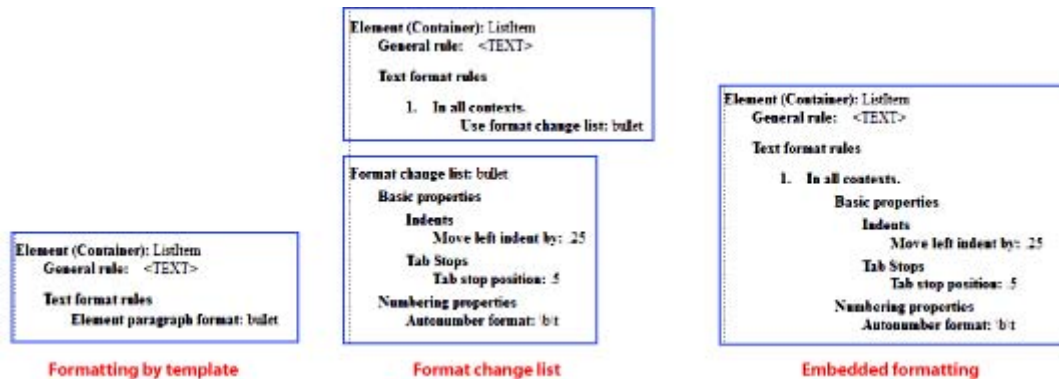
Comparing three formatting options in the EDD

If you choose to use format change lists or embedded formatting, you will still need a basic formatting template that defines your master pages.

After you create the EDD and the formatting, you combine the two components to create a single structured template. To create the structured template, you open the formatting template and import element definitions (File > Import > Element Definitions) from the EDD. The resulting file is your structured template. You distribute this file to document authors. Remember to keep a separate copy of the EDD so that you can make updates.

Structured authoring and XML

To provide support for XML import and export, you need the EDD, structured template, and a few additional files.

- *XML structure definitions.* A document type definition (DTD) or Schema file provides structure rules for XML that match your FrameMaker element definitions. Unlike the EDD, DTDs and Schema files do not provide formatting information.

- *Read/write rules.* The read/write rules control translation from FrameMaker structure to XML and back. Specifically, read/write rules help manage table translation and other complex formatting.

- *Structured application.* The structured application lists all of the component files in your structure implementation and provides configuration information. For example, you can use the structured application to specify whether and how to export conditional text tagging.
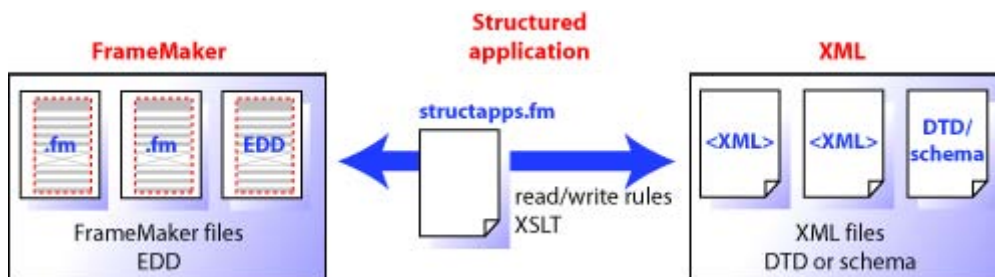
Components of a structured authoring environment

Extras

If the requirements for your authoring environment go beyond what's available with a basic structured application, FrameMaker offers several additional ways to customize XML processing. You can use any or all of the following:

- *XSL pre- and post-processing.* In addition to processing content with read/write rules, you can supply XSL transformations that process your XML files during import or export. For example, you can rearrange the order of elements in your XML files during import with an XSL transformation.

- *FrameMaker API client.* The FrameMaker Developer's Kit (FDK, available at partners.adobe.com/public/developer/framemaker/devcenter.html) allows you to customize and extend FrameMaker's functionality. For example, you could use the FDK to change how index markers are processed.

- *Third-party plug-ins.* Numerous plug-ins are available that extend FrameMaker's functionality.

Getting started with structure

We recommend that you start by building a small structured application to familiarize yourself with all the components you need. This section describes an application for a simple proposal.

Content analysis

Before building the proposal template, analyze existing proposals to identify their components.

Reviewing existing proposals

Based on this analysis, you create a content map. The proposal example results in the following sequence:

1 Title

2 Executive summary

- Title

- One paragraph

3 Project description

- Title

- One or more paragraphs

4 Cost

- Title

- One or more paragraphs

5 Schedule

- Title

- One or more paragraphs

Note: You could probably build the EDD for this simple example without formal content analysis. For larger projects, though, content analysis is critical.

Choosing an EDD strategy

There are several ways to begin building your EDD. You can:

- Create the entire EDD yourself.

- Import a DTD or Schema to create an EDD that contains structure definitions.

- Use a conversion rules table to structure an existing sample document and create a first draft of the EDD that contains basic element definitions and formatting that matches your unstructured template.

- Modify an existing EDD—either one of the samples supplied with FrameMaker or an EDD from another source.

This section describes how to create a new EDD so that you can see how the process works.

Building the proposal EDD

Based on the content analysis, you can now create the proposal EDD.

To build the EDD:

1 Make sure you are in structured FrameMaker. To switch from unstructured to structured FrameMaker, select File > Preferences > General. In the Product Interface drop-down list, select Structured FrameMaker. Close and restart FrameMaker.

2 Select StructureTools > New EDD to create a new EDD file. FrameMaker inserts the first few default elements in the EDD for you.

Note: The EDD is itself a structured FrameMaker document. You use the same guided editing environment to create the EDD that you use to edit other structured documents.

3 Click the Structure View button to display the Structure View window. (The Structure View button is found in the top right edge of your document window. Refer to the following figure.)
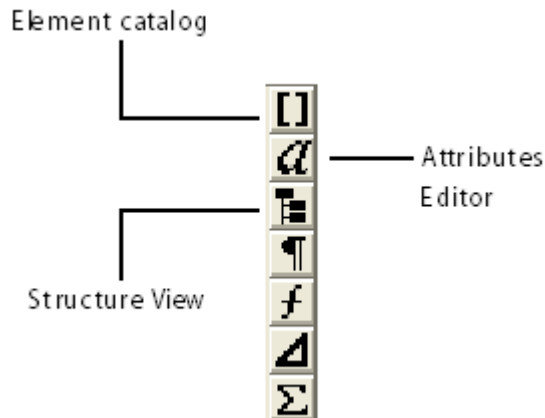
Structure View and other buttons
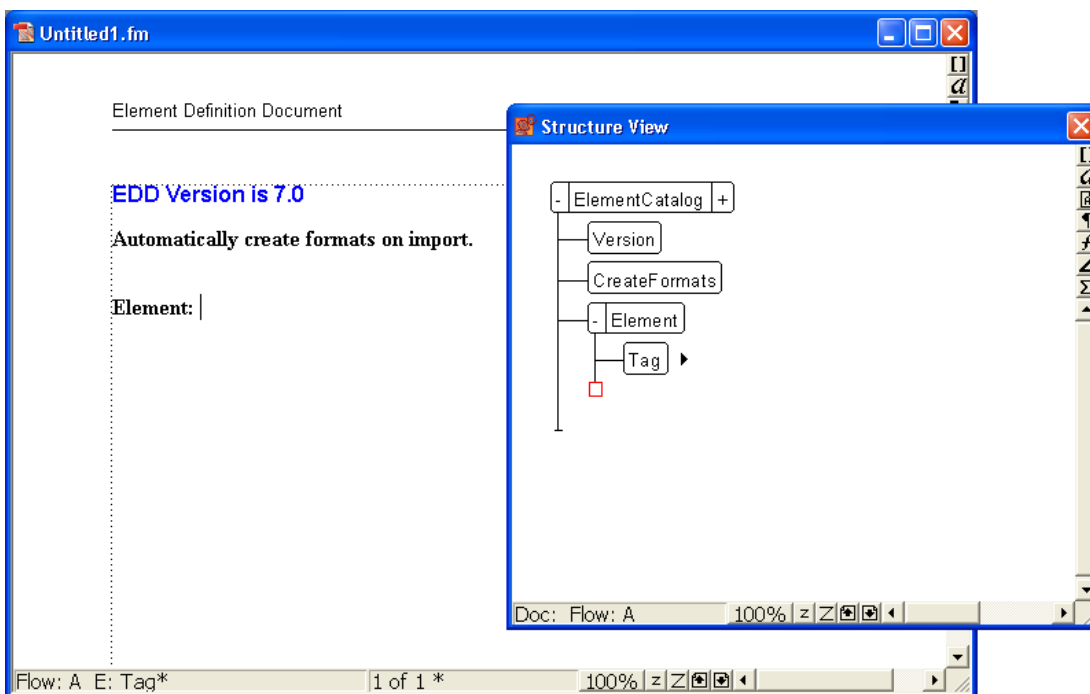
Getting started with an EDD

4 Create the top-level Proposal element. Position your cursor to the right of the Tag bubble in the Structure View, and type in `Proposal`. As you type, the letters appear in both the Structure View and the document window.

5 Click the Elements Catalog button (found in the top right edge of the document window and of the Structure View) to display the Elements catalog.
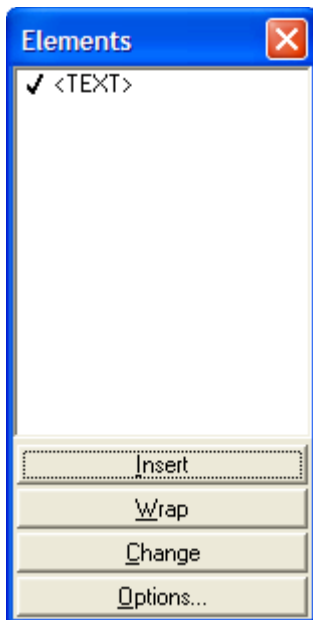
Elements catalog

6 In the Structure View, click to the right of the red box (which indicates that additional information is required). Notice that the contents of the Elements catalog change because of the new cursor location. In the Elements catalog, select Container and click Insert. The Container element and a child GeneralRule element are inserted (as shown in the following figure).
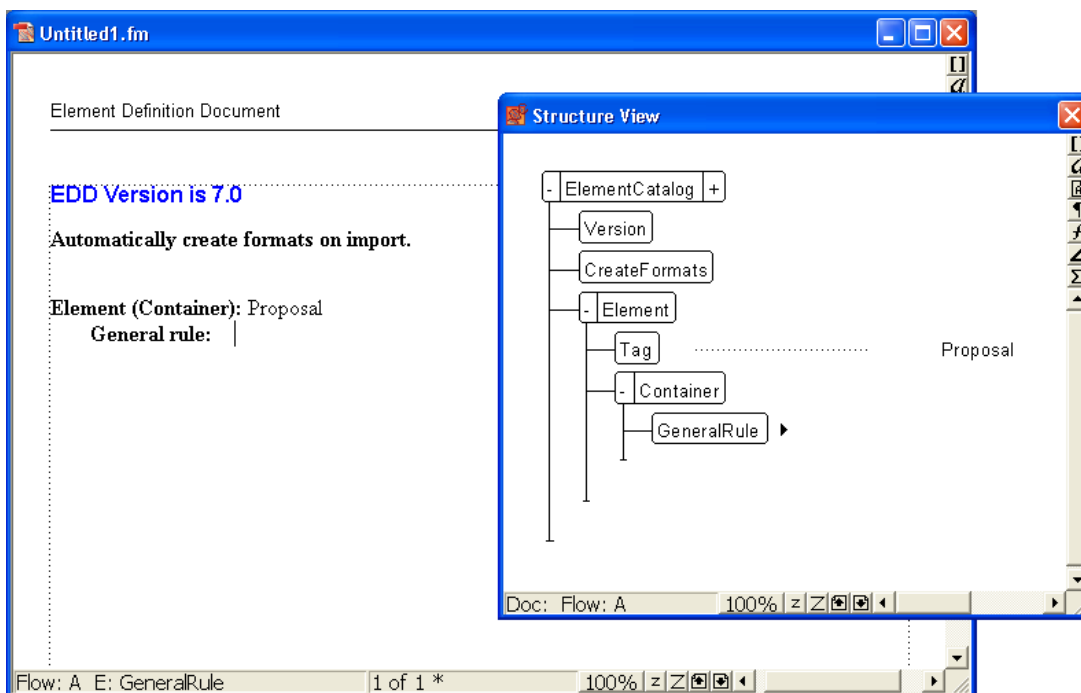
Adding the general rule for Proposal

The general rule specifies which elements are allowed inside the proposal element. During the content analysis, you identified the following: title, executive summary, project description, cost, and schedule.

7 Type a general rule for Proposal:

```
Title, ExecSummary, ProjectDescription, Cost, Schedule
```

Note: Element names cannot contain spaces.

8 Insert a ValidHighestLevel element as a sibling of the GeneralRule element. To do so, click underneath the GeneralRule element to position your cursor as shown in the following figure, click the ValidHighestLevel element in the Elements catalog, and then click Insert.
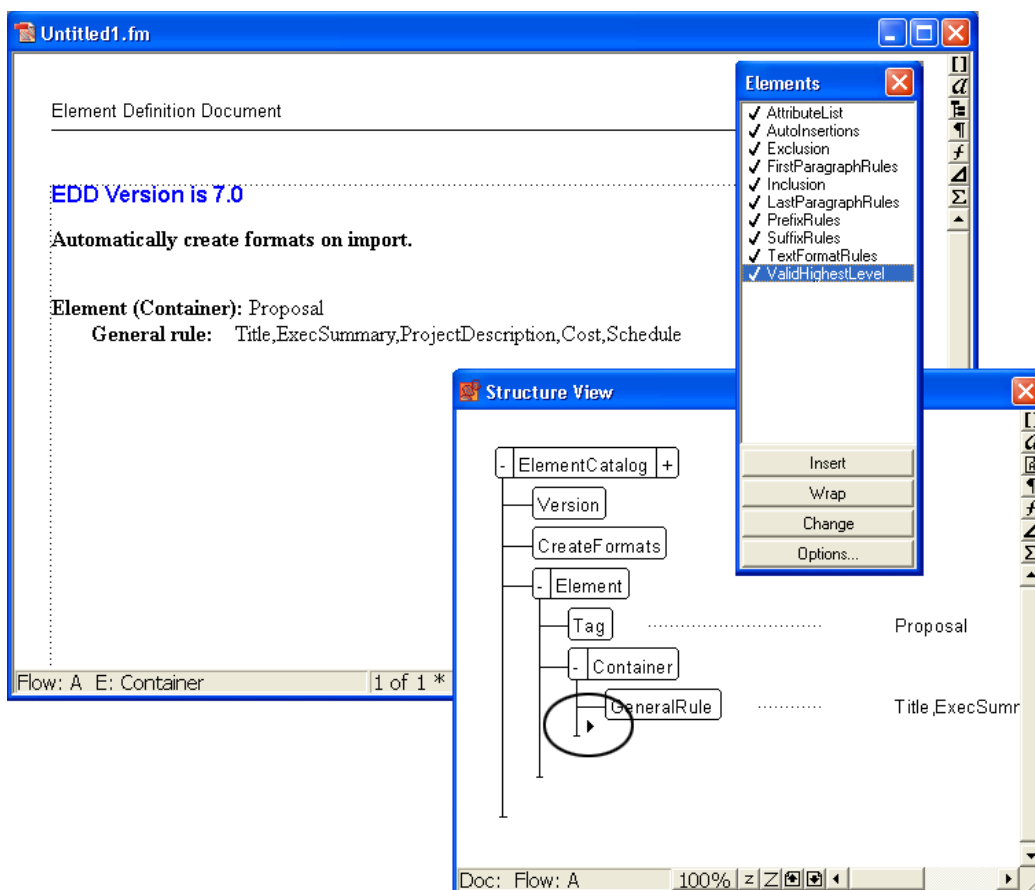
Inserting the ValidHighestLevel elemen
The Proposal element is complete. You must now provide definitions for each of the child elements: ExecSummary, ProjectDescription, Schedule, and Cost.

To define the child elements:

1 Position your cursor at the bottom of the structure as shown in the following figure:
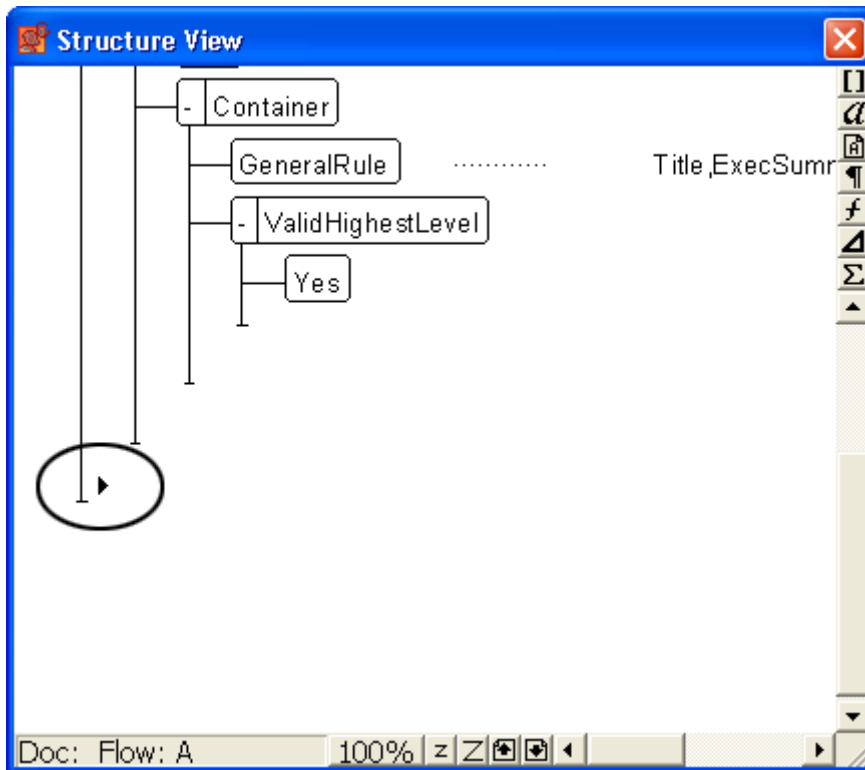
Getting ready to insert another element definition

2 Using the Elements catalog, insert an Element bubble. Name the element ExecSummary, make it a container, and specify the following as the general rule:

```
Title, Para+
```

The result is shown in the following figure:
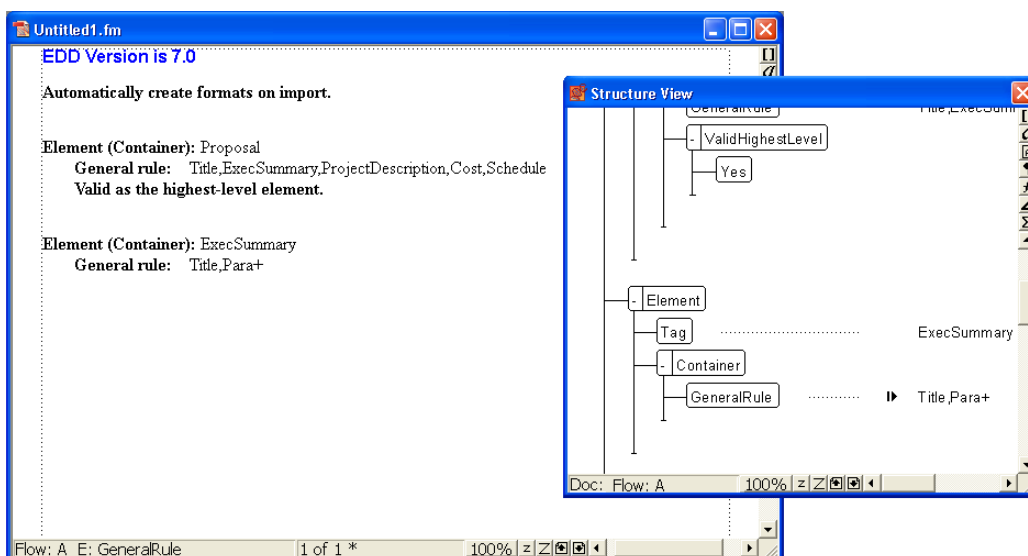
Adding the ExecSummary element

3 Repeat step 2 to define the remaining elements. The general rules are shown in the following table:

Element	General Rule
ProjectDescrip-tion	Title,Para+
Cost	Title,Para+
Schedule	Title,Para+
Title	<TEXT> (Type the word TEXT with angle brackets around it.)
Para	<TEXT> (Type the word TEXT with angle brackets around it.)

4 Save your EDD file as proposal_EDD.fm.

Testing the EDD

To test the EDD, you import it into a document and then verify that you can create the structure you expect. At this point, the document will not have any flormatting, but you can verify that the structure is working as expected.

To verify that the structure is working as expected:

1 Create a new, blank, portrait document by selecting File > New > Document, and then click Portrait.

2 Make sure that the EDD and the new document file are both open. From the new document, select File > Import
> Element Definitions. In the Import from Document drop-down list, select the proposal EDD and click Import.
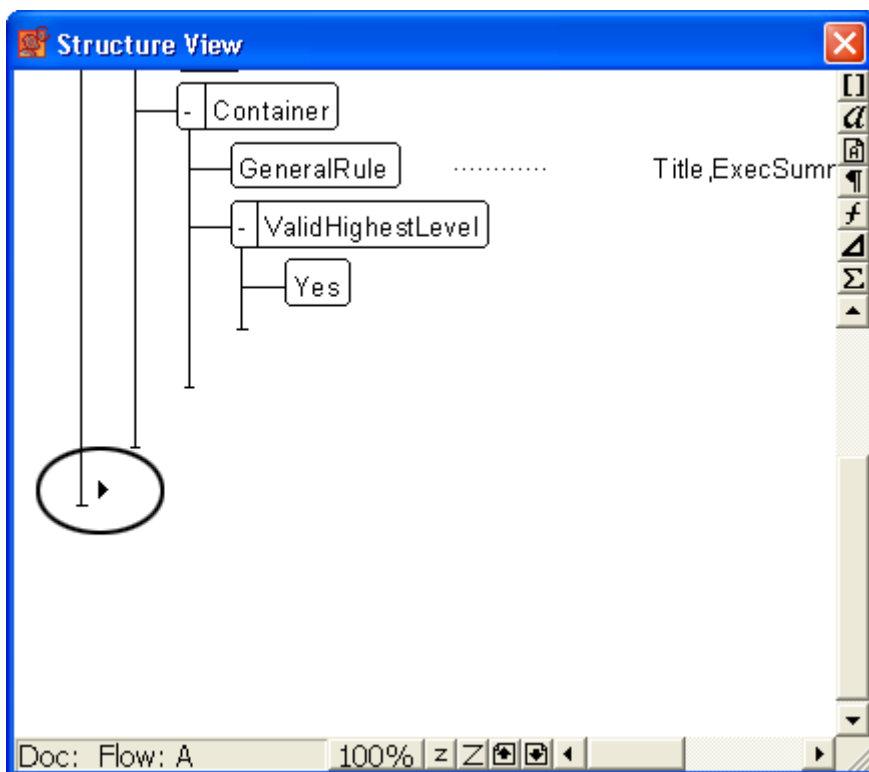
Importing element definitions from the EDD
Note: *If your EDD is not displayed in the list, make sure that the EDD file is open and that you have saved it. Until you*
save a document, it is not available in this list.

The structure definitions in your EDD are imported into the blank document. To verify that the definitions were imported, position your cursor in the main text flow and then display the Elements catalog. You should see the Proposal element, as shown in the following figure:
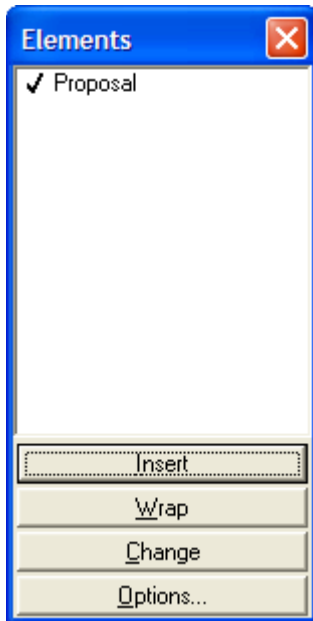
The Elements catalog shows permitted elements

3 Insert a Proposal element. The Title element, which is required as the first child of Proposal, should now appear in the Elements catalog.

4 Insert the Title element.

5 Continue inserting elements until your proposal structure is complete. Your result must look like the following figure:
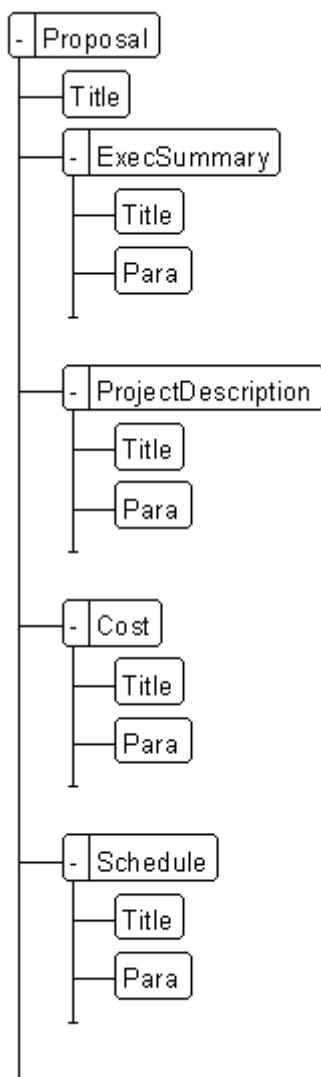
Completed proposal structure
Note: *If your structure doesn't match the figure above, go back to your EDD, correct it, and then reimport the element definitions. You can also check your EDD against the proposal EDD, which is available at:*

www.adobe.com/products/framemaker/proposal_edd.

6 Save your file as structured_proposal.fm.

Adding formatting to the EDD

You have now built an EDD that provides structure for a simple proposal. However, when you type content, no formatting is applied. This section describes how to provide formatting, and how to automatically insert the correct text for the various titles.

By default, text uses the Body paragraph tag.

To change the Body tag definition:

1 In structured_proposal.fm, select Format > Paragraph > Designer and change the default definitions of the Body and Heading1 paragraph tags. For example, change the font or put a line above the Heading1. To make your changes obvious, you may also want to assign unique colors to the two tags.

2 In proposal_EDD.fm, modify the Para element definition to include a formatting rule. To specify that Para should always use the Body paragraph tag, click under the GeneralRule element, add a TextFormatRules element, and then add an ElementPgfFormatTag element. Type Body as the text for the ElementPgfFormatTag element.
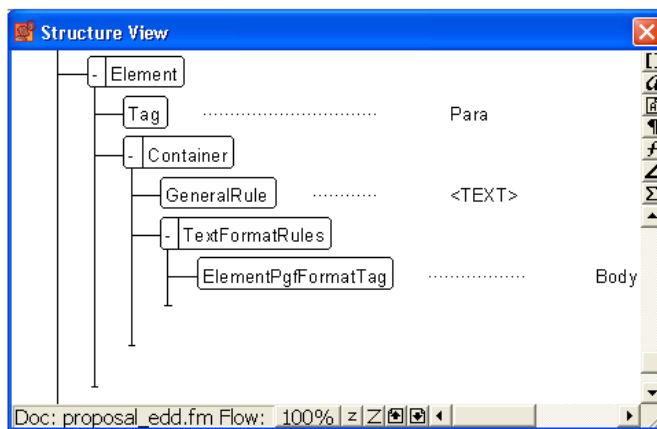
Adding formatting rules to the EDD

For the Title element, you need more complex formatting rules. Title should automatically display section titles, such as Executive Summary, Project Description, and so on. You must write a context rule that specifies what text to display for each type of heading, and specify that Title uses the Heading1 paragraph tag.

3 In proposal_EDD.fm, modify the Title element definition to use the Heading1 paragraph tag. Add the same TextFormatRules and ElementPgfFormatTag elements as you did for the Para element.

Note: *Like the paragraph tags, the information you enter is case-sensitive and space-sensitive. For example, "Heading1" is not the same as "heading1" or "Heading 1."*

Next, add a prefix rule to the Title element. Prefix rules let you specify text that should appear at the beginning of the element. Based on the Title's position, you'll specify which text should be displayed.

To add a prefix rule:

1 Position your cursor in the Title element to insert a child of Container after TextFormatRules, as shown in the following figure:
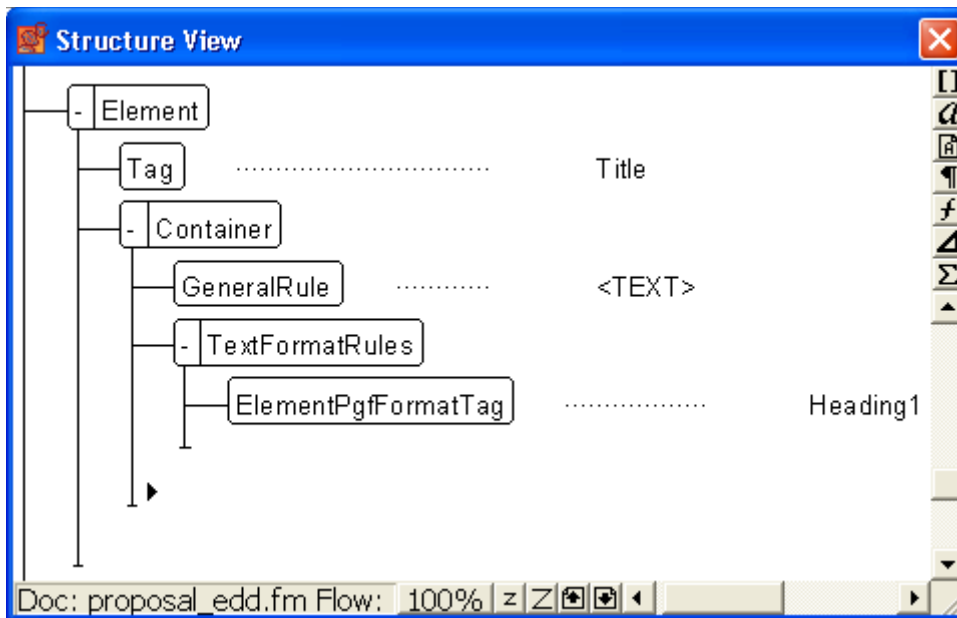
The cursor is positioned to insert a child of Container

2 Insert a PrefixRules element.

3 Insert a ContextRule element. The If and Specification elements are inserted automatically. For the Specification text, type `ExecSummary`.

4 Position your cursor underneath the Specification element (as displayed in the following figure) and insert a Prefix element.
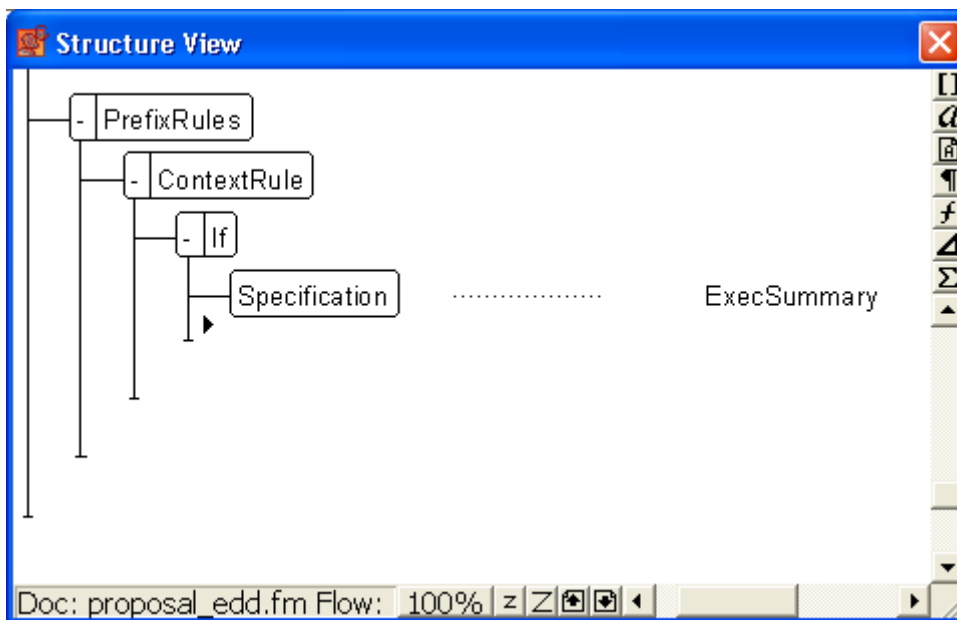
The cursor is underneath the Specification element and to the right of the If element line

5 For the Prefix element text, type:

```
Executive Summary
```

6 Repeat steps 3 –5 for the other elements that need titles—ProjectDescription, Schedule, and Cost—and insert the appropriate text for each prefix. The results are displayed in the following figure:
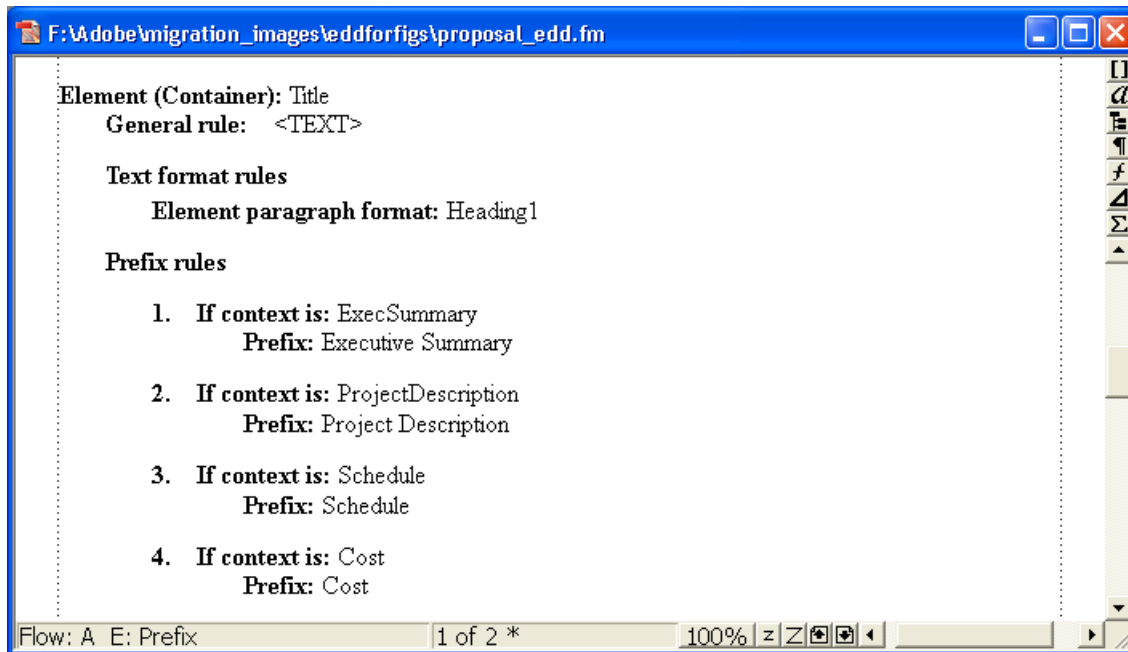
Context rules for Title element

To test the results:

1 Save the EDD.

2 Import the element definitions into your structured_proposal.fm file to test the results. Each section should display the title text you've specified.
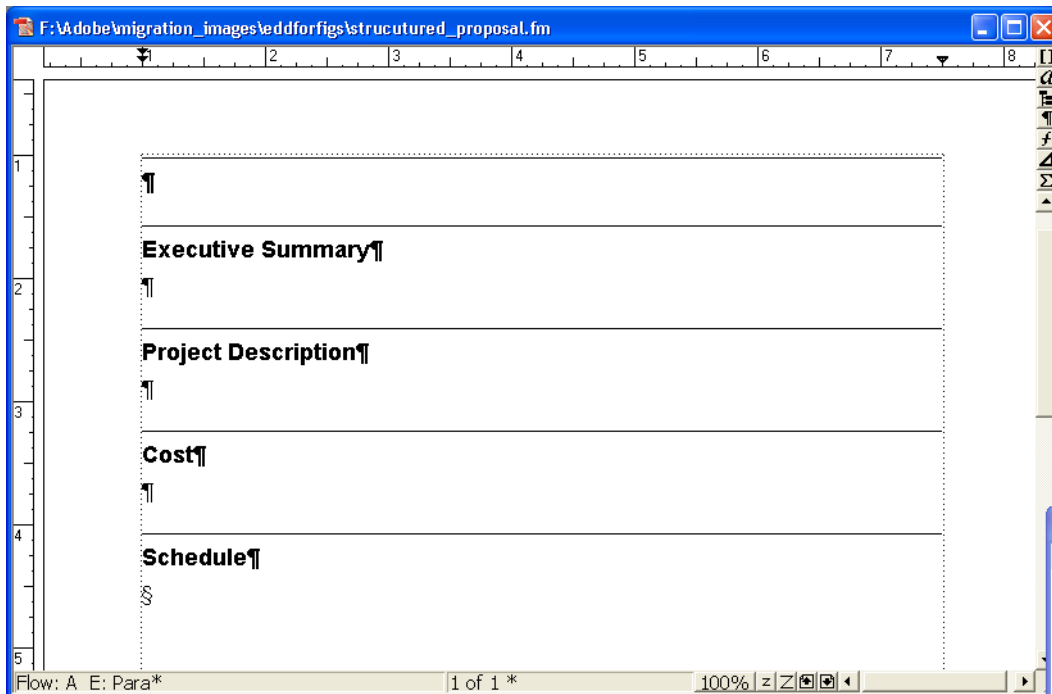
Testing the context rules

The completed EDD is available at:

www.adobe.com/framemaker/proposal_edd

Building the structured application

To enable XML import and export for structured proposals, you need to set up a structured application, which lists the components of the structured authoring environment.

First, you need to create a document type definition (DTD) that matches the EDD.

To create a DTD:

1 Open the proposal_edd.fm file in structured FrameMaker.

2 Select StructureTools > Save As DTD. Specify the file name (proposal.dtd) and where you want to save the file, and then click Save.

3 In the Use Structured Application dialog box, leave the default selection, <No Application>, and click Continue.

4 In the Select Type dialog box, select XML and then click OK. The DTD file is written out to the location you specified.

You also need a structured template that contains formatting and EDD information.

To create a structured template:

1 Open the structured_proposal.fm file.

2 Delete all content from the file. The structured template must be empty.

3 Save the file as proposal_template.fm.

Now, you are ready to configure the structured application.

To configure the structured application:

1 Select StructureTools > Edit Application Definitions. This command opens the structapps.fm file (installed in FrameMaker's structure directory) where application definitions are stored.

Note: Like the EDD, the application definition file is itself structured.

2 Insert an XMLApplication element as a child of the StructuredSetup element. Type `Proposal` for the application name.

3 Insert a DTD element and specify the following as the DTD element text:

```
$STRUCTDIR/proposal/proposal.dtd
```

4 Insert a Template element and specify the following as the Template element text:

```
$STRUCTDIR/proposal/proposal_template.fm
```

The completed application definition is displayed in the following figure:
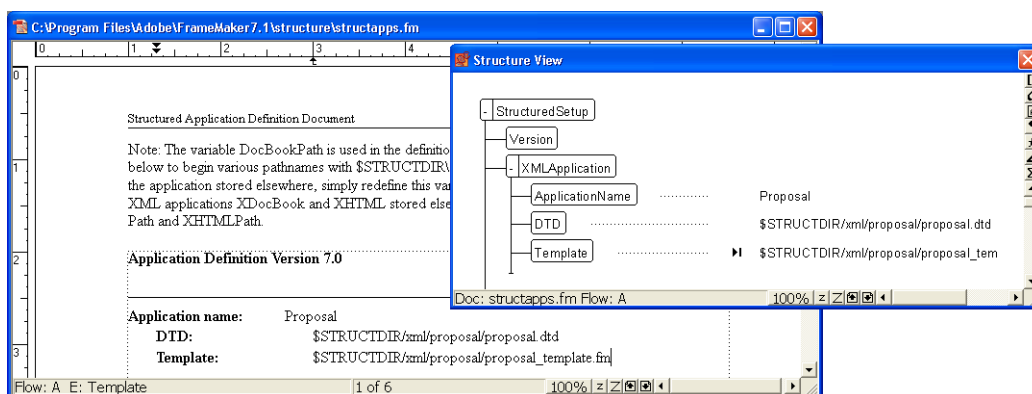
Structure definitions for the Proposal application

5 Select File > Save to save the structapps.fm file.

6 Select StructureTools > Read Application Definitions to update FrameMaker with the new application definition.

Note: To verify that the application is installed correctly, select File > Set Structured Application to display the Set Structured Application dialog box. If you set up the applications definitions correctly, Proposal appears in the drop-down list.

Finally, you need to copy the application files into the directory where the structured application definition expects them.

To copy the application files:

1 Locate your FrameMaker installation directory using the file explorer (the default on a Windows machine is C:\Program Files\Adobe\FrameMaker8).

2 Navigate to the structure\xml directory.

3 Inside the xml directory, create a proposal directory.

4 Copy the proposal.dtd and proposal_template.fm files into the proposal directory.

Testing XML round-tripping

When you have configured the structured application, you can test XML round-tripping.

To test your implementation:

1 Create a valid structured proposal in FrameMaker.

2 Export the FrameMaker file to XML. To do so, select File > Save As and choose XML as the output format. If prompted, select the Proposal application.

3 Open the exported XML file in a text editor or an XML editor and verify that you have a valid XML file.

4 In an XML or a text editor, modify the file you just exported. You can also create a new XML file that validates against the proposal DTD. Save the new XML file.

5 In FrameMaker, open the XML file. Verify that the XML file imports correctly and that formatting is applied automatically.

Implementing structured FrameMaker

Implementation scenarios are rarely as straightforward as the proposal example outlined in the preceding section. Before you begin building an EDD and a structured application, some planning is necessary.

Content analysis

The term *content analysis* describes a process in which you review existing documents to understand how they are designed and what implicit structure they contain. Begin your analysis by making a list of the documents your organization produces. Your list might include user guides, reference guides, white papers, tutorials, training manuals, and online help. Make a list of the major components for each document type. For each component, list whether the item is required, optional, and how often it occurs in that document. The following table displays a high-level analysis for a book:

Component	Required or optional?	OccurRence
Front matter	Required	1
Table of contents	Required	1
Preface	Optional	0 or 1
Chapter	Required	2 or more
Appendix	Optional	0 or more
Glossary	Optional	0 or 1
ndex	Required	1

For major components, such as lessons (for training manuals) or chapters (for books), work your way down the document hierarchy into smaller and smaller chunks, until you reach the bottom level of the hierarchy.

Component	Required or optional?	OccurRence
Glossary	Optional	1
Title	Required	1
GlossEntry	Required	1 or more
Term	Required	

Component	Required or optional?	OccurRence
<TEXT>		
Definition	Required	1 or more
<TEXT>		
CrossRef	Optional	1 or more

You must do a content analysis for every document type you want to create in your structured environment. When you have developed a content model for each document, you can look for opportunities to refine the model and reuse names. For example, an online help deliverable might consist of a collection of topics. Chapters in a book might also consist of topics. If you create a Topic element that is usable for both printed and online materials, you can minimize the number of elements in your structure definition and perhaps reuse information in both output formats.

Printed Topic	Online Topic	Combined Topic
Topic	Topic	Topic
Title	Title	Title
Para	Para	Para
Steps	Steps	Steps
Can contain Para, List, Table, Graphic, Note	Can contain Para, List, Table	Can contain Para, List, Table, Graphic, Note
	RelatedTopics	RelatedTopics

It's unlikely that your documents are perfectly consistent. You need to decide whether to create a structure that is loose (allowing many variations) or strict (very few variations are permitted). You will have problems at both ends of the spectrum:

• A very loose structure is quite complex, and can be difficult to maintain because so many variations are permitted.

• A very strict structure may disallow element combinations that are needed.

It's very difficult to find the right balance between these two extremes. One approach is to allow variations only where they add value. For example, the content of a glossary should be fairly straightforward. You could also create reference materials (such as API documentation) that is highly structured. A standard online help topic, however, is likely to require a significant number of choices.

Note: A similar problem occurs when creating unstructured FrameMaker templates. You want to minimize the number of tags that must be maintained while providing all of the tags that are needed to create your content.

When the analysis is complete, you can decide whether to use an existing structure or to build your own. Numerous XML implementations are available; DocBook and the Darwin Information Typing Architecture (DITA) are specifications used for technical documentation. Standard structures are also defined for military documents (mil-specs or mil-standards), aircraft maintenance manuals, and others. The following table describes some of the factors that influence whether you will use a standard specification or build your own structure:

use a standard	Build your own
You are required to deliver content that follows the standard. For example, many U.S. military contractors are required to deliver documentation that follows a published standard	You want to create a structure that matches your content analysis precisely.
Your content requirements closely match an existing structure. You only need to make minimal changes to the standard structure.	Your content analysis indicates that your information does not match existing structures very well.
You do not want to spend a significant amount of time building a structure, and you are willing to change the organization of your content to fit it into an existing structure.	The structure needs to match the content precisely. A longer implementation period is an acceptable cost to ensure you can build exactly what you need
You do not have the technical expertise or resources available to build your own structure.	You have resources available, whether in-house or as consultants, who can build the structure.

Building structure files

When you complete your content analysis, you will have structure maps similar to the ones displayed in the preceding section. Decide whether to use an existing standard or create your own structure.

To create structure files without using an existing standard:

1 In FrameMaker, create an EDD that matches your structure requirements.

2 Test the EDD to verify that the structure definitions are correct.

3 Add formatting to the EDD.

4 Test the EDD to verify that the formatting works correctly.

5 Create a DTD from the EDD.

You now have the two structure definition files you need—one for FrameMaker (EDD) and one for XML (DTD).

To use an existing standard:

1 Obtain a copy of the standard files.

2 Modify the provided DTD or Schema file to match your requirements.

3 Open the completed structure file in FrameMaker to create an EDD.

4 Add formatting to the EDD.

Note: FrameMaker includes several variations of DocBook as sample structured applications. If you plan to create DocBook-based structure, consider modifying one of the provided applications.

When you have your structure definitions, you need to set up the structured application.

To set up the structured application:

1 Open the structapps.fm file (select StructureTools > Edit Application Definitions).

2 Add a new application definition to the file with pointers to your EDD and DTD/Schema files.

After setting up the application, you'll want to fine-tune the import/export settings.

To fine-tune the import/export settings:

1 Set up a read/write rules file with the necessary mappings.

2 Set up XSL transformation files with any additional changes.

3 Add a reference in the structured application definition to the read/write rules file and the XSL transformation files.

4 Add any other required configuration settings, such as handling of conditional text and external cross-references, in the structured application definition.

Migrating unstructured files to structure

FrameMaker provides a mapping feature to help you transfer your unstructured documents into structure. Your results depend on the following factors:

• Document consistency. Documents that implement a formatting template consistently, with few or no formatting overrides, will convert better than documents that are full of overrides and custom paragraph or character tags.

• Similarity between unstructured and structured documents. A new document structure that is similar to the organization in the unstructured documents eases the conversion process.

Mapping tags to elements

The conversion process creates structured elements from FrameMaker formatting components, such as paragraph tags, character tags, markers, cross-references, and table components.

To begin the conversion process, select a document that is representative of your typical content. Ideally, this document should contain examples of all of the formatting tags that would occur in your documents. These tags must be shown in logical sequences (as they would occur in documents), so a formatting template that shows examples of each paragraph tag in alphabetical order is not a good example document.

To configure the conversion:

1 Open the example document.

2 Import element definitions from the EDD into the example document.

3 Select StructureTools > Generate Conversion Table. Select Generate New Conversion Table, then click Generate.
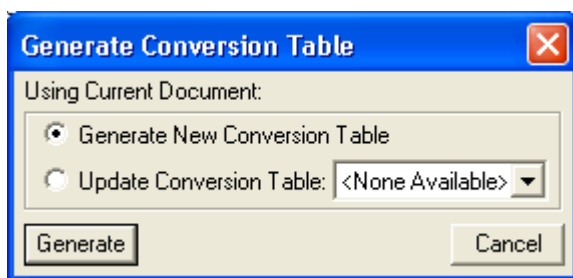
Creating a conversion rules table

Adobe FrameMaker scans the document and creates a list of the formatting components that occur in this document. Tags that are defined in the formatting catalogs but not used in the document are *not* included in the list.

Wrap this object or objects	In this element	With this qualifier
P:Title	Title	
P:Body	Body	
P:Heading1	Heading1	
P:Code	Code	
P:Note	Note	
P:Heading2	Heading2	
P:Anchor	Anchor	
P:Caption	Caption	
P:NumberedText1	NumberedText1	
P:NumberedText	NumberedText	
P:BulletedText	BulletedText	
P:BulletedText2	BulletedText2	
P:IndentedText	IndentedText	

Excerpt of a new conversion rules table

Note: *FrameMaker assumes that the name of the formatting component will be the same as the name of the structure element.*

4 Modify the mapping rules to match the structure. For example, FrameMaker assumes that the formatting tag names match the element names, so in the preceding example, the Body paragraph (P:Body) is mapped to the Body element. To change this mapping, change the second column ("In this element") to read Para instead of Body.

5 When you have mapped all of the formatting components, add additional entries to the table to create hierarchy. For example, if a Section element typically contains a Heading and one or more Para elements, you add a row to the table and specify how to create the Section element.

P:Title	Heading	
P:Body	Para	
Heading,Para+	Section	

6 *(version 7.2)* Add a root element mapping that specifies the top-level tag in the document, as shown here:

```
RE:RootElement                          Proposal
```

7 Save the conversion rules table.

8 To test the conversion rules table, open your example document, then select File > Utilities > Structure Current Document. Select the conversion rules table document in the drop-down list, and then click Add Structure. FrameMaker creates a new, untitled, structured document.

Keep refining and testing your conversion rules until you are satisfied with the document produced.

You can add tags to the conversion rules table by typing them or by scanning additional documents.

To add tags automatically:

1 Make sure that the conversion rules table is open. Open the file that contains additional formatting components.

- Mapping from a single paragraph tag to multiple elements. For example, you might have an unstructured document that uses a Heading1 for all major sections within a chapter. In your structure, you have specified that a Chapter contains several different types of sections—Procedure, Concept, and Reference. If all of the sections have the same organization, you will probably have to review the content to determine whether a particular Heading1 should become a title in a Procedure, Concept, or Reference element. The best strategy is probably to map everything to the element that occurs must often, and then make changes manually as needed.

- Adding metadata. Your new structure probably contains attributes, such as an author attribute for the top-level Help element. If that information is not present in the unstructured file, you may have to manually insert the attribute value.

- Inconsistent document organization. If the organization of the unstructured document does not match the organization required by the EDD, you'll need to change the content to match the required structure.

Automating conversion tasks

As you develop your conversion rules table, you will discover some conversion problems that require manual cleanup. We strongly recommend that you use a scripting utility, such as FrameScript, to automate these tasks. Here are some examples (from simple to more complex) of tasks you could automate:

- Deleting extraneous empty paragraphs.

- Changing text bolded with the Bold button (or Ctrl-B) to text bolded with a character tag. You can then map the character tag to the appropriate element. (You could also use the Create and Apply Formats utility to assign new character tags for mapping. However, you must use Create and Apply Formats for all overrides; if you want to disregard some overrides, a scripting solution is more flexible.)

- Identifying and processing paragraphs that require unique treatment. In a well-designed template, converting Note paragraph tags to Note elements is easy. You can just map them in the conversion rules table. Imagine, though, that instead of using a Note paragraph tag, your content contains note information that uses the Body paragraph tag. The authors have typed in the word "Note" at the beginning of each Body paragraph that is being used as a note. (This inefficient approach is more common than you might think.) You cannot identify the Body paragraphs that are being used as notes through the conversion rules table. Instead, you can write a script that locates the problem paragraphs, removes the typed-in "Note" text, and applies a temporary Note paragraph tag. In the conversion rules table, you can then map the Note paragraph tag to the Note element.

- Assigning different elements to table row and cell elements based on the table tag. For example, you might have TableRow and TableCell for regular tables, but FieldName and FieldDescription for others. If the table paragraphs use the same paragraph tags, conversion rules cannot distinguish between the two types of table rows and cells. With scripting, you can post-process the structured document and assign specific table tags based on the parent Table element. That is, any table that uses the generic Table element gets the TableRow and TableCell elements. Any table that uses the FieldTable element gets the FieldRow element for rows, the FieldName element for the first cell in a row, and the FieldDescription element for the second cell in a row.

If you can write down a generic process for the cleanup task, you can probably automate the task with a script.

XML with FrameMaker

You can open and save an XML file in FrameMaker.

Opening and saving XML files

When you open an XML file, FrameMaker retains the file's .xml extension. Also, if you use the File > Save command, FrameMaker saves the XML file in XML format using the .xml extension.

You can open XML files that use XML Schema; see "XML with Schema" on page 615.

Note: You can open XML files containing Unicode content. FrameMaker opens these files by converting them into UTF-8 encoding.

To open an XML file:

1 In Structured FrameMaker, choose File > Open. (In UNIX, you can click Open in the main FrameMaker window.)

2 Select the file you want to open, and click Open.

3 If the Use Structured Application dialog box appears, choose an application name from the Use Structured Application pop-up menu, and click Set. Then do one of the following:

• To associate an application with the file, choose the name of an application.

• To use default mapping and no read/write rules, choose <No Application>. (You may want to use this option to browse a file you don't intend to save.)

The WebDAV feature is extended to allow authoring and editing of XML files located on the WebDAV server.

To save an XML file:

Do one of the following:

• Select File > Save As XML. In the Save Document dialog box, click Save.

• Select File > Save As. In the Save Document dialog box, select XML in the Save as type list, and click Save.

• Select File > Workgroup > Save As. In the Save To Server dialog box, select XML in the Format list, and click Save.

FrameMaker saves the file in XML format and preserves the .xml extension.

Save a FrameMaker file as XML, method 1

1 In structured FrameMaker, select File > Save As XML.

2 Select the folder in which to save the file.

3 Specify a filename with an .xml extension.

4 Choose XML (*.xml) from the Save As Type pop-up menu.

5 Click Save.

Save a FrameMaker file as XML, method 2

1 In structured FrameMaker, select File > Workgroup > Save As.

2 In the Save To Server dialog box, select XML in the Format list.

3 Click Save.

Save a FrameMaker file as XML, method 3

1 In structured FrameMaker, select File > Workgroup > Save As.

2 In the Save To Server dialog box, select XML in the Format list.

3 Click Save.

Handling conditional text and XML

Structured FrameMaker allows you to export and import all conditional text (visible and hidden), along with information about the condition tags, such as their show/hide status, color, and style.

To preserve conditional text when saving and opening XML files, the XML file that FrameMaker generates contains the following:

- Conditional text tags corresponding to the conditional text present in the document.
- Condition indicators—color and effect— associated with each conditional text tag.
- The status—show or hide—for each condition tag.
- Start and end markers for sections corresponding to each tag.

In addition to normal text, support for conditional text in XML allows an entire table or table rows to be conditional. The same applies to footnotes, markers, and anchored graphics. Also, conditional text can be inside a text inset (XML or text).

Handling cross-references in XML

Structured FrameMaker allows you to generate and retain external cross-references when saving and opening XML files.

For example, if your FrameMaker file contains a cross-reference to another file, when you save your file in XML, FrameMaker generates tags representing the cross-reference along with information about the referenced file. When opening the same XML file, FrameMaker converts the cross-reference tags and the information they contain into a FrameMaker cross-reference.

FrameMaker supports a new attribute, `srcfile`, to retain external cross-reference information when generating XML documents.

When you export a file containing an external cross-reference to XML, the `srcfile` attribute of the cross-reference contains the name of the referenced file and the ID of the referenced element in the file.

Note: FrameMaker converts file paths in the generated XML to URIs.

Options for processing XML

FrameMaker provides options for processing XML. FrameMaker also allows XML import and export to support XSL transformations (see "XML with XSL transformation" on page 614), and the Schema language for grammar and rule definition (see "XML with Schema" on page 615). You can import an XML document that uses Schema, automatically creating a Document Type Definition (DTD) from the referenced Schema, or you can create an Element Definition Document (EDD) directly from a Schema definition. This release also enables validation against an associated Schema upon both import and export.

XML with XSL transformation

XSLT (XML Style Transformation language), a specialized programming language written in XML, is the means by which transformations defined in XSL (Extensible Style Language) are applied to XML documents. FrameMaker includes an XSLT processor that allows you to associate an XSL file with an XML structure application or XML document, and apply the transformations defined in that document when importing from or exporting to XML. FrameMaker supports W3C XSLT 1.0 recommendations.

- New elements in the structure application (`XSLTPreferences` in the `Stylesheets` element of `XMLApplication`) allow you to specify an XSL file as part of your XML structure application, to be used for both import and export.

- The `xml-stylesheet` processing instruction (PI) now allows you to specify an XSL file in an XML markup document, which supercedes any XSL specified in the structure application when importing that document.

Upon import, XSL transformations are applied before the default read rules or any additional read rules you have defined. That is, the result of applying an XSL transformation on import is a new file, which (if it is an XML file) is passed to the read/write rules.

Upon export, XSL transformations are applied after the default or explicit write rules. The result of applying read/write rules on export is a new XML file, which, if it is valid, is passed to the XSLT processor.

For additional information and further details of the new elements and PI, see the *Structured Application Developer's Guide*.

XML with Cascading Style Sheets

When an XML document is opened in FrameMaker, FrameMaker processes CSS2 by mapping the CSS information to appropriate EDD rules in the EDD document.

The following scenarios describe the processing of CSS2 in FrameMaker:

- You open an EDD in FrameMaker and use the Import CSS Styles option in the StructureTools menu. FrameMaker checks whether the current document is an EDD. If so, the Open dialog box appears and you can specify the CSS file path. The CSS is then imported into the EDD. You can then import the element definitions from the EDD into a template to use when you open an XML file. If the EDD contains formatting rules, the CSS properties are appended to the existing rules if the properties are unique. Alternatively, the CSS properties you import will overwrite the existing formatting rules of the EDD. You can also export XML style information to an EDD for all elements in a document that use the Cascading Style Sheets 2 (CSS2) format, using the Generate CSS2 option in the StructureTools menu.

- When you open an XML file that is associated (using xml-style sheet PI) with style sheets, FrameMaker reads the DTD and the style sheet associated with the XML document, and then generates a temporary template to use for opening the XML file. However, if a template is already specified in the "Structured Application" (used to open the XML file), FrameMaker uses that template to open the XML file and will not generate any new template from the DTD and style sheets.

Note: An XML file opened in FrameMaker can contain multiple CSS files. FrameMaker supports the author's style sheet only, and not the user's style sheet.

XML with Schema

FrameMaker allows you to import XML markup documents that are associated with W3C's XML Schema language. FrameMaker automatically creates a DTD and EDD from the Schema. FrameMaker validates the document structure against the associated Schema upon both import and export to XML, but does not retain all Schema information upon export.

For complete details of how Schema is mapped to DTD, see the *Structure Application Developer's Guide.*

Note: This release offers support for Schema that is equivalent to what was previously available for DTD. That is, EDD has not been extended to accommodate features in Schema that are not available in DTD. For this reason, Schemas are read-only, and you cannot export the EDD back out to Schema.

Schema workflow

You can import an XML document that references a Schema file, and you can specify a Schema file in your structure application, to use for validating a document upon export to XML.

1 For a specific XML document, you can include the path of the schema file in the XML using attributes - `noNamespaceSchemaLocation` or `schemaLocation` depending on whether your schema includes a target namespace or not.

2 To specify a Schema file for use in exporting XML, modify the `structapps.fm` file. Use the `Schema` element as part of the `XMLApplication` to provide the Schema file path for export.

3 Open the XML in Frame using a structured application. Edit it.

4 Save the XML using a structured application. The `Schema` element in the `structapps.fm` file is output in the file and validation is performed against it.

In this workflow, a DTD is generated automatically as an intermediary file from the Schema given in the XML document, and you do not modify it. However, you can also use a Schema file to generate an EDD; see "Generating an element catalog from Schema" on page 616.

Changes to structure application for Schema support

The new element `Schema`, a child of the `XmlApplication` element, specifies the path of a Schema file in the `structapps.fm` structure application file. If instance documents use namespaces, the property `Namespace` in `XmlApplication` must be set to `true`.

In order for a structure application to be selectable in the Use Structured Application list while importing a document that is associated with a Schema, the Schema's root element must be included in the application's `DOCTYPE` in the `XmlApplication` element.

Generating an element catalog from Schema

You can create a new EDD from a Schema definition, or import the elements from a Schema definition into an existing EDD. FrameMaker converts the Schema definition to DTD first, and then creates or imports elements to an EDD.

Use the following commands in the StructureTools menu:

• Open Schema: This command converts a specified Schema to DTD, and creates a new EDD from the DTD.

• Import Schema: This command converts a specified Schema to DTD, and imports elements from the DTD into an existing EDD.

Each command opens a File Choose dialog box that allows you to specify the Schema file, then a Save dialog box in which you specify where to save the resulting DTD file.

To create an EDD from Schema:

1 In Structured FrameMaker, select StructureTools > Open Schema.

2 Choose a Schema file.

3 Choose a path for the DTD to be output.

4 Examine the resulting DTD and make any modification you wish.

5 Create an EDD from the generated DTD, as described in the Structure Application Developer's Guide.

6 Use this EDD to create a template that can be included in the Structured Application.

7 Provide your DTD path along with the Schema Location in the input XML. This will make sure that FrameMaker works correctly with your template. Validation of input and output XML is still performed against the Schema.

Chapter 20: UNIX macros and utilities

About the UNIX version of FrameMaker

The UNIX version of Adobe FrameMaker has several features that can increase your productivity.

• Macros can automate repetitive keyboard actions.

• The screen-capture feature lets you capture on-screen images that you can then import into FrameMaker documents.

• Several UNIX command-line utility programs perform batch operations on FrameMaker files and work with graphic files.

Using UNIX keyboard macros

A macro is a shortcut for a sequence of keystrokes. You assign the macro a *trigger*—a key sequence you'll press to play back the macro. When you press the trigger, the macro plays back as if you were typing the keystrokes yourself.

A macro can be simple—for example, it could type a word or phrase you use often—or it can be complex. For example, it might search for the paragraph tag of a first-level heading, move the insertion point to the next paragraph, and paste a format that's on the Clipboard.

Before recording macros, become familiar with the extensive set of FrameMaker keyboard shortcuts. You'll use them to create macros. For a complete list of keyboard shortcuts, see the online Help.

You don't need to use a macro to change the default keyboard shortcut for an action. You can add, change, or delete the built-in shortcuts by following the instructions in the online manual Customizing FrameMaker Products. This manual is available on this Adobe website: www.adobe.com/devnet/framemaker/pdfs/ Customizing_Frame_Products.pdf.

You can work with any number of macros at a time. Each macro can be about 600 keystrokes long. (Most nonprinting keys—such as the spacebar, Return key, and function keys—count as two keystrokes.)

A macro can do anything you can do in FrameMaker, except the following:

• Pause for keyboard input and then continue

• Record mouse clicks or mouse movements

• Record the F10 keyboard shortcut that moves the focus to the menu bar

• Record the F4 keyboard shortcut that displays the appropriate context (shortcut) menu

• Record Japanese characters

To record a macro in UNIX:

1 Choose File > Utilities > Keyboard Macros.

2 Click Record a New Macro, click Begin, and then click OK.

3 Type the keystrokes you want FrameMaker to record. When you press a key, FrameMaker records it and carries out its normal function. You can also press the trigger for a macro that you've already recorded.

4 To finish recording, choose File > Utilities > Stop Recording Keys.

5 Press the key or combination of keys you want to use as a trigger, and then click Continue. You must type a trigger, or the recording is canceled.

As you type the trigger, the keystrokes appear in the text box. (Function keys appear preceded with a slash; Control appears as ^; Meta appears as ~; Shift appears as +; and Esc appears as \!) For more information on triggers, see "Choosing a macro trigger" on page 619.

6 Type a comment for the macro if you want, and click Continue.

To cancel recording in UNIX:

Choose File > Utilities > Stop Recording Keys, and click Cancel.

Choosing a macro trigger

Here are some guidelines for choosing a macro trigger:

- The trigger can contain up to 15 keystrokes.

- A trigger can be any keyboard key, but shouldn't be one that already has a function assigned to it. For example, don't use the Tab key as a trigger, because you then can't use it to insert a tab in text.

- A trigger can include any combination of the Control, Shift, and Meta keys—for example, Control+8 and Meta+Control+8 are both valid.

- A trigger shouldn't start with Esc or Control+r, followed by the first letter of a menu name. This will disable all the shortcuts for that menu. For example, if you choose Esc e as a trigger, you can't use the shortcuts for Edit menu commands.

- A trigger shouldn't duplicate a built-in shortcut unless you don't mind losing the built-in shortcut. (For a list of built-in keyboard shortcuts, see online Help.)

- Certain keys and key combinations have special meanings when you're assigning a macro trigger.

Key sequence	Meaning
Backspace, Delete, and Control+h	Deletes the last trigger keystroke
Control+u	Deletes the whole trigger
Return, Control+]	Accepts the trigger (clicks OK)
Tab	Moves to the next setting
Shift+Tab	Moves to the previous setting
Control+Tab	Moves to the first setting
Control+c	Cancels the macro (clicks Cancel)

To use these keys in a trigger, precede them with a backslash. For example, to use Control+g Delete as a trigger, press Control+g, type a backslash, and then press Delete. The trigger appears as ^g/Delete.

- To include the backslash itself in a trigger, type it twice (\\).

Playing back macros

When you play back a macro, FrameMaker responds as if you were typing the keystrokes stored in the macro.

Depending on the purpose of the macro, you may need to select text or objects before playing back the macro. For example, if the macro changes the format of the current paragraph, put the insertion point in a paragraph before playing back the macro.

Note: Macros may execute incorrectly when the insertion point is in an equation and you press the macro trigger from a dialog box.

To play back a macro:

Press the macro's trigger.

To cancel a macro while it's playing:

Press Control+c.

Note: If you choose Edit > Undo after playing back a macro, only the last action of the macro will be undone. To undo the effect of the whole macro, you must save your document before playing the macro, and then choose File > Revert to Saved after the macro has finished.

Saving UNIX macros

You save the macros currently in memory by adding them to a macro file. FrameMaker adds any macros you recorded since the last time you saved or cleared them.

If you save your macros in a file called fmMacros and store it in one of four locations, FrameMaker will load the macro file automatically when it starts. It loads the first fmMacros file it finds as it searches in the following locations in this order:

• The fminit directory where you started FrameMaker (./fminit)

• The directory where you started FrameMaker (.)

• The fminit directory in your home directory (~/fminit)

• Your home directory (~)

You can create special macro files for specific tasks, reading them into FrameMaker as needed. For example, you could create a macro file for graphics tasks and a different macro file for working with text.

To save all current macros in a file in UNIX:

1 Choose File > Utilities > Keyboard Macros, and do one of the following:

• To add the macros to your standard set of macros, make sure fmMacros is the filename in the Macro File text box.

• To add the macros to different macro file, use the scroll list to select a macro file.

• To create a new macro file, type a new filename in the Macro File text box.

2 Click Add New Macros to File and click Begin.

Reading macros into memory

Reading macros from a macro file merges the macros in the file with the current macros. If a macro in the file uses the same trigger as a current macro, the macro in the file replaces the current macro. If you want to replace all the current macros with the macros in a file, clear the current macros before you read the macros from the file.

If your system crashed before you could save your macros to a file of your choosing, you can reload them by reading in the file ~/fmMacrosLog.

To read a set of macros from a file in UNIX:

1 Choose File > Utilities > Keyboard Macros and use the scroll list to select a macro file.

2 Click Read Macros from File, and then click Begin.

Clearing macros from memory

When you record macros or read them from a file, the macros are stored in your workstation's memory. You can clear the current macros from memory at any time. (If you want to use the macros again, be sure you save them before you clear them from memory.)

When you clear macros, FrameMaker also clears shortcuts that were added in a menu customization file during the session. For information on menu customization files, see the online manual *Customizing FrameMaker Products*.

To clear the current set of macros from memory:

Choose File > Utilities > Keyboard Macros, click Clear Current Macros, and then click Begin.

Deleting UNIX macros and triggers

If you want to discard the macros that you just recorded—but haven't saved—you can clear the current macros (see "Clearing macros from memory" on page 621). But if you have other newly recorded macros you want to save, or if the macro has already been added to the file, delete the macro from the macro file.

To delete a trigger and use it in a different macro:

Record the new macro and give it the trigger you want. Even though FrameMaker has two macros with the same trigger, it uses only the most recent macro for the trigger.

To delete a macro from a saved macro file:

1 Save any newly recorded macros in a macro file (see "Saving UNIX macros" on page 620).

2 Open the macro file and delete the macro definition. (If you use FrameMaker to edit the file, save the file in Text Only format.) To identify the macro you want to delete, look for its trigger or its comment. The comment immediately precedes the macro definition. Be sure to delete the whole definition, including the final angle bracket (>).

```
This is the comment for Macro15.
     <Macro Macro15
         <Label Macro15>
         <Trigger ^p>
         <TriggerLabel ^p>
<Definition \/usr\/doc\/Manual>
         <Mode NonMath>
     >
```

Sample macro and its comment

3 Clear the current macros (see "Clearing macros from memory" on page 621).

4 Read the edited macro file back in (see "Reading macros into memory" on page 621).

Creating UNIX macros that use dialog boxes

This procedure describes the general steps for creating a macro that uses a dialog box. The specific steps will depend on the dialog box you're using and what you want to accomplish in the macro.

To create a macro that uses a dialog box:

1 Start recording the macro, and use a keyboard shortcut to display the dialog box or to shift the focus to an already-open dialog box. (For a list of these shortcuts, see online Help.)

2 Press Control+Tab to move to the first setting in the dialog box. Pressing Control+Tab ensures that the macro always starts filling in the dialog box at the same setting or field.

3 Specify each setting of importance to you even if it's already correct. Specifying each setting ensures that the macro plays back in the same way no matter what state the dialog box is in when the macro starts.

To move forward from setting to setting, press Tab; to move backward, press Shift+Tab. For a full list of dialog box shortcuts, refer to online Help.

4 Press Return to accept the settings and to close the dialog box. Pressing Return has the same effect as clicking the button that currently has the focus. If you want the macro to click a different command button, tab to the button, and then press Return.

5 Stop recording the macro.

To create a macro that starts or stops while a dialog box is open, display the dialog box as you usually do and then press Control+] to start or stop the macro recording.

Creating UNIX macros that repeat

This procedure describes the overall steps for creating a macro that repeats a set number of times or indefinitely, until you stop it by pressing Control+c.

To create a macro that repeats a set number of times:

1 Record the macro you want to repeat and assign it a trigger (see "Choosing a macro trigger" on page 619).

2 Start recording a second macro, and while recording, press the first macro's trigger as many times as you want the macro to repeat.

3 Stop recording the macro.

To create a macro that repeats indefinitely:

Record the macro you want to repeat and make the last keystrokes you record the same as the macro's trigger.

Capturing UNIX screen images

You can capture an image of any rectangular area of the screen and store it as an X Windows Dump (xwd) file. You can edit the resulting file in any paint program that supports the xwd bitmap format. If you need to convert a color image to black and white before importing it, see "Converting color images to monochrome (UNIX)" on page 630. Once captured, you can import the image into FrameMaker (see "Using the Import command to import graphics" on page 501).

💡 *To capture the edges of an image cleanly, move it over an empty window or a blank page in a document. If the object is unmovable, you can edit the image in a paint program. You can also mask unwanted bits in FrameMaker by drawing objects with white fill and no pen pattern on top of the parts you want to hide (see "Cropping or masking graphics" on page 340). Then recapture the masked image to make the edits permanent.*

Screen captures that include colors may not be totally accurate. For example, a screen capture of a blue dialog box might have a darker shade of blue than the original.

To capture an image in UNIX:

1 Position the image as needed.

2 Choose File > Utilities > Capture and specify a filename and location for the image.

3 Click Capture. After a short delay, the pointer changes to a cross hair (+).

4 Drag from one corner to the opposite corner until the capture border surrounds the image. When you release the mouse button, a message appears telling you the screen image has been captured.
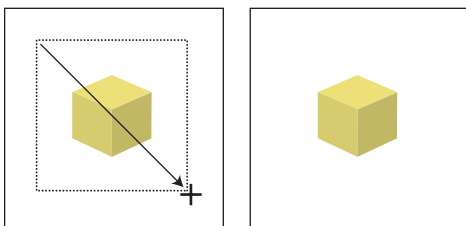
Drag out a capture border and release to capture the image.

5 Click Continue.

💡 *If you capture an image in an application that uses a different color map, you can move the pointer to the application's window during the delay mentioned in step 3, thus switching to the appropriate color map. To change the delay period, edit the Maker.captureDelayTime resource, as described in the online manual Customizing FrameMaker. This manual is available on this Adobe website: www.adobe.com/devnet/framemaker/pdfs/ Customizing_Frame_Products.pdf*

Performing command-line operations with fmbatch (UNIX)

You can use fmbatch to open, print, reformat, and save FrameMaker files without actually displaying them. You can issue commands one at a time (interactively), or you can store commands in a text file—a batch file—and issue all the commands in a single command.

Starting fmbatch

You start fmbatch by typing **fmbatch**, followed by optional start options, at a UNIX shell prompt (you may have to change to $FMHOME/bin).

Start option	Result
-makername maker	Starts FrameMaker
-makername structured	Starts Structured FrameMaker
-noerrorquit	Starts FrameMaker and continues to run even if an error is encountered
-v	Turns echoing on
batch_file	Executes the commands in *batch_file* (omitting *batch_file* starts fmbatch in interactive mode)

For example, enter **fmbatch -v -makername maker MyCommands.txt** to start FrameMaker, have fmbatch execute the commands in the MyCommands.txt file, and echo those commands to the screen.

If you've set a language preference with the Maker.uiLanguage resource in your ~/.Xdefaults file, fmbatch uses that language version as well.

Using fmbatch interactively

Use commands interactively (one at a time) for operations you perform infrequently.

To use fmbatch interactively:

1 Type **fmbatch** at a UNIX shell prompt.

2 Enter an fmbatch command (see "About fmbatch commands" on page 625) at the prompt.

Using fmbatch in batch mode

You can store fmbatch commands in a text file—a batch file—and issue all the commands in the file at once. Using batch files is convenient when you need to perform the same set of operations frequently. For example, you can create a batch file to open, print, and close a book file.

You can also create batch files from UNIX shell scripts. For more information, see "Creating batch files from scripts" on page 628.

When you store a batch file in the same location as the files you want to use, you don't have to use pathnames in your fmbatch commands. Otherwise, use either absolute or relative pathnames.

To create an fmbatch batch file:

1 Use any standard text editor to create a text file.

2 Type fmbatch commands in the order you want them executed with each command on a separate line. Be sure to include any needed options. (For a list of possible commands, see "About fmbatch commands" on page 625. For details on the options for some commands, see the sections that follow.) Two special commands deserve special note:

• To enter a comment, type a number sign (#) at the beginning of the line.

• To display messages on-screen while the batch file is running, enter **echo *message*,** where *message* is the text you want to display.

3 Save the file. If you're using FrameMaker to create the batch file, save it in Text Only format.

To use a batch file with fmbatch:

At a UNIX shell prompt, type **fmbatch -v *batch_file***. To suppress commands from appearing as they are run in the batch file, don't use the -v option.

For example, to have fmbatch run a batch file called PrintBook, type **fmbatch -v PrintBook**

About fmbatch commands

The following table lists all the commands you can use with fmbatch. You can use these commands in either interactive or batch mode.

Command	Result
echo	Prints messages to standard error output
help or ?	Displays a list of fmbatch commands
UseFormatsFrom	Imports and updates the formats in an open document or in all the documents in a book file, using the formats from another open document
Open	Opens a document or book file
OpenTextFile	Opens a text file
ping	Verifies that FrameMaker is still running
Print	Prints an open file, using its own print settings or the print settings from another file
Quit	Closes a file or exits fmbatch
Save	Saves an open file
SaveAs	Saves an open file, using a different name or format
system	Runs a UNIX command
Update	Updates cross-references and generates all the generated files in an open book

All fmbatch commands are case-sensitive. Some commands are followed by filenames. A few commands also need options, as described in the sections that follow.

When using filenames with fmbatch commands, you may need to use single or double quotation marks to delimit them. (If the filename includes single quotation marks, enclose the filename in double quotation marks, or vice versa.) For example, to open a file that has single quotation marks in its name, type
Open "My 'Unquotable' Quotes File"

Opening, saving, and printing files with fmbatch

You can open any file with fmbatch that you can open with the FrameMaker File > Open command. You must use fmbatch to open a file before you can perform any other fmbatch operations on it.

You can save an open document or a book file with the current filename and format, or you can save it with a different name or format.

Note: When you save a document with fmbatch, it does not warn you about overwriting an existing file. The overwritten file is given a .backup suffix.

You can print a file you opened with fmbatch using the file's print settings or using the print settings from a different FrameMaker document, which lets you, for example, specify one printer name for a group of documents.

If the open file you're printing is a book file, fmbatch prints the entire book. If you print a book file to a PostScript print file, fmbatch creates a single large PostScript file.

You can also use fmprint to print files. For details, see "Printing with fmprint (UNIX)" on page 629.

To open a file with fmbatch:

In a batch file or at the fmbatch prompt, do one of the following:

• To open a FrameMaker document, enter **Open** *filename*. For example, enter **Open chapt1.fm**

• To open a text file, enter **OpenTextFile** *type filename*. The *type* option is one of the following.

Type option	File type
a	A line-oriented text file (Each line is treated as a separate paragraph.)
t	A paragraph-oriented text file (Consecutive nonempty lines are considered part of a paragraph, and an empty line signifies a paragraph break.)

For example, to open MyData.txt, a line-oriented text file, enter **OpenTextFile a MyData.txt**

To save an open file with fmbatch:

In a batch file or at the fmbatch prompt, do one of the following:

• To save a file with its current name and format, enter **Save** *filename* (for example, enter **Save chapt1.fm**).

• To save a file with a different name or format, enter **SaveAs** *format oldname newname*. The *format* option is one of the following.

Format option	Result
d	Saves in Document format
l (lowercase L)	Saves in View Only format
a	Saves in line-oriented text format
t	Saves in paragraph-oriented text format
m	Saves in MIF
- (hyphen)	Saves in the current format

Specify only one format option. If you don't specify a format option, fmbatch saves the file in its current format. You can't use the l, a, or t option when saving a book file. If a document is in View Only format, you can't save it in Document format with the SaveAs command.

For example, to save the FrameMaker document MyReport.fm as a MIF file, enter **SaveAs m MyReport.fm MyReport.mif**

To print an open file with fmbatch:

In a batch file or at the fmbatch prompt, do one of the following:

• To print a file with its own print settings, enter **Print** *filename*

• To print a file with the print settings of another FrameMaker document, enter **Print** *filename settings_file*. (To set up or change the print settings in the *settings_file* document, open a document—even a new, blank document— choose File > Print, specify the settings you want, and click Save Settings Only. Then save the document.)

For example, to print MyReport.fm with the print settings from the PrintToDuplex.fm document, enter **Print MyReport.fm PrintToDuplex.fm**

Updating files with fmbatch

You can update all cross-references in a document or book that you opened with fmbatch. When you update a book, fmbatch also regenerates all generated files in the book.

When you use a batch file (see "Using fmbatch in batch mode" on page 624) to update and generate files, fmbatch quits if it encounters an error such as an unresolved cross-reference or a missing file (unless you start fmbatch with the -noerrorquit option).

You can also import and update the formats in a document or in all files in a book. To do this, first use fmbatch to open both documents or the document and book (both the target and the source for the import format process).

To update and generate files with fmbatch:

In a batch file or at the fmbatch prompt, enter **Update** *filename* (for example, to update and generate the files in Reference.book, enter **Update Reference.book**).

To import formats with fmbatch:

In a batch file or at the fmbatch prompt, enter **ImportFormats** *options filename filename_with_formats*. The *options* are any of the following.

Option	Result
p	Imports paragraph formats
f	Imports character formats
l (lowercase *L*)	Imports page layouts (master pages)
c	Imports cross-reference formats
v	Imports variable definitions
r	Imports reference pages
t	Imports table formats
x	Imports conditional text settings
k	Imports color definitions
m	Imports math definitions
i	Imports combined fonts (Japanese documents only)
d	Imports document properties
B	Preserves manual page breaks
O (uppercase *O*)	Preserves other format and layout overrides

If you don't specify options, fmbatch imports all formats. The options correspond to the settings available with File > Import > Formats. For information on the settings, see "About import and update settings" on page 409.

For example, to import the paragraph and character formats from Template.fm to Chapter2.fm while preserving the manual page breaks, enter **ImportFormats pfB Chapter2.fm Template.fm**

Closing files and exiting fmbatch

When you close a file or exit fmbatch, the program doesn't check whether you saved changes. So be sure to save any changes you made.

To close a file or exit fmbatch:

In a batch file or at the fmbatch prompt, do one of the following:

• To close a file, enter **Quit** *filename*. For example, to close Chapter2.fm, enter **Quit Chapter2.fm**

• To exit fmbatch, enter **Quit**

Using UNIX commands within fmbatch

You can use any UNIX command from within fmbatch. For example, you may want to copy or move files after you process them.

To use a UNIX command within fmbatch:

In a batch file or at the fmbatch prompt, enter **system "***command***"**. The command must be within single or double quotation marks.

For example, to copy MyFile to /tmp, enter **system "cp MyFile /tmp/MyFile"**

Creating batch files from scripts

You can use fmbatch in shell scripts to automate some FrameMaker operations. For example, a shell script can use fmbatch to generate a book file, save all documents in MIF, edit the MIF files to set the document's window position and size, and convert the MIF files back to Document format.

You can also use UNIX scripts to generate fmbatch batch files. The following example is a C-shell script that builds a batch file to save all documents as MIF files. To use this script, type it exactly as shown, then change to the directory that contains the documents you want to process and type the full path to the script. The script creates a batch file that you can use with fmbatch at the current location.

```
#! /bin/csh -f
set scriptname = createbatch
set batchfile = commands.batch
rm -f $batchfile >& /dev/null
touch $batchfile
foreach f ( * )
  # don't add directories or the batch file itself
  if ( ! -d "$f" && "$f" != "$batchfile" ) then
    echo "Open $f" >> $batchfile
    echo "echo Saving $f to $f.mif" >> $batchfile
    echo "SaveAs m $f $f.mif" >> $batchfile
    echo "Quit $f" >> $batchfile
  endif
end
```

```
echo ""
echo "$scriptname is done. "
```

Printing with fmprint (UNIX)

You use the fmprint script to print one or more FrameMaker documents or books without opening and displaying them. You can also use the print settings from a different FrameMaker document, just as you can when you use the fmbatch Print command (see "Opening, saving, and printing files with fmbatch" on page 625).

To print a file with fmprint:

At a UNIX shell prompt, do one of the following:

• To print a file using its own print settings, enter **fmprint** *filename*

• To print a file using the print settings from another FrameMaker document, enter **fmprint -p** *settings_file filename*. (To set up or change print settings in the *settings_file* document, open the document, choose File > Print, specify the settings you want, and click Save Settings Only. Then save the document.)

Copying file hierarchies with fmcopy (UNIX)

The fmcopy script copies a file hierarchy from one place to another, preserving symbolic links and permissions. Use it to copy FrameMaker installation files from one file system to another.

To copy a file hierarchy:

At a UNIX shell prompt, type **fmcopy** *source_dir target_dir* where *source_dir* is the directory you want to copy and *target_dir* is the directory you want to copy to.

For example, to copy FrameMaker installation files from /var/frame to /var/FrameMaker, type **fmcopy /var/frame /var/FrameMaker**

For on-screen instructions on fmcopy, type **fmcopy** at a UNIX shell prompt.

Inverting images with fminvert (UNIX)

You can use fminvert to invert a monochrome Sun rasterfile or X Windows Dump (xwd) 1-bit image so that portions previously black appear white and portions previously white appear black.

To invert an image:

At a UNIX shell prompt, type **fminvert** *filename inverted_filename* where *filename* is the file you want to invert, and *inverted_filename* is the name of the inverted file.

Converting color images to monochrome (UNIX)

Use xwd8to1 to convert color X11 xwd images to monochrome images. (You can use the screen-capture feature to create xwd images; see "Capturing UNIX screen images" on page 623.)

Each color is converted to either black or white. The conversion is controlled by a cutoff value—between 1 and 100— that determines the intensity at which colors should be converted to black. An intensity value of 1 causes only black to be converted to white. An intensity value of 99 causes all colors except white to be converted to black. If you don't specify a cutoff value, xwd8to1 uses a cutoff value of 50.

To convert a color xwd image to monochrome:

At a UNIX shell prompt, type **xwd8to1 -i *cutoff filename filename.mono*** where *filename* is the name of the color image, *cutoff* is the cutoff value used to convert colors to black or white, and *filename.mono* is the name of the converted file.

Chapter 21: Creating accessible documents (Windows)

Authoring for accessibility

Whether you're publishing a document in HTML, Adobe PDF, or some other format, creating accessible documents requires much more than simply representing the original document accurately. Sighted people can look at a printed page and easily discern the difference between titles, subtitles, columns of text, headers, footers, and so on. Visual clues, such as location of the text on the page, bold text, and large font sizes help them determine the structure of a document so that they can read and navigate it easily.

Assistive technologies such as screen readers can't depend on these visual clues. Instead, they rely on the underlying computer-based information to provide that same structure. As a result, making documents accessible depends on two things:

- Authoring the original documents so that they contain not just content (such as the text in the document) but also information about the structure of the content (such as how the text flows within the page and from page to page).

- Using publishing tools such as Adobe FrameMaker software and Adobe PDF technology that can retain and encode both the content and the structure so that they can be interpreted by Windows-based screen readers.

These same requirements apply to any type of publishing environment, regardless of the file format or application. If you want to make it possible for people with screen readers to navigate documents correctly, the underlying structural information must be present.

Using accessibility features in FrameMaker

The FrameMaker software provides a number of features that improve access for visually impaired users. In particular, it:

- Provides support for high-contrast viewing for users with low visual acuity.

- Creates tagged Adobe PDF files when converting FrameMaker files to tagged PDF, making it easier for people who use screen reader software to navigate a document in the proper reading order. For information on how to turn your FrameMaker documents into tagged Adobe PDF files, see "Defining a tagged Adobe PDF file" on page 575.

- Supports assistive technology, such as screen reader software for the Windows platform.

Screen readers let visually impaired users interact with the computer by interpreting what is happening on the screen and sending that information to speech-synthesis devices. The screen reader will follow the logical structure of the document. Screen readers can read FrameMaker documents viewed in FrameMaker, or tagged PDF documents viewed in Adobe Acrobat 7.0 or Acrobat Reader 7.0.7. Refer to your screen reader documentation for information on installation and use with documents viewed in FrameMaker or Acrobat.

For more information on accessibility in Adobe Acrobat and Adobe PDF documents, see the Acrobat online Help and the Adobe Web site.

Note: UNIX does not offer a general accessibility interface for screen readers.

Setting your FrameMaker workspace for high-contrast viewing

Adobe FrameMaker uses system colors to draw window backgrounds, text, and other graphics. Users who have trouble discerning different colors or variations in contrast, or who have low visual acuity can set high-contrast color schemes and custom text and background colors to make the information in the FrameMaker interface easier to view. You can also use custom system cursors, in addition to the FrameMaker built-in cursors. Users can set the system settings as their application default.

To set FrameMaker for high-contrast viewing:

1 Open the Windows Control Panel.

2 In your Windows system, go to the page where you control the appearance of interface items.

3 Do any of the following:

• To change the appearance of all editable interface elements at once, choose a scheme option, such as one of the High Contrast options.

• To change the appearance of one interface element, choose that element, and then change the appropriate settings.

4 Click Apply.

FrameMaker will adjust colors and sizes of such interface items as the Quick Access Bar, title bars, menus, scroll bars, dialog boxes, palettes, rulers, grids, and icons in window borders.

Important: FrameMaker does not adjust colors and sizes for all items. Some of these include the background color and fonts for drawing the title bar in some palettes, such as Equations, and the fill color of graphic objects.

To use custom system cursors:

1 After you install FrameMaker, locate the maker.ini file in the FrameMaker8 folder.

2 Open the maker.ini file in a text editor.

3 Change the value of UseSystemCursor to On.

4 Save the maker.ini file and restart FrameMaker.

Preparing documents for accessibility

Both FrameMaker documents and tagged Adobe PDF documents can be read by screen readers on the Windows platform.

To make an accessible FrameMaker document or tagged PDF document using FrameMaker, you must create the document with accessibility in mind. Here are some things to consider to optimize your FrameMaker documents for accessibility, and help screen reader applications use them:

Logical reading order Documents are more accessible if they have been authored with a logical structure in mind. Using FrameMaker to define and create document structure, such as titles, chapters, headings, and multicolumn text, can make it easier for assistive technologies such as screen readers to understand the logical reading order of the content without any ambiguity. For example, if a tagged Adobe PDF document has been correctly authored using two columns to create a two-column format, the screen reader will read all the way down the first column and then proceed to the second column. On the other hand, if the writer used tabs to imitate the look of two-column text, the screen reader would not recognize the layout as two-column. Instead, it would simply read horizontally, going from the first line in the first column and then tabbing over to the first line in the second column.

The order in which you create frames in the original FrameMaker document is the order that is represented in the logical structure tree of your tagged Adobe PDF file. Therefore, if you move frames in the FrameMaker layout, the structure of your tagged Adobe PDF file will still show frames in the order created. To correct reading order problems, you can use tools in Acrobat 7.0.

Note: Screen readers may not be able to correctly read multicolumn text if it is viewed in FrameMaker. If you want your FrameMaker documents to be read by screen readers using FrameMaker, use single-column formatting. Otherwise, save the document as tagged PDF.

Alternate text descriptions for graphic objects The document should contain written descriptions of graphic objects in the document, including drop caps. These graphic objects must be in anchored frames. When a screen reader encounters the graphic in the document, it will read the alternate text. Make sure you use text that makes sense when read out of context. For example, you might want to add alternative text that begins with "A graphic depicting" and then describe what the graphic depicts. For more information about adding alternate text, see "Preparing anchored frames for tagged PDF" on page 354.

Fonts Be sure to use fonts that specify character encoding, so that the display and screen reader deliver the correct characters. For more information, see the online manual *FrameMaker Character Sets*.

Navigation The document should include navigational and organization aids, such as a table of contents and useful headings. This provides an easy way for users to move through the document so that they don't have to read the entire document page by page to find what they're looking for.

Testing accessibility in files using a screen reader

Before making a FrameMaker file or tagged PDF file available for other users, test the file using a screen reader. This will show you how the information in the document will actually be presented to users, and how well such things as the reading order and navigational links will work.

If you encounter errors in a tagged PDF file, make corrections, where possible, in the original FrameMaker file, and then resave it as tagged PDF. That way you maintain a single source file for publishing the content in additional formats, such as XML, SGML, XHTML, and so on.

If you have Acrobat 7.0 installed, you can also use Acrobat tools to adjust the tagged PDF structure and the reading order. In this case, however, your changes will be saved only in the PDF file, not in the FrameMaker file. For more information on accessibility tools in Acrobat, see the Acrobat online Help or the Adobe Web site.

To test files for accessibility in screen readers:

1 Start a screen reader for Windows. See the Install ReadMe file (Windows) for supported screen readers.

2 Do any of the following, depending on whether you're reading a FrameMaker file or tagged PDF file:

• Start FrameMaker and open the FrameMaker file in it.

• Start Acrobat and open the tagged Adobe PDF file in it.

3 Use the screen reader to read the document.

4 Check for problems, including the following:

• The document contains graphics, but there are no text descriptions for those graphics. To solve this problem, open the original document in FrameMaker and make sure the graphics are in anchored frames. Then select each graphic, choose Graphics > Object Properties > Object Attributes, and add alternate text descriptions.

• Text in columns isn't read in the correct order. To solve this problem, touch up the reading order of elements in the logical structure tree of your tagged Adobe PDF file using the Tags palette in Acrobat 7.0.

Chapter 22: Structured authoring using DITA

Introduction

Extensible Markup Language (XML) authoring offers benefits to publishing organizations, including content reuse, multichannel publishing, and standards-based information exchange. Darwin Information Typing Architecture (DITA) offers a specific form of XML authoring that has the potential to revolutionize technical documentation.

The Adobe FrameMaker DITA feature extends the XML capabilities of FrameMaker by adding support for core features of DITA. If you are already familiar with the basics of DITA, but are curious as to how DITA can be implemented in FrameMaker, see "About DITA in FrameMaker 8" on page 646.

One question that organizations ask when considering a move to structured authoring is, "Which document type definition (DTD) or schema should we use?" With XML—and associated authoring/publishing tools such as Adobe FrameMaker —the DTD or schema defines the fundamental structure of authored content.

Some organizations build their own DTD or schema; others leverage a preexisting DTD or schema (for example, Text Encoding Initiative, DocBook, or DITA). Factors such as the type of content being managed and the demands for content delivery determine which option an organization chooses.

What is DITA?

As its name states, DITA is an information architecture. DITA is mostly defined by a set of DTDs and a parallel set of schemas, which are maintained by the Organization for the Advancement of Structured Information Standards (OASIS)—a nonprofit e-business consortium. DITA also enjoys the support of an increasing number of Open Source and commercial software products and add-ons that enable users to author and publish their content using the DITA content model.

DITA is more than just a schema/DTD. DITA represents an innovative philosophy and methodology for authoring and managing content. For example, with DITA, a document is not authored from beginning to end; instead, document components, or topics, are developed individually and assembled as needed (perhaps in a different sequence or hierarchy for different forms of output or target audience) using a mechanism called a DITA map. DITA offers a number of such mechanisms that are combined to facilitate content reuse, and multichannel publishing.

A brief history of DITA

In the late 1990s, organizations managing technical documentation faced a number of challenges because of the advent and growth of the World Wide Web and the increased pace of technology development:

- **Increased demand for multichannel publishing**: Content that was once published only in book form now also had to be published to Hypertext Markup Language (HTML) and other output formats. Localization requirements greatly increased the number of required content deliverables.

- **Shorter development cycles**: Software documentation had to be updated and released more rapidly to reflect the faster pace of application updates.

- **Increased demand for customized and versioned content delivery**: As technologies were increasingly sold as solutions built from components, the need to dynamically assemble information from modular components grew.

- **Proliferation of information-on-demand**: With increasing access to information online, organizations could not assume that users would read through an entire manual sequentially from beginning to end. Instead, users expected to have random access to just those pieces of information needed at a specific time.

- **Increase in the linking and cross-referencing of information**: The hyperlinking made popular by the web increased authoring focus on the relationships among pieces of information.

While IBM was further along than most organizations at the time in terms of structured authoring—having pioneered the invention of Standard Generalized Markup Language (SGML) and having deployed a complex, internally built DTD on a broad scale—they still faced substantial challenges along these lines. The information structures developed over the years did not always suit the new forms of content delivery. Document architecture often relied heavily on a book paradigm that did not fully support the more modular forms of output, such as compiled Help or HTML. In some cases, sprawling, complex DTDs represented a huge learning curve for new authors.

Fortunately, the web brought increased publishing complexity as well as an array of new tools for solving publishing challenges. New technologies such as XML, Extensible Style Language Transformation (XSLT), and Java emerged at the same time that IBM was facing their information management challenges. Rethinking the technical documentation publishing process made sense, given both the new challenges and the newly available tools.

Starting in 1999, the DITA document architecture was developed by a cross-company workgroup, including representatives from IBM, Lotus, and Tivoli. The architecture went beyond defining content structure, prescribing authoring techniques as well as specific toolset functionality. An IBM team built this new standard, naming it "The Darwin Information Typing Architecture" and, in April 2001, revealed it to the public via IBM's DeveloperWorks website. Significant updates thereafter led to the release of the DITA Open Toolkit—a set of Open Source software tools for DITA.

In March 2004, IBM donated DITA to OASIS. Since arriving at OASIS, the DITA project has seen unprecedented activity as organizations rush to take advantage of an open standard that solves many of the problems authors have faced for the past decade.

Early DITA adoption at Adobe

Among the early adopters of DITA was Adobe, who faced challenges in their Instructional Communications department similar to the challenges IBM had faced that led to DITA. Not only did Adobe have to manage a large amount of documentation, but they also had to translate and localize the content for global distribution.

With shorter release cycles for software quickly becoming a reality, translation and localization processes became potential bottlenecks for large software companies such as Adobe. Improvements in translation efficiency was one of the primary reasons Adobe selected DITA as an approach to managing Help content. The modular, topic-centric nature of DITA, coupled with its emphasis on content reuse, meant that reusable document components could be translated and localized individually. The components could also be reused and output to multiple formats, which improved both the speed and cost-effectiveness of the localization process.

The Instructional Communications department at Adobe managed all Help content for Adobe Creative Suite® 2 using DITA, and authored it in FrameMaker. Not only was localization less costly and faster, but the modular nature of DITA lent itself naturally to a collection of products such as Adobe Creative Suite: common content components could be reused rather than rewritten for the different contexts in which they appeared. The success of this early DITA implementation led Adobe to apply DITA authoring to other software documentation projects.

Adobe also began incorporating DITA into FrameMaker. With the release of FrameMaker 7.2, Adobe released a Starter Kit for DITA, providing initial basic support of DITA structures. With the release of the Adobe FrameMaker 7.2 Application Pack for DITA, this support was extended to cover a wide range of DITA features. In FrameMaker 8, DITA has been integrated with FrameMaker.
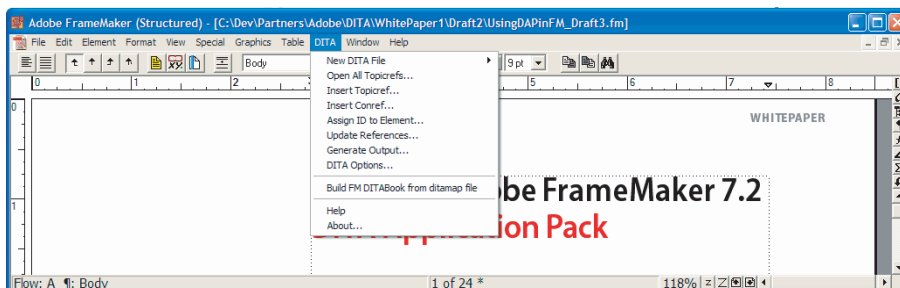
FrameMaker 8 is integrated with DITA and continues to include the DITA menu that was introduced in the FrameMaker 7.2 user interface.

Following is a description of the core features of the DITA feature in FrameMaker.

Import/Export Processing

Table Support. Pre-parses the imported file to count the number of columns in tables that have no column number attribute (required by FrameMaker to display a table). By default, this supports reltable and simpletable elements, but can be extended to handle other table elements as specified by the user (in the ditafm.ini). The column number data is used during the actual import of the file into FrameMaker to properly display those tables. This functionality may be enabled/disabled by the user with the Options command.

Indexterm Support On import, the plug-in converts indexterm elements to a FrameMaker-compatible format. DITA specifies that index subentries are defined by nested indexterm elements. This feature collapses nested indexterm elements into a single semicolon-delimited string within the top-level indexterm element which can be properly interpreted by FrameMaker and converted into an Index marker. This functionality keys off of the value of the class attribute, allowing it to work for specialized instances of the indexterm element. On export, the Index markers are converted back to valid nested indexterm elements. This functionality may be enabled/disabled by the user with the Options command.

Special Reltable Support On import, the plug-in converts reltable/topicmeta elements to reltable/fm-reltablemeta elements (to allow for proper mapping to a FrameMaker TableTitle object). Converts back to valid DITA topicmeta elements on export.

Reference Support All references (topicrefs, conrefs, and xrefs) are represented in FrameMaker as "text insets." These text insets are not linked to text flows but are used as a means of locking a region of text and allowing the user to click on the object. In order to maintain valid DITA files on export, the plug-in converts these text insets to the appropriate XML structure.

DITA Map Support

A structure application is provided for DITA map development. This structure application provides support for topicrefs and relationship tables. Through the import/export client and r/w rules, the resulting .ditamap file is completely DITA-compliant, although within FrameMaker some additional elements have been added to provide proper FrameMaker interaction. These elements have an "fm-" prefix.

When a .ditamap file is opened, all topicref elements are processed to include a new "fm-topicreflabel" element that contains a text inset. This text inset displays the title (navtitle attribute) and filename (href attribute) of the referenced file. When you double click the inset, the referenced file opens for editing. These labels are wrapped in conditional text style named "DITA-Topicref." You can change their color by editing the condition definition in the template file.

New topicref elements can be added using the Insert Topicref command from the DITA menu, or by inserting a topicref element from the element catalog. Inserting a topicref displays a file dialog, letting you select the referenced file. When the file is selected, the fm-topicreflabel element and inset are added. Topicref elements can reference other DITA topic files or DITA map files.

Existing topicref elements can be updated so the label text reflects any updates in the referenced file. To update an existing topicref, select the label and choose DITA > Update References. The Update References command also lets you update all topicrefs in the .ditamap to reflect any changes in the referenced files. It also honors the setting of the topicref's locktitle attribute; if locktitle is set to 'yes' the navtitle text is not updated.

Conref Support
When a file is opened, the content of any conrefed elements is resolved and displayed as a text inset (which is colored and styled by the "DITA-Conref" conditional style). The auto-loading functionality can be enabled or disabled using the DITA Options command in the DITA menu.

The Reference Manager (displayed when you select the Insert Conref command from the DITA menu) allows you to create conrefs to elements within the same file or in other files. In the Reference Manager dialog box, you select from the files currently open, the element name (valid at the current insertion point), then from a list of matching elements which have id attribute values (required for conrefing). The conrefed element is inserted as a text inset. You can double-click the conref to re-open the Reference Manager and change the referenced element or edit the source file. The Reference Manager also lets you display the list of all elements for conrefing (even if they have no id value). You must provide the id value at insertion time.

The Update References command in the DITA menu provides an option to load and build the conref insets (if they were not initially loaded by the auto-load functionality), and update the conrefs to reflect changes in the source files.

Xref Support
On the opening of a file, all xref elements are resolved and displayed as a text inset. The auto-loading functionality can be enabled or disabled using the DITA Options command in the DITA menu.

When an xref element is inserted (from the element catalog), the Reference Manager dialog box appears, allowing you to select the target element for the xref. Unless you enter text in the Alternate Xref Text field, the xref text will match that of the target element. The External Xref button lets you create an xref to an external file.

Building a FrameMaker DITA book from a DITA map file
The Build FM DITABook from ditamap file command in the DITA menu lets you generate a FrameMaker book from a DITA map file.

The highest-level topicrefs in your DITA map become chapters in the FrameMaker book, containing any nested topicrefs. Formatting is determined based on the structure application you have selected for books in the DITA Options dialog box.

General
The DITA Options command in the DITA menu provides the ability to specify the structure applications for the opening of DITA map and DITA topic files, as well as enable/disable various DITA options.

The items in the DITA > New DITA File menu option let you create different types of DITA files. The DITA topic types listed are extracted from the element definition document (EDD) associated with the DITA structure application (as specified in the Options dialog box). All elements of the class "topic/topic" will be added to the DITA > New DITA File menu option, as will all elements of the class "map/map." When you select the type of file to create, you are first prompted for the filename to create. This differs from the standard FrameMaker "New" command in the File menu because FrameMaker does not provide a method for creating an "Untitled" XML file (one that is not saved to the file system). If you want to start with an "Untitled" file, select the standard New command and use the DITA template as the template file.

Key DITA features

Several key features define the DITA approach to managing information:

• DITA architecture is based on topics. These core units of information serve as building blocks for all content.

• DITA topics include three core information types: task, concept, and reference.

• DITA maps assemble topics into sequence and hierarchy tailored to specific delivery requirements.

• The DITA object model is based on inheritance (hence the reference to Darwin). The task, concept, and reference topics, for example, share a common base structure whose characteristics they inherit.

• Links between topics are defined and maintained using relationship tables.

• DITA enables reuse of units of content by means of the conref attribute. An example is a note, common to multiple topics, that can be authored once and included by reference.
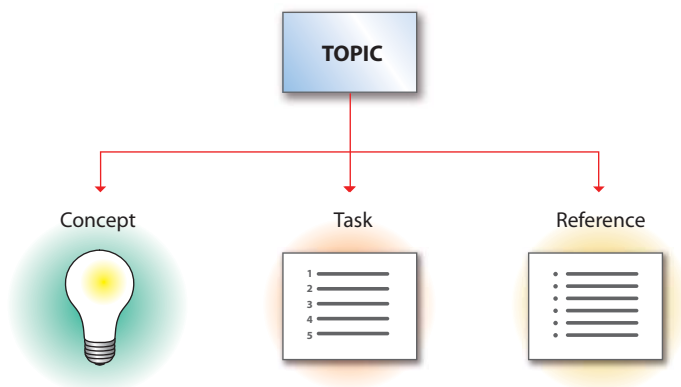
DITA topic, concept, task, and reference information types

The extremely modular, topic-centric nature of DITA is perhaps its most distinctive feature. The DITA topic has been described as "a chunk of information organized around a single subject." Authors new to DITA have to learn to think of content in terms of these modular units of information. Instead of thinking in terms of a single, monolithic document, authors working in DITA must create topics of different types as one process, then define the sequence and hierarchy of these topics for different forms of delivery as a second, independent process.

Benefits of using DITA

Using DITA to manage content can offer many benefits:

• Ease of content reuse

• Ability to publish to multiple output formats using the DITA Open Toolkit

• Enhanced information exchange with other organizations using DITA

- Ability to leverage a growing number of software tools for authoring, managing, and publishing DITA content

- Ease of authoring and publishing Help-based content, including efficient management of hyperlinks and relationships between topics

- Reduction of translation cost as a result of topic-orientation and content reuse

The benefits of DITA will vary depending on specific organizations' publishing requirements, as well as their ability to successfully learn this modular approach to managing content. Some organizations will find DITA well worth the initial investment in restructuring content and adopting topic-based authoring.

Understanding DITA

To understand DITA, you must consider its overall architecture, its philosophy of topic-based content management, and the specific mechanisms by which it is implemented. Beyond the core DITA functionality available from the base information set, an important consideration for most organizations will be how they could customize and extend DITA to their own uses.

DITA architecture

DITA architecture is based on several principles:

- **Reusability and modularity**: The topic-based nature of DITA is a direct response to the realization that effective content reuse is required to contain documentation costs. The modular nature of DITA means that reuse is anticipated at the outset of a project by core features such as topic maps, content references (conrefs), and conditional processing.

- **Inheritance**: DITA can be extended without having to extensively redesign publishing processes. For example, when specializing the content model by defining a new form of topic specific to an industry, the specialized topic inherits from the defined base class of topic, letting users automatically leverage the same processing as the base class.

- **Emphasis on content relationship**: DITA was created with an awareness of the increasing criticality of relating and linking information. The notion of related topics, for example, is anticipated by the content model itself, rather than added after the fact as is common with older, print-centric, sequential architectures.

Topic-oriented authoring

With DITA, information is organized into separate units. Each unit is devoted to just one topic—for example, one concept or one set of instructions—preferably composed with a minimum of information.

DITA provides a standard for structuring topics and content within topics. That standard is based on three broad information categories into which almost all technical information can be classified:

- **Task**: Explanation of how to perform a specific topic (for example, the steps to save a file in a software application).

- **Concept**: Explanation of key conceptual information related to a task.

- **Reference**: Facts relevant to a task. Often reference topics are presented in table or list form to give users quick access to information.

These are considered specializations of the base class of topic, from which they inherit a consistent core structure. Elements common to the three standard DITA information types are title, description, prolog, and body. A DITA document must contain at least one topic, and may contain many.

	Task to Pic	**Concept Topic**	**Reference Topic**
Common structure	**Header:**	**Header:**	**Header:**
	Title	Title	Title
	Short description	Short description	Short description
	Prolog	Prolog	Prolog
	Body:	**Body:**	**Body:**
	taskbody	conbody	refbody
	Related links	**Related links**	**Related links**
Examples of optional elements (within body)	Context	Section	Section
	Prerequisites	Paragraph	Paragraph
	Steps	Lists	Properties lists
	Step-elements	Tables	Tables
	Result	Images	Syntax
	Examples	Examples	Examples
	Post requirements		

Task, concept, and reference inherit common structure from their parent information type topic.

DITA structure supports reuse of independent topics in any arrangement to form new documents. In fact, one of the main reasons for the topic-based nature of DITA is to let authors reuse information.

Examples of reuse include compiling independently created and saved topics into new documents; automating links and cross-references to, from, and within topics and documents; identifying and formatting information for various kinds of distribution; formatting information so it can be handled by diverse processes; and segmenting authoring responsibility across multiple authors or groups. Reuse can occur at the topic level (that is, when you rearrange a collection of output via DITA maps), or at the subtopic level, such as when you reference a specific document component within multiple topics via content reference attributes.

DITA maps
DITA maps offer powerful control over the publishing process, enabling you to define the sequence and hierarchy of collections of topics at the point of content delivery.

This method of assembling content from a set of components can make the publishing process very flexible, enabling single-sourced, multichannel publishing. For example, rather than writing two slightly different versions of the same document for different target audiences, authors can use DITA maps to produce multiple versions without redundant effort.
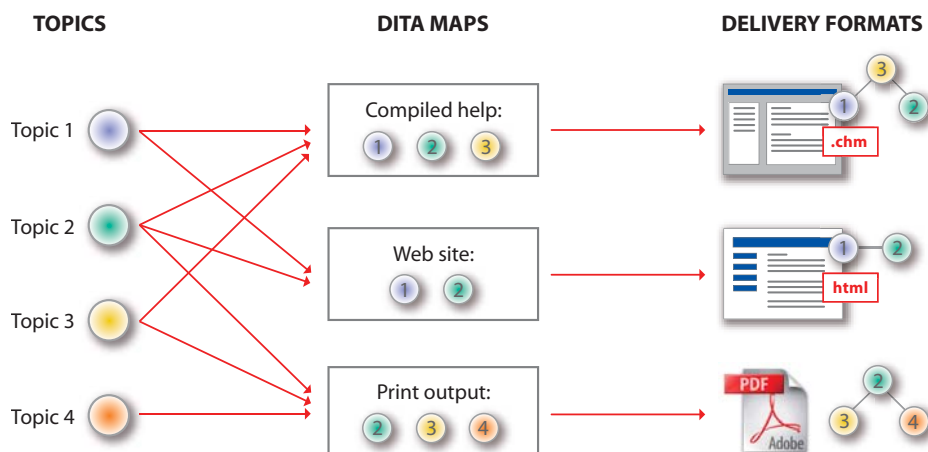
Single-source publishing using DITA maps to produce multiple delivery formats

When creating DITA maps, you work primarily with four XML elements: `<topicref>`, `<topichead>`, `<topicgroup>`, and `<topicmeta>`.

• The `<topicref>` element references a topic; you sequence and nest these elements to define how topics are arranged in published output.

• The `<topichead>` element lets you add topic headings to sections containing multiple topic references.

• With `<topicgroup>`, you create collections of topic references without affecting their hierarchy. For example, you could identify groups for linking without changing the overall structure of published output.

• The `<topicmeta>` element is used to define the metadata that applies to a topic (and nested topics) when it appears in a map. It can also be used to override the title and short description of the topic when linking.

When you have created your DITA map, a subsequent publishing process assembles topics in the ways defined by the DITA map.

Content referencing for reuse

Along with DITA maps, the conref (content reference) attribute is a primary mechanism for content reuse. It references content that is anchored with an id attribute and inserts it in place of the element with the conref attribute.

You can use conrefs either in a topic or in a map, to point to content in another topic or map. When you use a conref, a change to that one referenced, single-document component will ripple through all documents that reference it.

A conref in one file:

```
<note conref="myfile.dita#mytopic/mynote"></note>
```

```
can reference content in another file (in this case, "myfile.dita"):
```

```
<topic id="mytopic">
```

```
...
```

```
<note id="mynote">This is a reusable component</note>

...

</topic>
```

by specifying in the conref attribute the name of the file, the id attribute of the containing `<topic>`, and the id of the referenced component. It is important that the element names match, and that the element using the `conref` attribute is valid at the insertion point.

You can also use conrefs to reference content within the same file (omit the filename from the `conref` attribute in this case).

While conrefs are resolved in typical DITA publishing processes, and the appropriate referenced section appears in place of the reference, XML authoring tools that aren't DITA-aware will not generally display the anchored text in the conref location by default. FrameMaker adds support for conrefs, including display of referenced content in the authoring environment.

Files supporting DITA

The app directory contains the files needed to support DITA. It includes the following files:

File	Purpose
ditabase.dtd	The parent file for the DITA 1.0 DTD
concept.dtd	Specialized DTDs provided with DITA 1.0
reference.dtd	
task.dtd	
topic.dtd	
map.dtd	DTD for DITA map files
highlightDomain.ent	Modular components of the DITA DTD
mapGroup.ent	
programmingDomain.ent	
softwareDomain.ent	
topicDefn.ent	
uiDomain.ent	
utilitiesDomain.ent	

File	Purpose
concept.mod	Modular components of the DITA DTD
highlightDomain.mod	
map.mod	
mapGroup.mod	
metaDecl.mod	
programmingDomain.mod	
reference.mod	
softwareDomain.mod	
task.mod	
tblDecl.mod	
topic.mod	
topicAttr.mod	
uiDomain.mod	
utilitiesDomain.mod	
catalog-dita.txt	Catalog of DITA public entities (text version).
catalog-dita.xml	Catalog of DITA public entities (XML version).
edd	FrameMaker EDD, including formatting rules for supported DITA elements
rules	Read/write rules
template	Structured FrameMaker template to use on import
import.xsl	XSLT stylesheet. Invoked by DITA structure application on import to transform DITA constructs to FrameMaker objects.
export.xsl	XSLT stylesheet. Invoked by DITA structure application on export to transform FrameMaker objects to the DITA content model.

The default structapps.fm file contains the definition of the DITA application. For information on creating and editing structapps.fm, see the online manual, the Structured FrameMaker Developer's Guide.

Next steps

Organizations that consider the potential value of DITA should carefully consider whether it is appropriate for their needs. While DITA is enjoying increasing popularity, with a corresponding increase in the number of DITA-aware publishing tools, it may not be the right structure for every situation.

Evaluating DITA for your organization

The following questions can help evaluate whether the DITA content architecture is an appropriate solution for your needs:

• How topic-oriented is the existing and anticipated content?

• Is content currently structured with XML?

• What are the required/desired forms of published output?

• How much customization for various audiences is required?

• How extensive are available authoring and document architecture resources?

Not all content is topic-oriented and thus may not be suited to authoring with DITA. DITA is appropriate when modular content is possible, such as with content that naturally falls into independent topics or that has already been authored in separate topics. A sequential structure—such as a novel, unique research report, or feature article— would usually not be suited to DITA.

If topic-oriented authoring architecture is possible and appropriate, the next consideration would likely be the amount of effort required for migrating to and working in DITA. If structured authoring (that is, XML authoring) has already been or is being implemented, it will be easier to start implementing DITA.

An evaluation of the effort required for DITA should also include realistic consideration of the available document architecture resources, as well as authors' talent for and dedication to consistently writing for DITA's topic-centric structure. The appeal of DITA-associated toolsets, such as the DITA Open Toolkit, the prospect of efficient content reuse and extensibility, and other powerful advantages DITA promises for publishing must be weighed against the necessity that the content being authored can conform to modular structure.

The most suitable content for DITA may be software, or similarly, documentation that can be effectively delivered in the form of compiled Help. In such cases, writers are usually very familiar with, if not already using, topic-based authoring. The further content moves away from such a paradigm, the more analysis is required to determine if DITA is the best alternative.

Before embarking on an enterprise-wide move to a DITA-based document structure and authoring paradigm, it might be prudent to start with a pilot project of a clearly defined scope to discover the benefits of, and the resources that would be required for, a larger-scale transition to DITA.

About DITA in FrameMaker 8

The DITA application pack in FrameMaker 8 extends the structured authoring functionality of FrameMaker to allow authors to work more efficiently. The DITA feature consists of a set of plug-ins combined with a set of structure applications, which together provide core tools for DITA authoring and publishing. The DITA feature can be extended for a variety of uses.
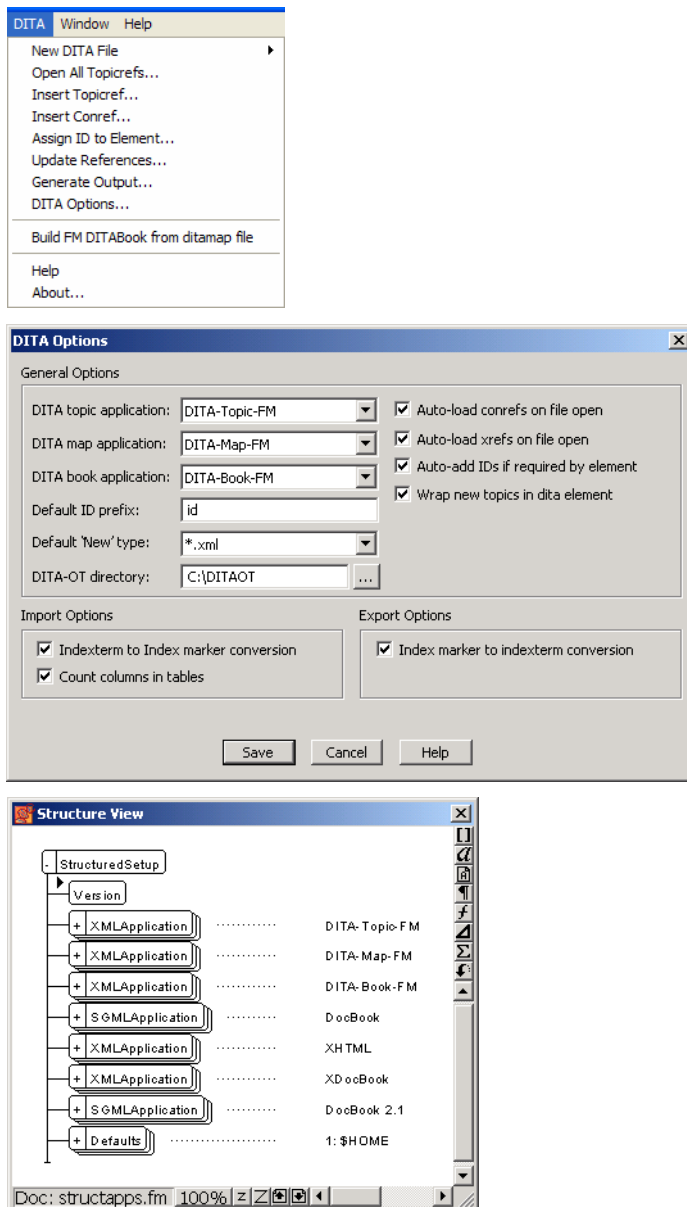
FrameMaker DITA supports DITA authoring and publishing through a set of plug-ins and structure applications.

DITA features

Features offered with DITA support:

- **Import/Export processing**: Includes the use of some FrameMaker-specific constructs and elements (notable by their fm prefix), which are present while authoring in FrameMaker but translated to DITA-conformant XML during the import/export process, thus ensuring interoperability with other systems.

- **DITA map support**: The DITA feature in FrameMaker offers a structure application for creating and editing DITA maps, as well as managing relationship tables. Double-clicking on a topic within a map opens the topic for editing.
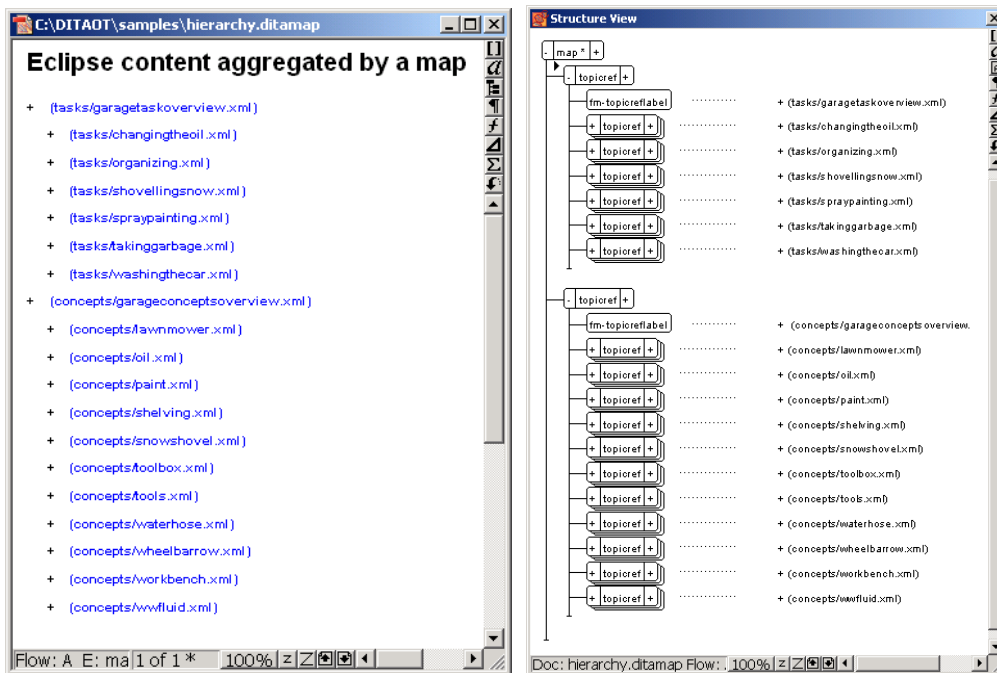
Working with DITA maps in FrameMaker

- **Conref support**: When you open a file, DITA resolves conrefs, and displays the referenced content as a text inset in FrameMaker. The DITA feature also offers the Reference Manager dialog box for inserting conrefs.
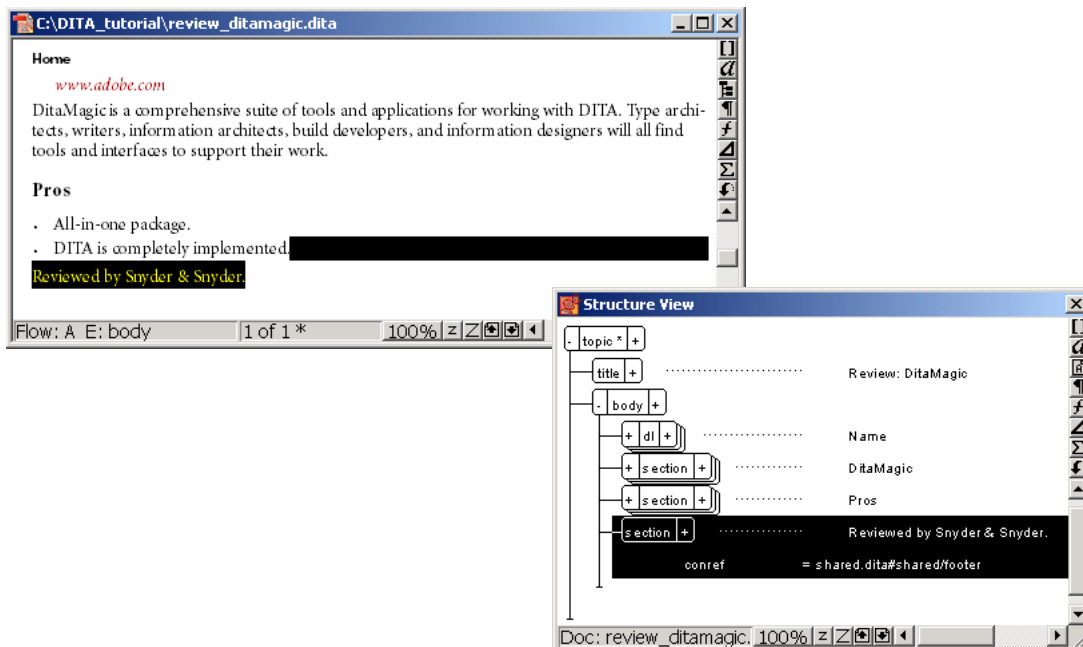
Working with DITA conrefs in FrameMaker

- **Xref support**: When you open a file, the DITA feature automatically resolves <xref> elements and displays any associated text within FrameMaker. You can turn this feature on or off.

- **Output support**: For content generation—such as Adobe PDF, compiled Help, and HTML—the DITA feature enables you to build a FrameMaker book from a DITA map.

You can customize the DITA features using the DITA Options dialog box or by editing the ditafm.ini file.

Applications in DITA

The DITA integrated with FrameMaker 8 includes four FrameMaker applications:

- **DITA-Topic-FM**: Use this application to author topic, concept, reference, and task information types. If needed, the EDD and structured template used in this application can be optimized for screen view and topic proofing (see "Modifying template components and files for DITA structured templates" on page 662).

- **DITA-Map-FM**: Use this application to create and edit DITA maps (both .map and .ditamap).

- **DITA-Book-FM**: Use this application to build a FrameMaker book that consists of all the files in an open DITA map (<dita>, <ditamap>, or <map>). The EDD and structured template used in this application can be customized to format your content for hardcopy or PDF (see "Modifying template components and files for DITA structured templates" on page 662).

Each application has an application definition that points to its components:

- Complete DITA DTD

- Read/write rules file

- A template (with a separate EDD)

- Application programming interface (API) clients and XSLT processing files, if necessary

- Entity locations

DITA-Topic-FM, DITA-Map-FM, and DITA-Book-FM use an API client for import and export; DITA-Book-FM also uses an XSLT for preprocessing. The structure defined in DITA-Book-FM encompasses all the elements included in DITA-Topic-FM, and it has some additional FrameMaker-specific wrapper elements to enable FrameMaker book-building. To this end, this application also points to one non-DITA-generic .dtd file, fm-ditabook.dtd.

Using DITA in FrameMaker 8

Earlier versions of FrameMaker provided DITA application packs and S1000D to let developers fully evaluate and enhance XML authoring and publishing capabilities within FrameMaker using two leading open standards. In addition, both application packs were companion pieces to earlier versions of the FrameMaker Developer Kit (FDK) that provided sample content, tools, applications, and documentation.

FrameMaker includes an in-built DITA application pack and a DITA menu, which facilitate DITA authoring. You can generate a FrameMaker document directly from a DITA Map. You can use the standard FrameMaker features while authoring DITA content. With DITA's modular, reusable information elements, you can publish structured documents across different formats and media, and also flexibly recombine information in almost any way you like. DITA supports dynamic and personalized delivery of structured content, thus putting the reader in charge of what content is important and how it should be packaged.

In structured FrameMaker, you open a new document and create a map to organize topics into the hierarchy for a help system or website, or into a nested sequence for a book. You can also generate navigation hierarchies from the map and generate links that are added to the topics.

DITA application pack enhancements include the following:

- The DITA application pack supports Unicode.
- You can generate a single compound FrameMaker document from a ditamap file and save it in the required format (e.g., as a PDF file). The generated file is independent without any references to a document.

Note: The DITA application pack no longer supports the functionalities available through the use of the open toolkit (OT).

Creating a DITA map

DITA maps offer powerful control over the publishing process, enabling you to define the sequence and hierarchy of topics at the point of content delivery.

This method of assembling content from a set of components can make the publishing process very flexible, enabling single-sourced, multichannel publishing. For example, rather than writing two slightly different versions of the same document for different target audiences, authors can use DITA maps to produce multiple versions without redundant effort.

While creating DITA maps, you work primarily with four XML elements: `topicref`, `topichead`, `topicgroup`, and `topicmeta`.

- The `topicref` element references a topic; you sequence and nest these elements to define how topics are arranged in published output.
- The `topichead` element lets you add topic headings to sections containing multiple topic references.

- With `topicgroup`, you create collections of topic references without affecting their hierarchy. For example, you can identify groups for linking without changing the overall structure of published output.

- The `topicmeta` element defines the metadata that applies to a topic (and nested topics) when it appears in a map. It can also be used to override the title and short description of the topic when linking.

To create a DITA map:

1 Select DITA > New DITA File >New <map>. The Enter a New DITA Map File Name dialog box appears.
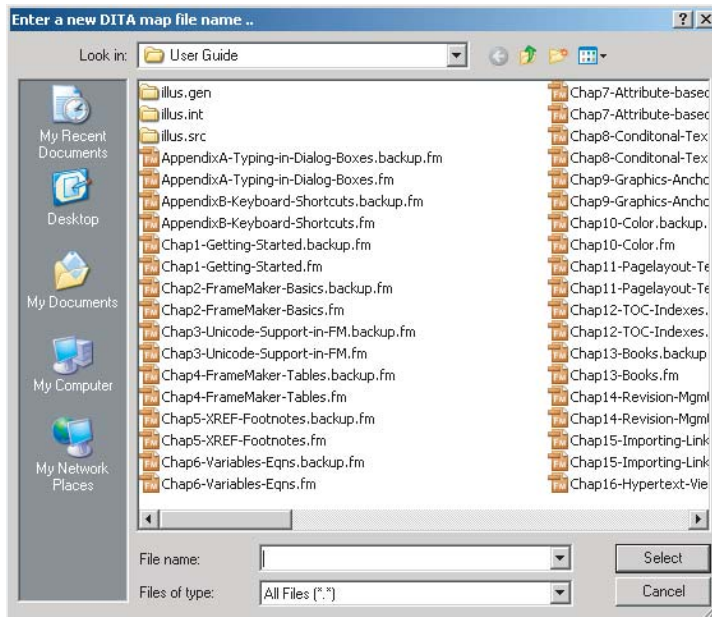
2 In the File Name field, specify a unique name for the map file.

Note: If you do not provide a filename extension for the new file, a default name is added based on the type specified in the Default File Type option in the DITA Options dialog box. DITA map files are assigned a .ditamap extension.

3 Click Select. A new window appears for your new DITA map with the default title text MAP TITLE.

4 In the Structure View window, click the plus (+) sign at the right-hand side of the <map> element bubble.

5 Double-click the title attribute.
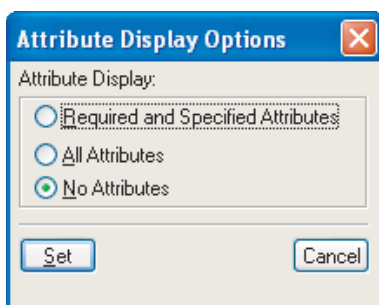
6 In the Attributes dialog box, highlight the text in the Attribute Value field and specify the desired value.

7 Click Set Value, and then click Done. The new DITA map file is saved with a .ditamap extension.

Creating a DITA topic

The DITA Options dialog box provides a check box for automatically wrapping new topic-level elements, such as `topic`, `concept`, `reference`, and `task`, with a `dita` element (the default). Select this option and then create a new topic.

To create a DITA topic:

1 Select DITA > DITA Options, and choose Wrap New Topics In Dita Element.
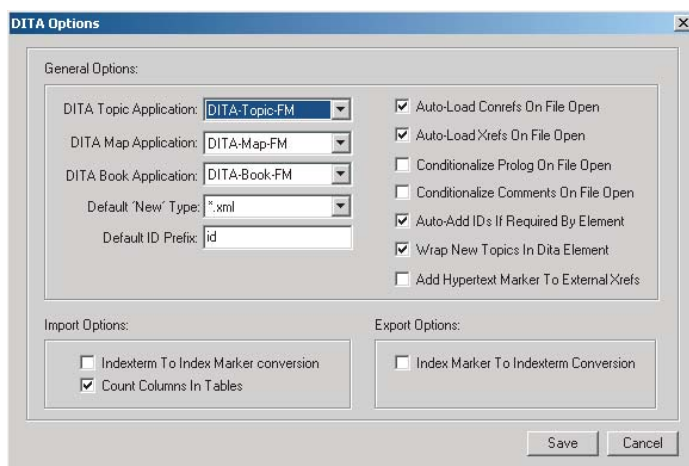
2 Click Save.

3 Select DITA > New DITA File > New <topic>.

4 Click Select. A new window appears for your new DITA topic with the default title text TOPIC TITLE.

5 In the Structure View window, click the plus (+) sign at the right-hand side of the <topic> element bubble.

6 Double-click the title attribute.

7 In the Attributes dialog box, highlight the text in the Attribute Value field and specify the desired value.

8 Click Set Value, and then click Done. The new DITA topic file is saved as an XML file.

Note: If you do not provide a filename extension for the new file, an extension is added based on the type specified in the Default File Type option in the DITA Options dialog box.

Creating a DITA concept

You can create concept topics to define terms and explain concepts.

To create a DITA concept:

1 Select DITA > New DITA File > New <concept>.

2 Click Select. A new window appears for your new DITA concept with the default title text TOPIC TITLE.

3 In the Structure View window, click the plus (+) sign at the right-hand side of the <concept> element bubble.

4 Double-click the title attribute.

5 In the Attributes dialog box, highlight the text in the Attribute Value field and specify the desired value.

6 Click Set Value, and then click Done. The new DITA concept file is saved as an XML file.

Note: If you do not provide a filename extension for the new file, an extension is added based on the type specified in the Default File Type option in the DITA Options dialog box.

Creating a DITA task

You can create a task topic to answer "How do I?" questions for a specific task by providing step-by-step procedures.

To create a DITA task:

1 Select DITA > New DITA File > New <task>.

2 Click Select. A new window appears for your new DITA task with the default title text TOPIC TITLE.

3 In the Structure View window, click the plus (+) sign at the right-hand side of the <task> element bubble.

4 Double-click the title attribute.

5 In the Attributes dialog box, highlight the text in the Attribute Value field and specify the desired value.

6 Click Set Value, and then click Done. The new DITA task file is saved as an XML file.

Creating a DITA reference

You can create a reference topic that includes content such as additional information, a tip, a warning, or a simple note.

To create a DITA reference:

1 Select DITA > New DITA File > New <reference>.

2 Click Select. A new window appears for your new DITA reference with the default title text TOPIC TITLE.

3 In the Structure View window, click the plus (+) sign at the right-hand side of the <reference> element bubble.

4 Double-click the title attribute.

5 In the Attributes dialog box, highlight the text in the Attribute Value field and specify the desired value.

6 Click Set Value, and then click Done. The new DITA reference file is saved as an XML file.

Opening all topic references in a .ditamap file

The `topicref` element identifies a topic (such as a concept, task, or reference) or other resource. A `topicref` element can contain other `topicref` elements, allowing you to express navigation or table-of-contents (TOC) hierarchies, as well as imply relationships between the containing `topicref` element and its children. You can set the collection-type of a container `topicref` element to determine how its children are related to each other. You can also express relationships among `topicref` elements using group and table structures (`topicgroup` and `reltable`). Relationships are expressed as links in the output, with each participant in a relationship having links to the other participants by default. You can fine-tune the output from your map by setting different attributes on `topicref` elements. For example, the `linking` attribute controls how relationships to other `topicref` elements are expressed as links, and the `toc` attribute controls whether the `topicref` element is displayed in the TOC or navigation output.

To open topic refererences in a .ditamap file:

1 Open a .ditamap file containing topic references.

2 Select DITA > Open All Topicrefs.

3 Click OK to confirm the message displayed. The linked topic reference files are opened in separate windows.

Inserting a topicref element in a .ditamap file

The Insert Topicref command inserts a new `topicref` element at the current insertion point of an open .ditamap file, or overwrites a selected `topicref` element to reference a new file.

To insert a topicref element in a .ditamap file:

1 Open a .ditamap file.

2 Right-click an insertion point where you want to insert a new `topicref` element, and select Insert Topicref. The Select a Topicref File dialog box appears.
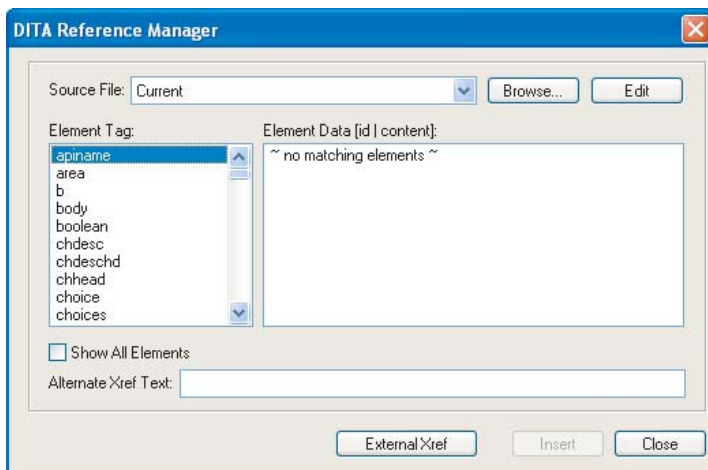
3 Select a file, or in the File Name field, specify the name of the topic file you want to insert as a topic reference in the DITA topic.

4 Click Select. The topic reference is inserted in the .ditamap file.

Inserting a conref element in a DITA topic

This section may be confusing because conref is described as a feature, an element, and an attribute. CW 4/17

DITA supports the conref feature of the DITA specification. When this feature is invoked, DITA inserts a content reference as a text inset and tags it with the `DITA-Conref` conditional text tag. By default, the text color of this condition tag is blue. However, you can modify it using the structured-template designer.

The `Conref` attribute is used to reference an ID on a topic that can be reused. For example, you could create a series of topics in a compound (DITA) or nested context for authoring convenience, and then reference each topic individually into a new target location. During output processing, a lookup process pulls the contents of the first topic into the calling topic markup that has the conref attribute.

To insert a conref element in a DITA topic:

1 Open a .dita file.

2 Collapse the `body` element.

3 Click an insertion point below the `body` element and add a sibling to it.

4 Select DITA > Insert Conref. The DITA Reference Manager appears.
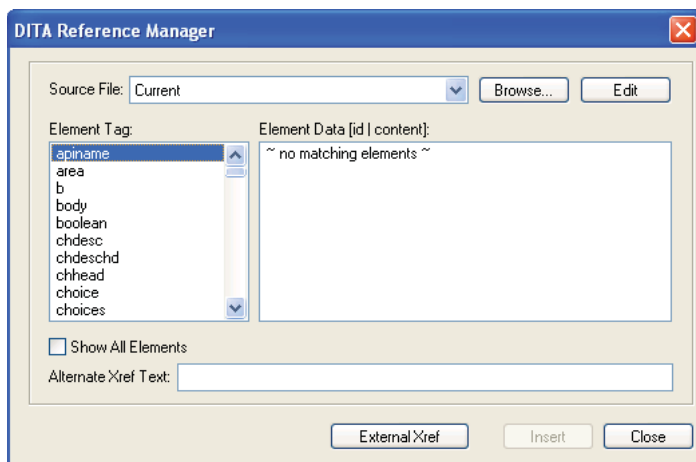
5 In the Element Tag pane, select a tag.

6 In the Element Data field, select the desired item, and click Insert.

7 Save and close the file.

By default, error messages are generated when you open a file that either contains a `conref` *element or an* `xref` *element that can't be resolved, or references a file with one of those. If you prefer not to receive these messages, choose DITA > DITA Options, and deselect both Auto-Load Conrefs on File Open and Auto-Load Xrefs on File Open.*

Inserting cross-references in a DITA file

if the cross-reference element is available in your document, you can define the destination and link text for internal and external `xref` elements.

To insert an internal cross-reference:

1 Open a .dita file.

2 Click an insertion point within an empty element.

3 In the Element catalog, select Xref, and click Insert. The DITA Reference Manager appears.
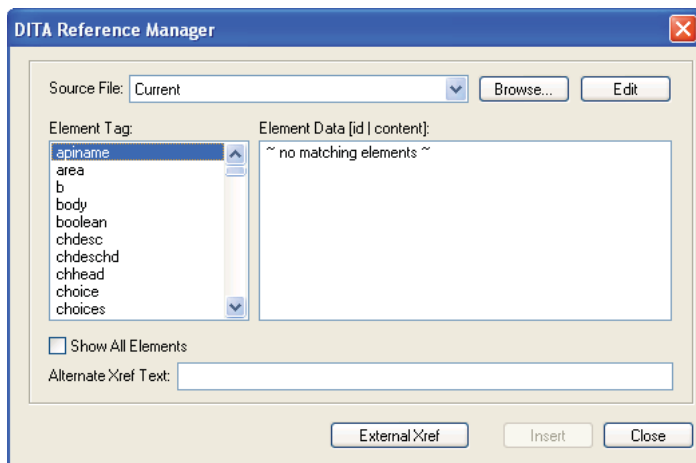
4 Select an Element Tag from the list for which element data is available.

Note: Select the Show All Elements option to view all element data in the Element Data list.

5 In the Alternate Xref Text field, type a text description that is displayed in place of the text of the selected element.

6 Click Insert. The Update button is displayed if you are modifying an existing `xref` element.

To insert an external cross-reference:

1 Open a .dita file.

2 Click an insertion point within an empty element.

3 In the Element catalog, select Xref, and click Insert. The DITA Reference Manager appears.
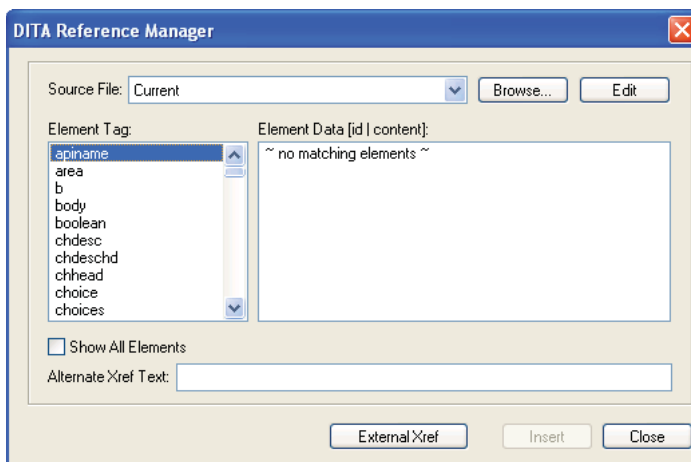
4 Click External Xref. The DITA External Xref dialog box appears.

5 In the Xref Target (href) field, type the URL of an external website.

6 In the Xref Link Text field, type a text description that is displayed to indicate the referenced external website.

7 Click OK.

8 Click Close.

Note: When an external reference has been created, you can modify it by double-clicking it.

Assigning an ID to an element

You can configure DITA to assign a generated ID to the selected element. The ID value assigned to the selected element is composed from values representing the year, month, day, hours, minutes, and seconds, plus two randomly generated values. It is designed to be unique per-user for 100 years. You can specify an ID prefix in the Options dialog box. If you specify a ID prefix for each user, the generated IDs are unique for each member of your team.

To assign an ID to an element:

1 Select an element in the Structure View window.

2 Select DITA > Assign ID to Element, or right-click the element, and select Assign ID to Element.

DITA generates an ID automatically and assigns it to the selected element.

Updating DITA references

You can configure DITA to update the content of `topicref`, `conref`, or `xref` elements.

Updating DITA maps

While working in DITA maps, you might find it necessary to update one or more `topicref` elements, which also updates the DITA maps.

The Update Selected Topicref option is available only when your insertion point is in a `topicref` element. The Update All Topicrefs in File option is only available when your insertion point is not in a `topicref` element. In addition, the Update All Topicrefs in File option honors the setting of the `locktitle` attribute. If it is set to `Yes`, the `navtitle` attribute of the `topicref` element will not be updated.

To update DITA maps:

1 Select DITA > Update References.

2 Do one of the following:

- If a `topicref` element is selected, click the Update Selected Topicref option. DITA updates the content of the selected `topicref` element.

- If a `topicref` element is not selected, click the Update All TopicRefs in File option. DITA updates all `topicref` elements in the current file to reflect any changes to titles in referenced files.

3 Click OK.

Updating DITA topics

While working in DITA topics, you might find it necessary to update all `conref` or `xref` elements.

To update DITA topics:

1 Select DITA > Update References.

2 Do one of the following:

- Select the Update All Conrefs In File option. DITA updates all `conref` elements in the current file to reflect any changes to the source content.

- Select the Update All Xrefs In File option. DITA updates all `xref` elements in the current file to reflect any changes to titles in referenced files.

3 Click OK.

Generating a FrameMaker document from a DITA map

You can generate a FrameMaker document from a DITA map.

Generate a FrameMaker document from a DITA map

1 Open a .ditamap file.

2 Select DITA > Generate FM document from DITAMap. The Enter new Document Name dialog box appears.

3 In the File Name field, specify the name of the FrameMaker document you want to create with the .fm extension. FrameMaker generates the new structured FrameMaker document using the content from the .ditamap file. A message confirms the successful completion of this task.

4 Click OK.

Setting DITA options

You can use the DITA Options dialog box to set general, import, and export-related DITA options.

1 Select DITA > DITA Options. The DITA Options dialog box appears.
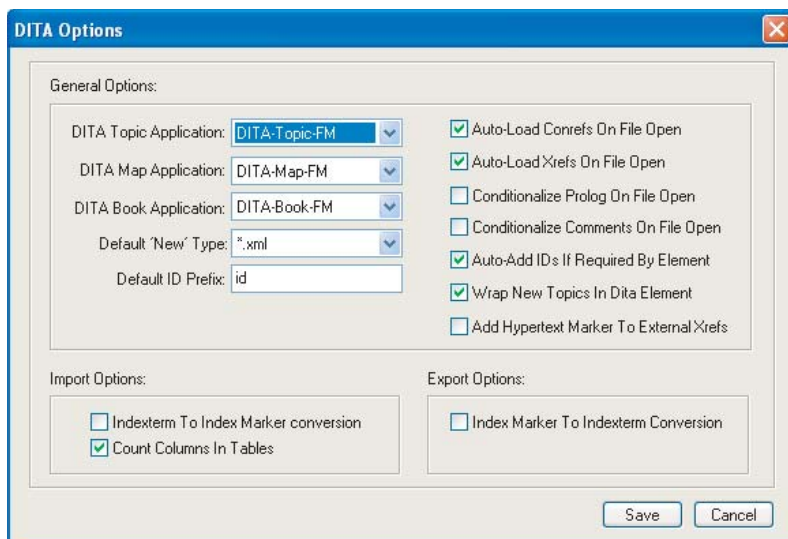
2 In the DITA Topic Application list, select a Topic Application. This selection determines the structure application used when you open a new topic by double-clicking a topic reference, content reference, or cross-reference, or save a topic opened in FrameMaker. It also determines the application used when DITA programmatically opens a topic file when resolving references. In addition, this selection defines the "New <map>" entry that appears in the DITA > New DITA File menu. The options available in the DITA Topic Application list are determined by the available XML applications you have defined in your structapps definition file (structapps.fm).

3 In the DITA Map Application list, select a Map Application. This selection determines the structure application used when you open a new map by double-clicking a topic reference that references a DITA map, or save a map opened in FrameMaker. In addition, this selection defines the "New <topic>," "New <concept>," "New <task>," and "New <reference>" entries that appear in the DITA > New DITA File menu. The options available in the DITA map application list are determined by the available XML applications you have defined in your structapps definition file (structapps.fm).

4 In the DITA Book Application list, select a Book Application. This selection determines the structure application used when you generate a FrameMaker book from a DITA map using Build FM DITABook from the DITA map File option. The options available in the DITA Book Application list are determined by the available XML applications you have defined in your structapps definition file (structapps.fm).

5 Select *.xml or *.dita in the Default 'New' Type list. The default 'New' type specifies the file extension for a new topic (.xml or .dita). This extension is applied only if you do not specify an extension for the new file.

6 Specify an ID prefix in the Default ID Prefix field. This prefix is associated with new IDs generated by DITA.

7 Deselect the Auto-Load Conrefs On File Open option. By default, this option is selected, and content references are automatically loaded when you open a .dita file.

8 Deselect the Auto-Load Xrefs On File Open option. By default, this option is selected, and cross-references are automatically loaded when you open a .dita file.

9 Select the Conditionalize Prolog on File Open option. When a DITA file that contains a `prolog` element is imported with this option selected, a condition tag named `DITA-Prolog` is applied. By default, the structured template contains these conditions set to **`Hide`**. In addition, the conditional text is saved (exported) regardless of whether it is showing ("OutputAllTextWithoutPIs"). If, on import, no associated condition tag is found in the structured template, the `DITA-Prolog` is added and set to `Show` (in Red).

*Note: If this option is not selected, all **prolog** (or draft-comment) elements are imported and displayed using the formatting from the EDD and structured template with no condition tags applied.*

10 Select the Conditionalize Comments on File Open option. When a DITA file that contains a `draft-comment` element is imported with this feature selected, a condition tag named `DITA-Comment` is applied. By default, the structured template contains these conditions set to `Hide`. In addition, the conditional text is saved (exported) regardless of whether it is showing ("OutputAllTextWithoutPIs"). If, on import, no associated condition tag is found in the structured template, the `DITA-Comment` is added and set to `Show` (in red). If Conditionalize Comments on File Open is not selected, all `draft-comment` elements are imported and displayed using the formatting from the EDD and structured template with no condition tags applied.

11 Deselect the Auto-Add IDs if Required by Element option. By default, this option is selected, and IDs are automatically added to elements that require IDs. The ID value assigned to the selected element is composed of values representing the year, month, day, hours, minutes, and seconds, plus two randomly generated values. It is designed to be unique per-user for 100 years.

12 By default, the Wrap New Topics In DITA Element option is selected and FrameMaker automatically wraps new topic-level elements such as `topic`, `concept`, `reference`, and `task`, with a `dita` element (the default). Deselect this option, if required.

13 Select the Add Hypertext Marker to External Xrefs option to add all new hypertext markers you define in a DITA file to external `xref` elements. You can generate an active PDF link to a URL when xref elements with a source using the external attribute are saved as PDF from an open document. If you select this option, when you open a DITA file that contains an xref element with a source attribute of external, the element receives a link-asis character format and an unstructured FrameMaker is placed therein. The text of the marker is the value of the xref element's href, preceded by "message URL ." This will generate an active URL hyperlink that can be saved as PDF. (Previously, only fm-xref elements could produce an active link in a PDF file generated from within FrameMaker using this application.)

Note: This doesn't make "internal" xrefs clickable in a PDF. To accomplish that, an fm-xref can be used wherever the associated text can be gleaned from the source of the fm-xref.

14 Select the Indexterm to Index Marker Conversion option to convert all index terms to `index` marker elements while importing a file into a structured document.

15 By default, the Count Columns in Tables option is selected. Deselect this option if you do not want FrameMaker to track the number of columns across tables while importing a file into a structured document.

16 Select the Index Marker to Indexterm Conversion option to convert all index markers to `index term` elements while importing a file into your structured document.

Setting options to display attributes

Attributes are used to help describe XML elements or provide additional information that can be used to, for example, identify an element or apply formatting controls. Before working with attributes, you need to be able to identify attributes in a document and expand or collapse them as required.

To set attribute display options:

1 Select View > Attribute Display Options. The Attribute Display Options dialog box appears.
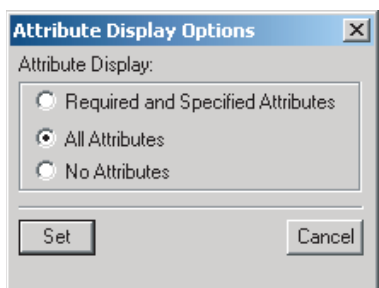
2 Do one of the following:

• If you want elements to display only attributes that are either required or have values in the Structure View, select Required and Specified Attributes.

• If you want elements to display all the attributes assigned to them in the Structure View regardless of values or requirements, select All Attributes.

• If you want all elements to display their attributes collapsed in the Structure View, select No Attributes.

3 Click Set.

Building FrameMaker books from DITA maps

The Build FM DITAbook From Ditamap file command lets you generate a FrameMaker book from a ditamap file.

The highest-level topcirefs in your DITA map become chapters in the FrameMaker book, containing any nested topicrefs. Formatting is determined based on the structure application you have selected for books in the DITA Options dialog box.

To build a FrameMaker book from a DITA map file:

1 Choose DITA > Build FM DITABook from DITA Map File.

Note: Whenever you want to build a FrameMaker book from a DITA map, invoke the DITA-Map-FM application to ensure that all the appropriate preprocessing and postprocessing takes place.

2 In the Choose a Ditamap File dialog box, select .ditamap file, and then click Select.

Note: The book is generated using the DITA Book application specified in the DITA Options dialog box.

3 In the Save Book dialog box, type a unique name for the book in the File Name field, and then click Save. A book window appears, and each file is added to the book.

All of the power and capabilities of FrameMaker books are now at your disposal—from Table of Contents and Index generation to the creation of high-quality PDF and HTML output.

Note: Double-clicking one of the files in the book window opens that file in a tab. Double-click the file name in the book window a second time to open it in a separate window.

4 Save the book.

Using indexterms

DITA supports `indexterm` marker elements in FrameMaker. The API client converts FrameMaker index markers with colon-delimited subentries to nested XML `indexterm` elements for seamless export, and it reverses the conversion for seamless import.

Before you convert index terms, copy the following code into WordPad, and save it as an XML file with the name "review_ditamagic.xml", in any folder. Open the file in FrameMaker using the DITA-Topic-FM Structured Application:

```
<?xml version="1.0" encoding="UTF-8"?>

<!DOCTYPE topic PUBLIC "-//OASIS//DTD DITA Composite//EN" "ditabase.dtd" [

<!-- Begin Document Specific Declarations -->

<!-- End Document Specific Declarations -->

]>

<topic id = "software_review_ditamagic"

    xmlns:ditaarch = "http://dita.oasis-open.org/architecture/2005/">

<title>Review: DitaMagic</title>

<body><dl><dlentry><dt>Name</dt>

<dd>DitaMagic</dd></dlentry>

<dlentry><dt>Version</dt>

<dd>1</dd></dlentry>

<dlentry><dt>Vendor</dt>

<dd>InfoTypes Ltd.</dd></dlentry>

<dlentry><dt>Platforms</dt>

<dd>Linux, Windows</dd></dlentry>

<dlentry><dt>Price</dt>

<dd>$100</dd></dlentry>

<dlentry><dt>Home</dt>

<dd><xref  href = "http://www.adobe.com/" scope =
"external">www.adobe.com</xref></dd></dlentry></dl>

<section>DitaMagic<indexterm class = "- topic/indexterm ">DITA</indexterm><indexterm

    class = "- topic/indexterm ">software</indexterm><indexterm
```

```
    class = "- topic/indexterm ">authors</indexterm> is a comprehensive

suite of tools and applications for working with DITA. Type architects,

writers, information architects, build developers, and information

designers will all find tools and interfaces to support their work.</section>

<section><title>Pros</title><ul><li>All-in-one package.</li>

<li>DITA is completely implemented.</li></ul></section>

<section conref = "shared.dita#shared/footer"></section></body></topic>
```

To convert indexterms:

1 Select File > Open.

2 Open the review_ditamagic.dita file from the folder where you saved it.

3 Select Edit > Find/Change.

4 From the Find pop-up menu, choose Any Marker.

5 Click Find.

6 Select Special > Marker.
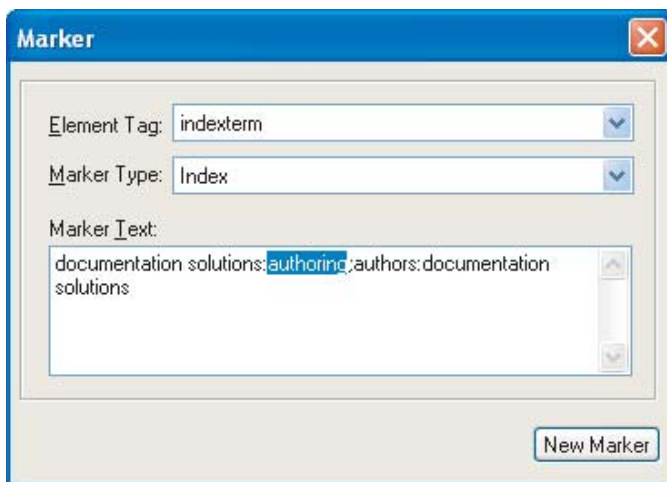
7 In the Marker dialog box, change the secondary indexterm subentry `authors` to: `authoring;documentation solutions`.

You have just corrected a tertiary index entry and added a separate primary entry. (The colons indicate indexterm hierarchy, and the semicolon indicates that what follows is a primary entry.)

8 Click Edit Marker, and close both the Marker dialog box and the Find/Change dialog box.

9 Save and close review_ditamagic.xml.

10 Using a text or XML editor (or the text-editing capabilities of FrameMaker), open the review_ditamagic.xml file.

11 Locate (visually or by using the Find function) the `indexterm` elements.

The colon-separated Marker text is converted to a nested `indexterm` element, and the semicolon-delimited entry is converted to a first-level `indexterm` element.

Note: On import, the nested set of `<indexterm>` elements is converted to one index marker element (a primary entry with subentries) and the other `<indexterm>` element is converted to a second index marker element.

12 Close review_ditamagic.xml file without saving it.

Modifying template components and files for DITA structured templates

Since the DITA feature uses three separate but integrated FrameMaker applications, the structured template designer can produce three (or more) distinct template designs.

Note: It is recommended that you avoid altering the structure itself. This structure is designed to work with the plug-ins, the other components of this application, and the other applications that comprise this feature.

Following are descriptions of the three FrameMaker applications, along with their template components:

DITA-Topic-FM This application is used to create or open `topic`, `concept`, `reference`, or `task` elements. You can modify the formats and page-layout features of the EDD and template components to optimize authoring at a topic level. You can modify the following structured template files for look and feel:

• $STRUCTDIR\xml\DITA-Topic-FM\app\dita-topic.edd.fm

• $STRUCTDIR\xml\DITA-Topic-FM\app\dita-topic.template.fm

DITA-Map-FM This application is used to create or open DITA maps. You can modify the formats and page-layout features of the EDD and template components to optimize the DITA map authoring experience. You can modify the following structured template files for look and feel:

• $STRUCTDIR\xml\DITA-Map-FM\app\dita-map.edd.fm

• $STRUCTDIR\xml\DITA-Map-FM\app\dita-map.template.fm

DITA-Book-FM This application is used to build FrameMaker books from DITA maps. You can modify the formats and page-layout features of the EDD and template components to produce, for example, high-quality print or PDF output. You can modify the following structured template files for look and feel:

• $STRUCTDIR\xml\DITA-Book-FM\app\dita-book.edd.fm

• $STRUCTDIR\xml\DITA-Book-FM\app\dita-book.template.fm

The three-application approach provides the structured-template designer great flexibility in fine-tuning the DITA authoring and document-production environment and output.

Publishing DITA documents

The DITA feature includes built-in methods to manage publishing to a wide range of formats, including compiled Help, HTML, and FrameMaker books.

Customizing DITA support of FrameMaker

You can extend the capabilities of the DITA feature by using XSLT, the FrameMaker Developer Kit (FDK), or custom plug-ins developed with third-party tools.

Using XSLT

You can reference XSLT style sheets for DITA in structure application definitions to transform the underlying XML on import or export. XSLT is a key method of the DITA feature for processing DITA maps into FrameMaker books. You can edit or chain the style sheets with other style sheets to change a behavior, or use additional style sheets to change how FrameMaker imports, exports, or publishes DITA content.

Using the FDK

For developers, the FDK represents a very powerful way to work with the internal mechanisms of FrameMaker, allowing them to work directly with the FrameMaker authoring environment and formatting engine. The main DITA features are developed using the FDK, and developers can build additional plug-ins that extend this capability. The FDK is available on the Adobe website: www.adobe.com/devnet/framemaker/.

Third-party tools

There are a wide range of third-party plug-ins available for FrameMaker. Some of the plug-ins already targeted towards structured FrameMaker can be used to extend the capabilities of the DITA authoring in FrameMaker. Third parties may offer tools that work directly in concert with the DITA's associated plug-ins and structured applications as well.

Tips

Following are tips for working with the Adobe FrameMaker DITA.

• If you make heavy use of references (`conref` or `xref` elements), you may find it more efficient to open the target files first. Target files are the destination of an `xref` element or the source of a `conref` element. If the target files are already open when you open topic files, the referencing process will go much faster.

• While converting an existing set of unstructured files into DITA, you may want to disable the auto-loading of `xref` and `conref` elements. If auto-loading is enabled, you may encounter many referencing errors when opening files if the targets of those references are not completely valid files.

• If you have titles that contain `conref` elements, be sure to have the target files open when updating the DITA map file. Otherwise, the `conref` element content will not appear in the topic reference label.

Chapter 23: Adobe Technical Communication Suite features in Adobe FrameMaker

Creating and editing images using RoboScreen Capture

RoboScreenCapture is a screen capture tool that can be used for capturing and editing images. You can use these images in your help systems like online tutorials, manuals, training handouts, presentations, marketing materials, and web pages.

Integration of Adobe® FrameMaker® 8 with RoboScreenCapture helps you do the following:

1 Open RoboScreenCapture from Adobe FrameMaker.

2 Insert images created in RoboScreenCapture into Adobe FrameMaker.

3 Edit images imported by reference into Adobe FrameMaker using RoboScreenCapture. You can use the right-click option Edit with RoboScreenCapture for an image to launch and edit the image in RoboScreenCapture. Changes made to the image are reflected in Adobe FrameMaker after the image is saved and closed in RoboScreen-Capture.

Note: This option is available only for image formats supported by RoboScreenCapture.

You can use RoboScreen Capture to perform the following tasks:

• Capture screens in 10 modes, including Free Hand, Virtual Screen, and Multi-Region

• Capture screens using a drop-down menu, assign your own keyboard shortcuts, and even control RoboScreen-Capture with voice commands

• Capture difficult-to-grab screens such as DirectX, Direct3D, 3Dfx, Voodoo, and Glide mode games

• Capture more than is visible on the screen, such as long Web pages

• Edit images

• Save your screen capture in over 20 image formats

• Automatically save screen captures to image files

• Quickly add image stamps, frames, drop shadows, and more

• Change image colors, flip or rotate images, and crop images to a smaller size

• Add identifying stamps to each screen capture, such as a company name or logo

• Call-out specific areas of your capture with shapes, shadow effects, and more.

Creating images with RoboScreenCapture and inserting them into Adobe FrameMaker

You can use RoboScreenCapture from Adobe FrameMaker to capture a screenshot from an application running on your computer, and save it in RoboScreenCapture. You can then import the file into an open FrameMaker document.

To create an image with RoboScreenCapture and insert it into Adobe FrameMaker:

1 Open the FrameMaker document into which you want to insert images.

2 Select File > Launch RoboScreenCapture. The RoboScreenCapture application opens.

3 From RoboScreenCapture, capture a screenshot of the desired application using the various options in the Capture menu.

4 Save the file, and close RoboScreenCapture.

5 In Adobe FrameMaker, select File > Import > File. The Import dialog box appears.

6 Select the file created in RoboScreenCapture.

7 Select Import by Reference.

8 Click Import.

Editing imported images using RoboScreenCapture

You can use RoboScreenCapture to edit images inserted by reference into FrameMaker documents.

To edit an image in Adobe FrameMaker using RoboScreenCapture:

1 Open Adobe FrameMaker.

2 Select File > Open, and open a document with the image you want to edit.

3 Select the image you want to edit.

4 Right-click the image, and select Edit With RoboScreenCapture. The RoboScreenCapture application opens with the image open for editing.

5 Edit the image.

6 Select File > Save.

7 Select File > Exit to close the RoboScreenCapture application.

The edited image is updated in Adobe FrameMaker and is ready for use in the document.

Inserting and editing Adobe Captivate demos

Adobe Captivate is an e-learning authoring tool used to create software demonstrations, software simulations, branched scenarios, and quizzes in the SWF format.

Integration of Adobe Captivate with Adobe FrameMaker enables you to do the following:

• Open Adobe Captivate from Adobe FrameMaker to create/record Adobe Captivate demos, and import the created demos into Adobe FrameMaker as SWF files.

• Insert Adobe Captivate movies into a FrameMaker document.

• Edit an Adobe Captivate movie placed in a FrameMaker document.

Note: You must install Adobe Captivate 2 or Adobe Captivate 3 to use this feature.

To launch Adobe Captivate, create a movie, and insert it in a FrameMaker document:

1 Open Adobe FrameMaker.

2 Select File > Adobe Captivate > Launch Adobe Captivate. The latest version of Adobe Captivate installed on your computer, opens. For example, if you have installed both Adobe Captivate 2 and Adobe Captivate 3, Adobe Captivate 3 opens.

3 Select Edit > Preferences and set your recording options.

4 Click Record or create a new project.

5 Use the options to record, and save the movie. Publish the movie in the SWF format. For more information, see Adobe Captivate User Guide. (www.adobe.com/support/documentation/en/captivate/)

6 Close Adobe Captivate.

7 In Adobe FrameMaker, select File > Open to open the document into which you want to insert the Adobe Captivate demo.

8 Place the cursor in the position where you want to insert the demo.

9 Select Import > File.

10 In the Import dialog box, select the SWF file.

11 Select Import By Reference or Copy Into Document.

12 Click Import. The SWF file is inserted in the FrameMaker document.

To create and insert an Adobe Captivate movie into a FrameMaker document:

1 Open Adobe FrameMaker.

2 Select File > Open to open the document in which you want to insert the Adobe Captivate movie.

3 Move the cursor to the position where you want to place the movie.

4 Select File > Adobe Captivate > Insert Adobe Captivate Demo. A dialog box prompts you to enter a name for the movie.

5 Specify a name for the movie (for example, myMovie.swf).

6 Click OK.

The Adobe FrameMaker window is minimized, and the startup screen of the latest version of Adobe Captivate appears.

7 Select Edit > Preferences and set your recording options.

8 Click Record or create a new project.

9 Use the options to record the movie. For more information, see Adobe Captivate User Guide. (www.adobe.com/support/documentation/en/captivate/)

10 Select File > Exit. A dialog box prompts you to save the movie.

11 Click Yes.

Adobe Captivate closes and the Adobe FrameMaker application is restored with the SWF file inserted at the cursor position.

To edit an Adobe Captivate movie:

1 Open Adobe FrameMaker.

2 Open the document containing the Adobe Captivate demo you want to edit.

3 Select the movie.

4 Do one of the following:

• Right-click the movie and select Edit with Adobe Captivate.

• Select File > Adobe Captivate > Edit with Adobe Captivate.

5 If the project file of the movie is available, Adobe Captivate is launched with the project file open for editing. The Adobe FrameMaker window is minimized.

6 Edit the Adobe Captivate movie. For more information, see Adobe Captivate User Guide. (www.adobe.com/support/documentation/en/captivate/)

7 Select File > Exit. A dialog box prompts you to save the movie.

8 Click Yes. The SWF file is automatically updated in the FrameMaker document.

Note: Ensure that you save the SWF file before you close Adobe Captivate.

Launch Adobe Acrobat Connect from Adobe FrameMaker

You can launch Adobe® Acrobat® Connect™ from Adobe FrameMaker to set up or access online meeting rooms.

Note: For more information about using the various features of Adobe Acrobat Connect, see www.adobe.com/support/acrobatconnect/.

Create an Acrobat Connect account

You must create an Adobe Acrobat Connect account before you set up an online meeting using Adobe Acrobat Connect. You can create an account by setting up a trial account or by purchasing a subscription. The Adobe Acrobat Connect functionality is enabled through Adobe® Acrobat® 3D Version 8.

Note: Reviewers must have Adobe® Reader® 7 or later versions installed to review the documents.

1 Open Adobe FrameMaker.

2 Select File > Start Meeting.

3 Do one of the following:

• Click Create A Trial account to set up a trial account.

• Click Buy Now to purchase a subscription.

4 Follow the onscreen instructions to set up the account.

Start a meeting with Adobe Acrobat Connect

You can launch Adobe Acrobat Connect from Adobe FrameMaker to set up or access online meeting rooms.

To start a meeting using Adobe Acrobat Connect:

1 Select File > Start Meeting.

2 Click Log In and enter the following information:

The URL of your meeting room in the format <connect.acrobat.com/<name of meeting room>

• Your log-in ID

- Your log-in password

3 Click Log In.

4 Click Send An E-mail invitation.

5 Type the e-mail addresses of attendees and click Send.

6 Click Share My Screen to share your computer interface with other users, and then select a screen-sharing option.

Desktop When you share your desktop, attendees see everything that happens on your computer screen, including e-mail pop-ups, alerts, and all visible windows and applications. Use this option when your demonstration uses several applications and windows, or when the areas you want to share are layered on top of each other.

Window You can share one or more windows currently open on your computer with the meeting participants. Only the windows you select are visible to attendees. Use this option if you want to share only the information that appears in selected windows.

Application You can share one or more applications that are currently running on your computer. Only the applications you select are visible to attendees (along with any windows associated with the applications). Use this option if you want to demonstrate functionality or share documents that can be opened in one or more applications.

7 When prompted to grant attendees access to the meeting, click Accept.

8 Do one of the following:

- If you want an attendee to share his or her desktop, select the attendee's name in the Attendee List, click the Set User Role button, and select the Set As Presenter To Allow Screen Sharing option.

- To chat with the attendees, type a message in the Chat pod, select the attendees to whom the message will be sent, and click Send Message.

- To take notes during the meeting, use the Notepad.

Sending PDFs for review

You can use the Save as PDF (Send for Review) feature in Adobe FrameMaker to save a document as a PDF file, and send the generated PDF file for review by e-mail. The selected file or book is converted to a PDF file, and attached to a new e-mail message in the default e-mail application on your computer. You can now send the document for review by typing the e-mail IDs of reviewers, and sending the e-mail.

Note: You can use this feature only if you have installed Adobe Acrobat 8 or later. Reviewers must have Adobe Reader 7 installed on their computers to review the document.

To generate a PDF and send it for review:

1 Open document or book.

2 Select File > Save As PDF (Send For Review). The Save Document dialog box appears.

3 Specify the desired file name for the PDF, and click Save. The PDF Setup dialog box appears.

4 Specify the desired settings for the PDF you are generating.

5 Click Set.

The new PDF is generated using Acrobat Distiller. The generated PDF file opens in Acrobat with the Getting Started page of the Send by Email for Review wizard displayed.

6 Select the PDF file to be sent for review.

7 Click Next. The Invite Reviewers page is displayed.

8 Click Address Book, and select the e-mail addresses of persons who will review the PDF file. Click OK.

9 Click Next.

10 In the Preview Invitation page, specify the Subject and content of the e-mail invitation that will be sent to the reviewers.

11 Click Send Invitation.

An Outgoing Message Notification notifies you that an e-mail message has been sent to the default e-mail application on your computer, and that the mail will be sent automatically by your e-mail client. A copy of the PDF is sent to the reviewers as an attachment. When reviewers open this file attachment, Acrobat opens the PDF file with a commenting toolbar.

12 Click OK.

Appendix A: Typing in dialog boxes

About typing in dialog boxes

You can enter characters that don't appear on the keyboard (such as nonbreaking spaces, en dashes and em dashes, and special hyphens) in dialog boxes.

Characters that don't appear on the keyboard are handled differently on each platform, as follows:

• (Windows) You must enter a sequence of characters beginning with a backslash (\). The backslash sequences appear in the dialog box, but the characters they represent appear in the document.

• (UNIX) You can enter the characters in the same way that you type them in a document window, but the backslash sequences will appear in the dialog boxes.

In addition to the special characters described here, you can enter characters in the Find/Change dialog box that indicate a position rather than a specific character (for example, **\P** for end of paragraph). For a list of these characters, see "Searching for special characters and nonprinting symbols" on page 79.

For information on typing special characters in a document window, see "Typing special characters" on page 72, "Typing special spaces" on page 72, "Changing hyphenation and line breaks" on page 118, and the online manual *FrameMaker Character Sets*.

All key sequences described here begin with a backslash (\). To indicate a literal backslash in a dialog box, enter two backslashes (\\).

Windows

You can enter many characters in a dialog box by pressing the corresponding keys on the keyboard. If a character doesn't appear on the keyboard, you can usually enter the character by using its ANSI or hex code or the character's key sequence. (See the online manual *FrameMaker Character Sets*.)

In some cases, however, you must type a character sequence beginning with a backslash (\) to enter a character in a dialog box. The sequence appears in the dialog box, but the character appears correctly in the document. The following table shows the sequences to type in a dialog box. In a few cases, you can choose between two backslash sequences for a character. In these cases, the sequences are separated by a comma.

Character name	Graphic	Backslash sequence
Bullet	•	\b
Circumflex	^	\@
Dagger	†	\d
Dagger (double)	‡	\Shift+d
Dash (em)	—	\m
Dash (en)	–	\=
Ellipsis	…	\e

Character name	Graphic	Backslash sequence
Florin	ƒ	\Shift+f
Forced return		\r
Fraction	⁄	\/
Grave	`	\{
Guilsingl left	‹	\(
Guilsingl right	›	\)
Hungarumlaut	˝	\&
Hyphen (discretionary)	-	\- (hyphen)
Hyphen (nonbreaking)	-	\+
OE ligature	Œ	\Shift+o Shift+e
oe ligature	œ	\oe
Per thousand	‰	\%
Quote (base single)	‚	\,
Quote (base double)	„	\g
Quote (double left)	“	\`
Quote (double right)	”	\'
Quote (single)	‘	\"
Space (em)		\sm, \Shift+m
Space (en)		\sn, \Shift+n
Space (nonbreaking)		\space
Space (numeric)		\s#, \#
Space (thin)		\st, \i
Suppress hyphenation		_ (underscore)
Tab		\t
Trademark serif	™	\Shift+t Shift+m
Y dieresis	Ÿ	\Shift+y : (colon)

UNIX

To comply with the X Window System, FrameMaker uses X server fonts in dialog boxes. X server fonts use ISO Latin-1 encoding for characters in Western fonts, so not all characters in the character set have a corresponding character in the X server font.

The following table lists characters in the character set that don't have corresponding characters in the X server font. You can enter the characters by pressing the key sequences shown in the second column, or type them directly as they appear in the second column. In a few cases, you can choose between two backslash sequences for a character. In these cases, the sequences are separated by a comma.

Character	Graphic	Press (or type)
Breve	˘	Control+q y **or type** \u
Bullet	•	Control+q % **or type** \b
Circumflex	ˆ	Control+q v **or type** \@
Dagger	†	Control+q space **or type** \d
Dagger (double)	‡	Control+q ` **or type** \Shift+d
Dot accent	·	Control+q z **or type** \.(period)
Dotless i	ı	Control+q u **or type** \l (lowercase *L*)
Ellipsis	…	Control+q Shift+i **or type** \e
Dash (em)	—	Control+q Shift+q **or type** \=
Dash (en)	–	Control+q Shift+p
fi ligature	fi	Control+q ^ **or type** \fi
fl ligature	fl	Control+q _ (underscore) **or type** \fl
Florin	ƒ	Control+q Shift+d **or type** \Shift+f
Forced return		Control+j **or type** \r
Fraction	⁄	Control+q Shift+z **or type** \/
Grave	`	Control+` **or type** \{
Guilsingl left	‹	Control+q \ **or type** \(
Guilsingl right	›	Control+q] **or type** \)
Hungarumlaut	˝	Control+q } **or type** \&
Hyphen (discretionary)	-	Control+- (hyphen) **or type** \- (hyphen)
Hyphen (nonbreaking)	-	Meta+- (hyphen) **or type** \¬
OE ligature	Œ	Control+q Shift+n **or type** \Shift+o Shift+e
oe ligature	œ	Control+q Shift+o **or type** \oe
Ogonek	˛	Control+q ~ **or type** \k
Per thousand	‰	Control+q d **or type** \%
Quote (base single)	‚	Control+q b **or type** \,

Character	Graphic	Press (or type)
Quote (base double)	,,	Control+q c **or type** \g
Quote (double left)	"	Control+q Shift+r **or type** \'
Quote (double right)	"	Control+q Shift+s **or type** \'
Quote (single)	'	Control+' **or type** \"
Space (em)		Esc space m (*space=press spacebar*) **or type** \sm, \Shift+m
Space (en)		Esc space n **or type** \sn, \Shift+n
Space (nonbreaking)		Control+spacebar **or type** \spacebar
Space (numeric)		Esc space 1 (one) **or type** \s#, \#
Space (thin)		Esc space t **or type** \st, \i
Tab		Tab **or type** \t
Trademark serif	TM	Control+q * **or type** \Shift+t Shift+m
Y dieresis	Ÿ	Esc % Shift+y **or type** \Shift+y :

Appendix B: Keyboard shortcuts

Keyboard shortcuts for Windows

Keyboard shortcuts instructions:

- \+ indicates that each key must be pressed simultaneously (for example, Control+z means to press the Control key and the z key simultaneously). If the shortcut keystrokes do not contain the Shift+ sign, press each key in the order the shortcut calls for (for example, Esc m p means to press and release the Esc (Escape) key, then the m key, then the p key).

Navigating through documents

To display	Press
Previous page	Esc p p, Pg Up
Next page	Esc p n, Pg Dn
First page	Esc p f, Alt+Pg Up, Shift and click the Previous Page button
Last page	Esc p l (lowercase L), Alt+Pg Dn, Shift and click the Next Page button
Go To Page dialog box	Esc v p, Control+g

To go to	Do this
Source of a cross-reference	Press Alt+Control and click an active area
A specific page	Press Control+g or click the Page Status area and then type the page number
Page containing the insertion point	Press Control+g or click the Page Status area and then click Page Containing the Insertion Point

To move the insertion point in text to	Press
Start of a word	Control+left arrow
End of a word	Control+right arrow
Start of the next word	Esc b w
Start of a sentence	Control+Home
End of a sentence	Control+End
Start of a paragraph	Control+up arrow
End of the current paragraph	Control+down arrow
Start of the next paragraph	Esc b p
Top of a column	Control+Pg Up

Bottom of a column	Control+Pg Dn
Start of a flow	Alt+ Shift+Pg Up
End of a flow	Alt+ Shift+Pg Dn
Start of a line	Control+Pg Up
End of a line	Control+Pg Dn

Drawing tools

To choose this tool	Use this shortcut
Arc	Esc one a
Graphic Frame	Esc one m
Freehand	Esc one f
Last tool selected	Esc one one
Line	Esc one l (lowercase L)
Object Selection	Esc one o
Oval	Esc one e
Polygon	Esc one p g
Polyline	Esc one p l (lowercase L)
Rectangle	Esc one r
Rounded Rectangle	Esc one Shift+r
Smart Selection	Esc one s

To choose this tool	Use this shortcut
Text Frame	Esc one t f
Text Line	Esc one t l (lowercase L)

To draw	Use this shortcut
Vertical, horizontal, or diagonal line	Press Shift and draw a line
Square	Press Shift and draw a rectangle
Circle	Press Shift and draw an oval
Circular arc	Press Shift and draw an arc

To	Use this shortcut
Display the Tools palette	Esc one w, Esc g Shift+t
Keep a tool active after use	Press Shift and click a drawing tool
Return to the Object Selection tool after drawing	Press Shift and click the Object Selection tool

Book Commands

To	Do this
New Book	Esc f Shift+n
Save Book	Esc f s, Control+s
Rename File	Esc f e or F2
Update Book	Esc e Shift+u,Esc f g
Display filenames (in book window)	Esc Shift+v Shift+m
Display paragraph headings (in book window)	Esc Shift+v Shift+x
Delete File from Book	Esc f x
Select All Files	Esc e a
Save all files in book	Esc f Shift+s
Close all files in book	Esc f Shift+c

To	Do this
Select All FrameMaker Files	Esc e Shift+a Shift+f
Select All Non-Generated FrameMaker Files	Esc e Shift+a Shift+n
Select All Generated FrameMaker Files	Esc e Shift+a Shift+g
Select a range of files	Shift+click
Select discontiguous files	Control+click
Move a file up in book	Esc m u
Move a file down in book	Esc m d
Print Book	Esc f p, Control+p
Print Selected Files in Book	Esc f Shift+f

Finding and changing

To	Press
Search forward	Esc f i n,Esc e Shift+f, Control+ Shift+f, Alt+Control+s
Search backward	Esc f i p, Alt+Control+f, Alt+Control+r
Change current selection	Esc r o
Change all occurrences of Find text in document	Esc r g
Change and search again	Esc r a
Change settings to As Is in Find Character Format and Change To Character Format dialog boxes	Shift+F8
Change settings to match selected text in Find Character Format and Change To Character Format dialog boxes	Shift+F9
Display Set Find/Change Parameters dialog box	Esc f i s
To find	**Type**
Tab symbol	\t
Forced return	\r
End-of-paragraph symbol	\p
Start of paragraph	\P
Nonbreaking space	\ (space)
Thin space	\i, \st

To Find	type
En space	\N, \sn
Em space	\M, \sm
Numeric space	\#, \s#
End-of-flow symbol	\f
` (grave)	\{
\ (backslash)	\ \
Discretionary hyphen	\ – (hyphen)
Nonbreaking hyphen	\+
Suppress hyphenation symbol	_ (underscore)
Start of word	\<
End of word	\>
With Use Wildcards turned on...	
Any number of characters	*

Spaces or punctuation	| (bar)
Any one character	?
The beginning of a line	^
The end of a line	$
Any one of the bracketed characters *ab*	[ab]
Any character except *ab*	[^ab]
Any character from *a* to *f*	[a-f]

Working with tables

To select	Press
A cell	Control and click the cell
A row	Control and double-click column border
A column	Control and double-click row border
Current row	Esc t h r
Current column	Esc t h c
Current table	Esc t h t, Control and triple-click a cell
To move to	**Press**
Rightmost cell in current row	Esc t m e
Leftmost cell in current row	Esc t m a
Top cell in current column	Esc t m t
Bottom cell in current column	Esc t m b
Next cell and select its text	Tab, Esc t m n
Previous cell and select its text	Shift+Tab, Esc t m p
Cell below and select its text	Alt+Control+Tab
Cell above and select its text	Alt+Control+ Shift+Tab
To	**Press**
Type a tab character in a cell	Esc Tab
Add rows above selected row	Esc t Shift+ r a
Add rows below selected rows	Esc t Shift+ r b, Control+Return
Add columns to left	Esc t c l (lowercase L)
Add columns to right	Esc t c r
Paste by replacing selected rows or columns	Esc t p r

Paste rows or columns before selection	Esc t p b
Paste rows or columns after selection	Esc t p a
Resize columns so no paragraphs in selected cells wrap	Esc t w
Resize selected columns without changing table's width	Alt and drag selected cell's handle
Copy column width to Clipboard	Esc e y w

Character and Paragraph Designers

To	Use this shortcut
Change all settings to As Is	Shift+F8
Change all settings to match selected text	Shift+F9
To	**Use this shortcut**
Display the previous set of properties	Page Up
Display the next set of properties	Page Down
Apply only the current group of properties	Press Control and click Apply

Object selection

Use these shortcuts to select objects on the current page.

To	Use this shortcut
Select a text line or text frame	Press Control and click the text line or text frame
Extend or shorten the selection	Press Shift and click an object
Force selection border to appear (when dragging from outside all objects is not possible)	Press Control+ Shift and drag diagonally
To	**Use this shortcut**
Select the first object in the draw order	Esc o Shift+f
Select the next object in the draw order	Esc o n
Extend the selection to the next object in the draw order	Esc o e
Deselect a text frame or text line and put the insertion point inside it instead	Double-click in the text frame or text line

Editing text

To	Press
Cut	Esc e x, Shift+Delete, Control+x
Copy	Esc e c, Control+c, Control+Insert
Paste	Esc e p, Control+y, Shift+Insert, Control+v
Undo/Redo	Esc e u, Control+ Shift+z, Control+ z, Alt+Backspace
Quick-copy text	Click where you want to put the copied text and then press Alt and drag through the text
Transpose characters	Click between characters and then press Control+F9
Make selected text lowercase	Alt+Control+l (lowercase L)
Make selected text uppercase	Alt+Control+u
Make selected text initial caps	Alt+Control+c
To select	**Do this**
A word	Double-click it
A word, then next words	Double-click it and drag, double-click it and Shift -click

To select	Do this
Current sentence, then next	Press Esc h s, press Control+ Shift+End
Current sentence, then previous	Press Esc Shift+h Shift+s, press Control+ Shift+Home
A paragraph	Triple-click it
A paragraph, then next paragraphs	Triple-click it and drag, triple-click it and Shift -click
To delete	**Press**
Previous character	Backspace
Backward to start of the previous word	Esc k b
Backward to end of the previous sentence	Esc k a
Next character	Delete
Forward to end of a word	Esc k f, Control+Delete
Forward to end of a line	Control+Shift+Delete
Forward to start of the next sentence	Esc k s

Function keys

Key	Function	Control	Shift	Alt
F1	Help	Align top		
F2	Plain text	Align middle		
F3	Underline	Align bottom	Overline	
F4	Bold		Cascade windows	Exit
F5	Italic		Tile windows	
F6				
F7			Point on document window	
F8	Choose character format by typing		Change dialog box settings to As Is	
F9	Choose paragraph format by typing	Transpose characters	Change dialog box settings to match current text	
F10			Display context menu	

Entering special characters

To type	Press
(bullet)	Control+q %
† (dagger)	Control+q space
‡ (double dagger)	Control+q `
™ (trademark)	Control+q *
© (copyright)	Control+q)
® (registered trademark)	Control+q (
¶ (paragraph symbol)	Control+q &
§ (section symbol)	Control+q $
… (ellipsis)	Control+q Shift+i
(em dash)	Control+q Shift+q
(en dash)	Control+q Shift+p
'	Control+'
"	Esc "
(with Smart Quotes off)	Control+q Shift+t
(with Smart Quotes off)	Control+q Shift+u
(with Smart Quotes off)	Control+q Shift+r, Alt+Control+'
(with Smart Quotes off)	Control+q Shift+s, Alt+Control+'
Em space	Esc space m, Control+ Shift+space

To type	Press
En space	Esc space n, Alt+Control+space
Nonbreaking space	Esc space h, Control+space
Numeric space	Esc space 1 (one)
Thin space	Esc space t
Nonbreaking hyphen	Esc hyphen h
Suppress hyphenation symbol	Esc n s
Discretionary hyphen	Esc hyphen Shift+d, Control+hyphen
Forced return	Shift+Return

To use this accent	Press Esc, then type this	Followed by one of these	Example
´ (acute)	' (apostrophe)	a, A, e, E, i, I, o, O, u, U	É, é
` (grave)	` (left quote)	a, A, e, E, i, I, o, O, u, U	È, è

˜ (tilde)	~ (tilde)	a, A, n, N, o, O	Ñ, ñ
¨ (dieresis)	‰ (percent)	a, A, e, E, i, I, o, O, u, U, y, Y	Ü, ü
ˆ (circumflex)	^ (caret)	a, A, e, E, i, I, o, O, u, U	Ê, ê
° (ring)	* (asterisk)	a, A	Å, å
¸ (cedilla)	, (comma)	c, C	Ç, ç

Other useful shortcuts

To	Press
Redraw the document display	Control+l (lowercase L)
Quick-copy a selected object	Alt and drag the object
Rotate an object arbitrarily	Alt and use the left or right mouse button to drag a corner or reshape handle
Move an object along vertical or horizontal axis	Shift and drag object

To	Press
Nudge an object 1 point/6 points	Alt+arrow key/Alt+Shift+arrow key
Fit page in window	Esc z p
Fit window to page	Esc z w
Zoom to 100 percent	Esc z z
Lock or unlock a document or book	Esc Shift+f l (lowercase L) k

Element menu

To choose	Use this shortcut
Merge	Esc Shift+e m
Split	Esc Shift+e s
Unwrap	Esc Shift+e u
Edit Attributes	Esc Shift Shift+e Shift+a

To choose	Use this shortcut
Namespaces	Esc Shift+e Shift+n
Element Catalog	Esc Shift+e Shift+c
Set Available Elements	Esc Shift+e Shift+o Shift+c
New Element Options	Esc Shift+e Shift+o Shift+i
Validate	Esc Shift+e v

Conventions and Function keys

Keys

When you use keyboard shortcuts, Caps Lock must be off and, unless otherwise noted, a document window must be active.

The following table lists the terms used for special keys.

This notation	Means
arrow key	Up, down, right or left arrow keys
Esc	The key labeled Esc
Control	The key labeled Ctrl or Control
Alt	The key labeled Alt
Shift	The key labeled Shift
F2	The function key labeled F2. (If you should type F followed by 2, the characters are shown as F 2)
space	The space bar
plus	The key labeled with a plus sign (+)
minus or hyphen	The key labeled with a hyphen (-)
period	The key labeled with a period (.)
comma	The key labeled with a comma (,)
zero	The key labeled with the numeral 0
one	The key labeled with the numeral 1

Shortcuts

The following table explains the conventions for showing key sequences and key combinations. When an uppercase letter appears in a shortcut, use the Shift key when typing the letter.

When one or more shortcuts accomplish the same action, the shortcuts are separated by commas; for example: Control+n, Shift+down arrow. You can use either Control+n or Shift+down arrow to accomplish the same action.

This shortcut	Means
Esc Shift+t r	Press and release these keys in succession: the Esc key, the uppercase letter T, and the letter r
Control+e	Press Control and type the letter e
Control+ Shift+hyphen	Press Shift and Control and type a hyphen

Function keys

Key	Function	Control	Shift	Alt
F1	Help	Align top		
F2	Plain text	Align middle		

F3	Underline	Align bottom	Overline	
F4	Bold		Cascade windows	Exit
F5	Italic		Tile windows	
F6				
F7			Point on document window	
F8	Choose character format by typing		Change dialog box settings to As Is	
F9	Choose paragraph format by typing	Transpose characters	Change dialog box settings to match current text	
F10			Display context menu	

Mouse

The following table lists the terms used for mouse actions.

This instruction	Means
Click	Click the mouse button
Right-click	Click the right mouse button
Double-click	Click the mouse button twice rapidly without moving the mouse
Triple-click	Click the mouse button three times rapidly without moving the mouse
Shift-click	Hold down Shift and click the mouse button

Color

Color selection

To	Use this shortcut
Keep a color selected after use	Press Shift and choose a color from the Color pop-up menu
Assign a color to all objects in a document, including text	Press Alt+ Shift and choose a color from the Color pop-up menu in the Tools palette
Display the Color Definitions dialog box	Press Esc v c d

Color views

To	Use this shortcut
Display Define Color Views dialog box	Press Esc v c v
To	**Use this shortcut**
Choose view number (1, 2, 3, 4, 5, or 6) from the Define Color Views dialog box	Press Esc v and then the number

Menu commands

Context menus

To	Do this
Display a pop-up menu of commands that apply to the current selection or context	Right-click on an object, in a document margin, or in a book window

File menu (document window)

To choose	Use this shortcut
New>Document	Esc f n, Control+n
New>Book	Esc f Shift+n
Open	Esc f o, Control+o
Close	Esc f c, Esc f q, Control+w, Control+F4, Control+Shift+w
Close All	Esc f Shift+c, Esc f Shift+q
Save	Esc f s, Control+s
Save All	Esc f Shift+s
Save As	Esc f a
Save As PDF	Esc f w p
Save As XML	Esc f w x
Revert to Saved	Esc f r
Import>File	Esc f i f
Import>Formats	Esc f i o
Import>Object	Esc f i b
Import>Element Definitions	Esc f i e
Print	Esc f p, Control+p
Print Setup	Control+ Shift+p
Send	Esc f m
Send All Open Files	Esc f Shift+m
Utilities>Compare Documents	Esc f t c
Utilities>Document Reports	Esc f t r
Utilities>HTML Setup	Esc f t h
Utilities>Create and Apply Formats	Esc f t f
Preferences	Esc f Shift+p
Exit	Alt+F4

File menu (book window)

To choose	Use this shortcut
New Document	Esc f n, Control+n
New Book	Esc f Shift+n
Open	Esc f Shift o, Control+o
Open All Files in Book	Esc f Shift+o
Close Book	Esc f c, Control+w
Close All Files in Book	Esc f Shift+c
Save Book	Esc f s, Control+s
Save All Files in Book	Esc f Shift+s
Save Book As	Esc f a
Revert to Saved Book	Esc f r
Import>Formats	Esc f i o
Import>Element Definitions	Esc f i e
Print Selected Files	Esc f Shift+f,
Print Book	Esc f p, Control+p
Print Setup	Control+ Shift+p
Utilities>Compare Books	Esc f b
Preferences	Esc f Shift+p
Exit	Alt+F4

Edit menu (document window)

To choose	Use this shortcut
Undo/Redo	Esc e u, Control+z, Alt+Backspace, Control+ Shift+z
Cut	Esc e x, Control+x, Shift+Delete
Copy	Esc e c, Control+c, Control+Insert
Paste	Esc e p, Control+v, Shift+Insert
Paste Special	Control+ Shift+v
Clear	Esc e b
Copy Special>Attribute Values	Esc e y a
Copy Special>Paragraph Format	Esc e y p
Copy Special>Character Format	Esc e y c
Copy Special>Conditional Text Settings	Esc e y d
Copy Special>Table Column Width	Esc e y w
Select All in Flow	Esc e a, Control+a

Find/Change	Esc e f, Control+f
Find Next	Esc f i n, Esc e Shift+f, Control+ Shift+f
Spelling Checker	Esc e s
Thesaurus	Esc e t
Text Inset Properties	Esc e i
Update References	Esc e Shift+u
Links	Esc e k
Object	(No shortcut available)

Edit menu (book window)

To choose	Use this shortcut
Undo/Redo	Esc e u, Control+z, Alt+Backspace, Control+ Shift+z
Cut	Esc e x, Control+x, Shift+Delete
Copy	Esc e c, Control+c, Control+Insert
Paste	Esc e p, Control+v, Shift+Insert
Paste Special	Control+ Shift+v
Clear	Esc e b
Copy Special>Attribute Values	Esc e y a
Select All Files	Esc e a
Select All FrameMaker Files	Esc e Shift+a Shift+f
Select All Non-Generated FrameMaker Files	Esc e Shift+a Shift+n
Select All Generated FrameMaker Files	Esc e Shift+a Shift+g
Find/Change	Esc e f, Control+f
Find Next	Esc f i n, Esc e Shift+f, Control+ Shift+f
Spelling Checker	Esc e s
Set Up Generated File	Esc f d
Rename File	Esc f e, F2
Delete File from Book	Esc f x
Suppress Automatic Reference Updating	Esc e Shift+s
Update Book	Esc e Shift+u, Esc f g

Add menu (book window)

To choose	Use this shortcut
Files	Esc f f
Table of Contents	Esc t o c
List of>Figures	Esc l (lowercase L) o f
List of>Tables	Esc l (lowercase L) o t
List of>Elements & Paragraphs	Esc l (lowercase L) o p
List of>Elements & Paragraphs (Alphabetical)	Esc l (lowercase L) o Shift+p
List of>Markers	Esc l (lowercase L) o m
List of>Markers (Alphabetical)	Esc l (lowercase L) o Shift+m
List of>References	Esc l (lowercase L) o r
Standard Index of Authors	Esc i x
Index of>Authors	Esc i o a
Index of>Subjects	Esc i o s
Index of>Markers	Esc i o m
Index of>References	Esc i o r

Element menu

To choose	Use this shortcut
Merge	Esc Shift+e m
Split	Esc Shift+e s
Unwrap	Esc Shift+e u
Edit Attributes	Esc Shift+e Shift+a
Namespaces	Esc Shift+e Shift+n
Element Catalog	Esc Shift+e Shift+c
Set Available Elements	Esc Shift+e Shift+o Shift+c
New Element Options	Esc Shift+e Shift+o Shift+i
Validate	Esc Shift+e v

Format menu

To choose	Use this shortcut
Font	(No shortcut available)
Size	(No shortcut available)
Style>Plain	Esc c p, F2
Style>Bold	Esc c b, F4, Control+b, Control+ Shift+b

Style>Italic	Esc c i, F5, Control+i
Style>Underline	Esc c u, Control+u, Control+ Shift+u
Style>Double Underline	Esc c d
Style>Overline	Esc c o
Style>Strikethrough	Esc c s, Control+/
Style>Change Bar	Esc c h, Control+ Shift+h
Style>Superscript	Esc c plus
Style>Subscript	Esc c minus
Style>Small Caps	Esc c m, Control+e
Characters>Designer	Esc o c d, Control+d
Characters>Catalog	Esc o c c
Characters>Default Paragraph Font	Esc o c p
Paragraphs>Designer	Esc o p d, Control+m, Control+ Shift+m
Paragraphs>Catalog	Esc o p c
Page Layout>Column Layout	Esc o c l (lowercase L)
Page Layout>Line Layout	Esc o l l (lowercase L)
Page Layout> Page Size	Esc o p s
Page Layout>Pagination	Esc o p i
Page Layout>Master Page Usage	Esc o m u
Page Layout>New Master Page	Esc o m p
Page Layout>Update Column Layout	Esc o u p
Customize Layout>Customize Text Frame	Esc o c f
Customize Layout>Connect Text Frames	Esc Shift+c Shift+c
Customize Layout>Disconnect Previous	Esc Shift+c Shift+p
Customize Layout>Disconnect Next	Esc Shift+c Shift+n
Customize Layout> Disconnect Both	Esc Shift+c Shift+b
Customize Layout> Split Text Frame	Esc Shift+c Shift+s
Customize Layout>Rotate Page Clockwise	Esc p Shift+o
Customize Layout>Rotate Page Counterclockwise	Esc p o
Customize Layout>Unrotate Page	Esc p Shift+u
Customize Layout>Combined Fonts	Esc o c o
Document>Numbering	Esc o d n, Esc e n
Document>Change Bars	Esc o b
Document>Footnote Properties	Esc o f

Document>Text Options	Esc o t o
Document>PDF Setup	Esc o d a
Document>Rubi Properties	Esc o r
Headers & Footers>Insert Page #	Esc o h p
Headers & Footers>Insert Page Count	Esc o h c
Headers & Footers>Insert Current Date	Esc o h d
Headers & Footers>Insert Other	Esc o h o

View menu (document window)

To choose	Use this shortcut
QuickAccess Bar	Esc v q
Formatting Bar	Esc v F
Track Text Edit Bar	Esc Shift+v e
Tabbed Bar	Esc Shift+v Shift+t Shift+b
Borders	Esc v b
Text Symbols	Esc v t
Rulers	Esc v r
Grid Lines	Esc v g
Element Boundaries	Esc v Shift+e
Element Boundaries (as Tags)	Esc v Shift+t
Options	Esc v o
Attribute Display Options	Esc v Shift+a
Go to Page	Esc v p, Control+g, Control+ Shift+g
Body Pages	Esc v Shift+b
Master Pages	Esc v Shift+m
Reference Pages	Esc v Shift+r
Color>Views	Esc v c v
Color>Definitions	Esc v c d
Menus>Quick	Esc v m q
Menus>Complete	Esc v m c
Menus>Modify	Esc v m m

View menu (book window)

To choose	Use this shortcut
QuickAccess Bar	Esc v q
Formatting Bar	Esc v F
Tabbed Bar	Esc Shift+v Shift+t Shift+b
Show Borders	Esc Shift+v b s
Hide Borders	Esc Shift+v b h
Show Text Symbols	Esc Shift+v t s
Hide Text Symbols	Esc Shift+v t h
Show Rulers	Esc Shift+v r s
Hide Rulers	Esc Shift+v r h
Show Grid Lines	Esc Shift+v g s
Hide Grid Lines	Esc Shift+v g h
Show Graphics	Esc Shift+v v s
Hide Graphics	Esc Shift+v v h
Show Element Boundaries	Esc Shift+v Shift+e s
Hide Element Boundaries	Esc Shift+v Shift+e h
Show Element Boundaries (as Tags)	Esc Shift+v Shift+t s
Options	Esc v o
Attribute Display Options	Esc v Shift+a
Zoom>In	Esc z i
Zoom>Out	Esc z o
Zoom>100 percent	Esc z z
Zoom>Fit Page in Window	Esc z p
Zoom>Fit Window to Page	Esc z w
Zoom>Fit Window to Text Frame	Esc z f
Color>Views	Esc v c v
Color>Definitions	Esc v c d
Menus>Quick	Esc v m q
Menus>Complete	Esc v m c
Menus>Modify	Esc v m m

Special menu

To choose	Use this shortcut
Page Break	Esc s p b
Anchored Frame	Esc s a
Footnote	Esc s f
Cross-Reference	Esc s c
Variable	Esc s v
Hypertext	Esc s h
Marker	Esc s m
Equations	Esc s e
Filter By Attribute	Esc a c
Conditional Text	Esc s Shift+c
Manage Conditional Text	Esc m Shift+c
Apply Conditional Text	Esc s Shift+c
Show/Hide Conditional Text	Esc v Shift+c
Show Condition Indicator	Esc Shift+v o
Hide Condition Indicator	Esc Shift+v Shift+o h
Toggle Conditional Indicators On/Off	Esc v Shift+o
Show One Conditional Text Tag	Esc q Shift+s
Select Same Condition Tags	Esc h Shift+c
View the condition applied to the text where the cursor is placed	Esc q Shift+c
Focus in Conditional Text	Esc Shift+f i o
Close Conditional Text dialog box	Esc Shift+c o
Turn on or off the Track Text Edit feature	Esc s t o
Show Next	Esc s t n
Show Previous	Esc s t p
Accept Edit	Esc s t a
Reject Edit	Esc s t r
Accept All	Esc s t Shift+a
Reject All	Esc s t Shift+r
Preview Final	Esc s t Shift+f
Preview Original	Esc s t Shift+o
Preview Off	Esc s p o
Rubi	Esc s r
Table of Contents	Esc t o c

List of>Figures	Esc l o f
List of>Tables	Esc l o t
List of>Elements & Paragraphs	Esc l o p
List of>Elements & Paragraphs (Alphabetical)	Esc l o Shift+p
List of>Markers (Alphabetical)	Esc l o m
List of>Markers	Esc l o Shift+m
List of>References	Esc l o r
Standard Index	Esc i x
Index of>Authors	Esc i o a
Index of>Subjects	Esc i o s
Index of>Markers	Esc i o m
Index of>References	Esc i o r
Add Disconnected Pages	Esc s p a
Delete Pages	Esc s p d
Remove Structure from Flow	Esc s s f

Graphics menu

To choose	Use this shortcut
Tools	Esc g Shift+t, Esc one w
Group	Esc g g
Ungroup	Esc g u
Bring to Front	Esc g f
Send to Back	Esc g b
Align	Esc g a
Distribute	Esc g d
Reshape	Esc g r
Smooth	Esc g s
Unsmooth	Esc g m
Flip Up/Down	Esc g v
Flip Left/Right	Esc g h
Rotate	Esc g t
Scale	Esc g z
Set # Sides	Esc g n
Join	Esc g j
Object Properties	Esc g o

Pick up Properties	Esc g Shift+o
Runaround Properties	Esc g Shift+r
Gravity	Esc g y
Snap	Esc g p
3D Menu	Alt + g + 3 + Shift+b
3D Menu Lighting option	Alt + g + 3 + Shift+l (lowercase L)
Lights From File	Alt + g + 3 + Shift+l + (lowercase L) Shift+l (lowercase L)
No Lights	Alt + g + 3 + Shift+l (lowercase L) + Shift+n
White Lights	Alt + g + 3 + Shift+l (lowercase L) + Shift+w
Day Lights	Alt + g + 3 + Shift+l (lowercase L) + Shift+d
Bright Lights	Alt + g + 3 + Shift+l (lowercase L) + Shift+b
Primary Color Lights	Alt + g + 3 + Shift+l (lowercase L) + Shift+p
Night Lights	Alt + g + 3 + Shift+l (lowercase L) + i
Blue Lights	Alt + g + 3 + Shift+l (lowercase L) + u
Red Lights	Alt + g + 3 + Shift+l (lowercase L) + Shift+r
Cube Lights	Alt + g + 3 + Shift+l (lowercase L) + Shift+c
CAD Optimized Lights	Alt + g + 3 + Shift+l (lowercase L) + Shift+o
Headlamp	Alt + g + 3 + Shift+l (lowercase L) + Shift+h
Show Existing Views	Alt + g + 3 + Shift+s
Render Mode option	Alt + g + 3 + Shift+r
Bounding Box	Alt + g + 3 + Shift+r + Shift+b
Transparent Bounding Box	Alt + g + 3 + Shift+r + Shift+t
Transparent Bounding Box Outline	Alt + g + 3 + Shift+r + Shift+o
Vertices	Alt + g + 3 + Shift+r + Shift+v
Shaded Vertices	Alt + g + 3 + Shift+r + Shift+s
Wireframe	Alt + g + 3 + Shift+r + Shift+w
Shaded Wireframe	Alt + g + 3 + Shift+r + h
Solid	Alt + g + 3 + Shift+r + l (lowercase L)
Transparent	Alt + g + 3 + Shift+r + r
Solid Wireframe	Alt + g + 3 + Shift+r + i
Transparent Wireframe	Alt + g + 3 + Shift+r + a
Illustration	Alt + g + 3 + Shift+r + u

Solid Outline	Alt + g + 3 + Shift+r + d
Shaded Illustration	Alt + g + 3 + Shift+r + e
Hidden Wireframe	Alt + g + 3 + Shift+r + n

Table menu

To choose	Use this shortcut
Insert Table	Esc t i
Table Designer	Esc t d, Control+t, Control+Shift+t
Row Format	Esc t r
Custom Ruling & Shading	Esc t x
Add Rows or Columns	Esc t a
Resize Columns	Esc t z
Straddle/Unstraddle	Esc t l (lowercase L)
Convert to Table/Convert to Paragraphs	Esc t v
Sort	Esc t s

StructureTools menu

To choose	Use this shortcut
StructureTools>Set Structured Application	Esc f + Shift+a, ALT + r + u
StructureTools>Utilities	ALT + r + l
StructureTools>Utilities>Convert Structured Documents	Esc f + t + s, ALT + r + l + c
StructureTools>Utilities>Convert Documents to Structured Format	Esc f + t + d, ALT + r + l + d
StructureTools>Utilities>Structure Current Document	Esc f + t + Shift+c, ALT + r + l + s
StructureTools>Utilities>Structure Documents	Esc f + t + Shift+d, ALT + r + l + t
StructureTools>New EDD	Esc f Shift+d Shift+n
StructureTools>Export Element Catalog as EDD	Esc f Shift+d Shift+x
StructureTools>Import CSS Styles	Esc f Shift+d Shift+j
StructureTools>Show Element context	Esc f Shift+d Shift+e
StructureTools>Open DTD	Esc f Shift+d Shift+o
StructureTools>Import DTD	Esc f Shift+d Shift+m
StructureTools>Save as DTD	Esc f Shift+d Shift+s
StructureTools>Open Schema	Esc f Shift+d Shift+y
StructureTools>Import Schema	Esc f Shift+d Shift+z
StructureTools>Edit Application Definitions	Esc f Shift+d Shift+a
StructureTools>Read Application Definitions	Esc f Shift+d Shift+r

StructureTools>New Read/Write Rules	Esc f Shift+d Shift+w
StructureTools>Check Read/Write Rules	Esc f Shift+d Shift+c
StructureTools>Parse Structured Document	Esc f Shift+d Shift+p
StructureTools>Generate Conversion Table	Esc f Shift+d Shift+g
StructureTools>Generate CSS2	Esc f Shift+d Shift+h

DITA menu

To choose	Use this shortcut
DITA>New DITA File>New <map$_i$> *Note: map<i> refers to an element whose class attribute starts with map/map and can vary from 1 to i.*	Esc Shift+n Shift+m i
DITA>New DITA File>New <topic$_i$>	Esc Shift+n Shift+t 1
DITA>New DITA File>New <concept$_i$>	Esc Shift+n Shift+t 2
DITA>New DITA File>New <task$_i$>	Esc Shift+n Shift+t i
DITA>New DITA File>New <reference$_i$> *Note: topic<i> refers to an element whose class attribute starts with topic/topic and can vary from 1 to i..*	
DITA>New DITA File>Refresh Menu	Esc Shift+r Shift+m
DITA>Insert Conref	Esc Shift+i Shift+c
DITA>Assign ID to Element	Esc Shift+a Shift+i
DITA>Update References	Esc Shift+u Shift+r
DITA>Open all Topicrefs	Esc Shift+o Shift+a
DITA>Insert Topicref	Esc Shift+i Shift+t
DITA>Build FM Document From DITA Map	Esc Shift+g Shift+d
DITA>DITA Options	Esc Shift+d Shift+o

Window menu

To choose	Use this shortcut
Cascade	Shift+F4
Tile	Shift+F5
Arrange Icons	(No shortcut available)
Refresh	Control+l (lowercase L)

Windows and dialog boxes

Window manipulation

To use these shortcuts, click in any FrameMaker window.

To	Use this shortcut
Redisplay a document window	Esc w r, Control+l (lowercase L)
Close the active window or modeless dialog box	Alt+F4
Close the document window	Esc f q, Esc f c, Control+F4, Control+w, Control+Shift+w
Minimize the document window	Esc w c

Display and activation

Use these shortcuts to display a window or dialog box and make it active. If it is already open but is behind another window, these shortcuts bring it to the front.

To display this window and make it active	Use this shortcut
Current document window	Esc Shift+f i d, Shift+F7
Find/Change	Esc Shift+f i f
Hypertext	Esc Shift+f i h
Marker	Esc Shift+f i m
Spelling Checker	Esc Shift+f i s
Paragraph Designer	Esc Shift+f i p
Character Designer	Esc Shift+f i c
Conditional Text	Esc Shift+f i o
Custom Ruling and Shading	Esc Shift+f i r
Table Designer	Esc Shift+f i t
Structure View	Esc Shift+f i v
Element Validation	Esc Shift+f i w

Navigation within windows

Use these shortcuts to move to settings within dialog boxes and windows. When you use a keyboard shortcut in a window or dialog box, the shortcut's effect depends on the active setting. The active setting is highlighted, has a dotted rectangle around it, or both.

To move to the	Use this shortcut
Next setting	Tab
Previous setting	Shift+Tab

Command buttons

To	Use this shortcut
Click the default button	Return
Click the active button	space
Cancel a dialog box (but not a window)	Esc

Radio buttons and checkboxes

To	Use this shortcut
Navigate through a group of radio buttons to turn a radio button on	arrow keys
Cycle through checkbox states (off, on, As Is)	space

Pop-up menus

To	Use this shortcut
Move to the previous menu item	up arrow
Move to the next menu item	down arrow
Search forward and select an item starting with a typed letter	UnShifted key

Scroll lists

To	Use this shortcut
Move to the previous item in a list	up arrow
Move to the next item in a list	down arrow
Search forward and select an item starting with a typed letter	UnShifted key
Move an item in a scroll list to the opposite scroll list	Double-click the item
Move all items in a scroll list to the opposite scroll list	Press and click arrow between scroll lists

Custom menus

To	Use this shortcut
Display a custom menu bar	Esc v m u

Document design

Master and reference pages

To	Use this shortcut
Rename a master or reference page (display the master or reference page before using this shortcut)	Esc p Shift+n
Create a master page (display a body or master page before using this shortcut)	Esc o m p or Esc p m

Page layout

To	Use this shortcut
Update page layouts (display a body page before using this shortcut)	Esc o u p

Import formats

To	Use this shortcut
Import the formats from another document	Esc f i o

Side-head area

To	Use this shortcut
Turn side-head area on or off	Esc j p Shift+s

Text flows

To	Use this shortcut
Split a text frame below the insertion point	Esc Shift+c Shift+s
Disconnect the text frame with the insertion point from the previous frame in a flow	Esc Shift+c Shift+p
Disconnect the text frame with the insertion point from the next frame in a flow	Esc Shift+c Shift+n
Disconnect the text frame with the insertion point from both the previous and next frames	Esc Shift+c Shift+b
Connect two selected text frames	Esc Shift+c Shift+c

Documents

Help

To	Use this shortcut
Display online Help	Esc f h, F1
Adobe Online	Esc w w w
Display Help on using the templates provided with FrameMaker	Press Control+n and click Explore Standard Templates

Open

To open	Use this shortcut
A document in a book file	Double-click the filename in the book window
All files in an active book window	Esc f Shift+o, or press and choose Open All Files in Book from the File menu
A MIF or an MML file as a text file	Press Control and click Open in the Open dialog box

Save and Close

To	Use this shortcut
Display the Save Document dialog box	Esc f a
Save a document or book	Esc f s, Control+s
Save all open files	Esc f Shift+s, or press and choose Save All Open Files from the File menu
Save all open files in an active book window in a book	Esc f Shift+s, or press and choose Save All Files in Book from the File menu
Close all open files	Esc f Shift+c, or press and choose Close All Open Files from the File menu
Close all open files in an active book window in a book	Esc f Shift+c, or press and choose Close All Files in Book from the File menu

Cancel and Undo

To	Use this shortcut
Cancel some FrameMaker commands	Esc
Undo some FrameMaker commands	Esc e u, Control+z, Alt+Backspace, Control+Shift+z

Navigation within a document

To display the	Use this shortcut
Previous page	Esc p p, Page Up
Next page	Esc p n, Page Down
First page	Esc p f, Alt+Page Up, or press and click the Previous Page button
Last page	Esc p l (lowercase L), Alt+Page Down, or press and click the Next Page button
Go to Page dialog box	Esc v p, Control+g

Document redisplay

To	Use this shortcut
Redisplay a document	Esc w r, Control+l (lowercase L)

Zoom

To zoom	Use this shortcut
In one zoom setting	Esc z i
Out one zoom setting	Esc z o
To fit page in window	Esc z p

To zoom	**Use this shortcut**
To fit window to page	Esc z w
To fit window to text frame	Esc z f
To 100 percent	Esc z z

Hypertext documents

To	**Use this shortcut**
Go to previous location on the hypertext stack	Esc v Shift+p
Go to next location on the hypertext stack	Esc v Shift+n
Activate a hypertext command without locking a document	Press Control+Alt and click an active area
Lock or unlock a document	Esc Shift+f l (lowercase L) k
Open Hypertext dialog box	Esc s h
Insert new hypertext marker	Esc m h
Move focus to Hypertext dialog box	Esc Shift+f i h
Close Hypertext dialog box	Esc Shift+c h
Validate a hypertext command	Esc v h
Toggle FluidView locked format	Esc Shift+v Shift+f

Document utilities

Spelling Checker

To	**Use this shortcut**
Check selected text or a word containing the insertion point	Esc l (lowercase L) s, or press Control and click Start Checking in the Spelling Checker dialog box
Check the entire document	Esc l (lowercase L) e
Check the current page	Esc l (lowercase L) p
Correct a word	Esc l (lowercase L) c w
Add a word to your personal dictionary (learn)	Esc l (lowercase L) a p
Add a word to the document dictionary	Esc l (lowercase L) a d
Add a word to automatic corrections	Esc l (lowercase L) a c
Delete a word from your personal dictionary (unlearn)	Esc l (lowercase L) x p
Delete a word from the document dictionary	Esc l (lowercase L) x d
Clear automatic corrections	Esc l (lowercase L) c a
Display the Spelling Checker Options dialog box	Esc l (lowercase L) Shift+o
Display the Dictionary Functions dialog box	Esc l (lowercase L) c d
Create a file of unknown words	Esc l (lowercase L) b

To	Use this shortcut
Mark all paragraphs for rechecking	Esc l (lowercase L) r
Show a word's hyphenation	Esc l (lowercase L) hyphen
Rehyphenate a document	Esc l (lowercase L) Shift+r
Replace a questioned word	Double-click the word in the Correction scroll list in the Spelling Checker dialog box

Thesaurus

To use this shortcut, the document window, not the Thesaurus, must be active.

To	Use this shortcut
Replace a selection with the Thesaurus selection	Esc Shift+t r

Document comparison

To	Use this shortcut
Display the Compare Documents dialog box	Esc f t c

Document reports

To	Use this shortcut
Display the Document Reports dialog box	Esc f t r

HTML and PDF export

To	Use this shortcut
Create and apply formats	Esc f t f
Open the HTML Setup dialog box	Esc f t h
Open the PDF Setup dialog box	Esc o d a

Reference Updating

To	Use this shortcut
Display the Suppress Automatic Reference Updating dialog box	Esc e Shift+s

Graphics

Drawing tools

To choose this tool	Use this shortcut
Arc	Esc one a
Graphic Frame	Esc one m
Freehand	Esc one f

Last tool selected	Esc one one
Line	Esc one l (lowercase L)
Object Selection	Esc one o
Oval	Esc one e
Polygon	Esc one p g
Polyline	Esc one p l (lowercase L)
Rectangle	Esc one r
Rounded Rectangle	Esc one Shift+r
Smart Selection	Esc one s
Text Frame	Esc one t f
Text Line	Esc one t l (lowercase L)
To draw	**Use this shortcut**
Vertical, horizontal, or diagonal line	Press and draw a line
Square	Press and draw a rectangle
Circle	Press and draw an oval
Circular arc	Press and draw an arc
To	**Use this shortcut**
Display the Tools palette	Esc one w, Esc g Shift+t
Keep a tool active after use	Press and click a drawing tool
Return to the Object Selection tool after drawing	Press and click the Object Selection tool

Fill patterns

"First," "last," "next," and "previous" refer to positions in the Fill pop-up menu.

To change pattern to	Use this shortcut
First fill pattern (solid)	Esc zero f
Last fill pattern (none)	Esc 9 f
Next fill pattern (if at the last pattern, this does nothing)	Esc plus f
Previous fill pattern (if at the first pattern, this does nothing)	Esc minus f

Pen patterns

"First," "last," "next," and "previous" refer to positions in the Pen pop-up menu.

To change pattern to	Use this shortcut
First pen pattern (solid)	Esc zero p
Last pen pattern (none)	Esc 9 p
Next pen pattern (if at the last pattern, this does nothing)	Esc plus p
Previous pen pattern (if at the first pattern, this does nothing)	Esc minus p

Line widths

"Next" and "previous" refer to positions in the Line Widths pop-up menu.

To change width to	Use this shortcut
Thinnest line width	Esc zero w
Thickest line width	Esc 9 w
Next line width	Esc plus w
Previous line width	Esc minus w

Line styles

To change an object's line style, select the style from the Line Styles pop-up menu.

To change the current dashed line style, choose a pattern in the Dashed Line Options dialog box. "First," "last," "next," and "previous" refer to positions in this dialog box.

To	Use this shortcut
Apply the solid line style to an object	Esc one d s
Apply the dashed line style to an object	Esc one d d
Display the Dashed Line Options dialog box	Esc one d i
Change to the first dashed line pattern	Esc zero d

To	Use this shortcut
Change to the last dashed line pattern	Esc 9 d
Change to the next dashed line pattern (if at the last pattern, this does nothing)	Esc plus d
Change to the previous dashed line pattern (if at the first pattern, this does nothing)	Esc minus d

Object selection

Use these shortcuts to select objects on the current page.

To	Use this shortcut
Select a text line or text frame	Press Control and click the text line or text frame
Extend or shorten the selection	Press and click an object
Force selection border to appear (when dragging from outside all objects is not possible)	Press Control+ and drag diagonally
Select the first object in the draw order	Esc o Shift+f
Select the next object in the draw order	Esc o n
Extend the selection to the next object in the draw order	Esc o e
Deselect a text frame or text line and put the insertion point inside it instead	Double-click in the text frame or text line

Object manipulation

To	Use this shortcut
Move an object horizontally or vertically	Press and drag the object
Maintain an object's proportions while resizing	Press and drag a corner handle
Pick up the properties of the currently selected object in the Tools palette	Esc g Shift+o, or press and choose Pick up Object Properties from the Graphics menu
Display the reshape handle and control points for the line, polyline, polygon, or freehand curve currently selected	Esc g r, Control+r, Control+Shift+r
Move the control point horizontally or vertically	Press and drag the control point
Change the curve on only one side of a reshape handle (crimp curve)	Drag the control point with the right mouse button
Run text around the contour of a selected graphic	Esc g w
Run text around the bounding box of a selected graphic	Esc g Shift+w
Turn text runaround off for a selected graphic	Esc g q
Quick-copy a selected object	Press Alt and drag the object
Turn display of graphics off or on	Esc v v

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To	Use this shortcut
Add a reshape handle and control points	Press Control and click a line, polyline, polygon, or freehand curve with reshape handles and control points currently displayed
Delete a reshape handle	Press Control and click the reshape handle
Drag and drop between open windows or applications	Drag (Control-drag to copy)

Object movement

Use these shortcuts to move selected objects.

To move objects	Use this shortcut
One point in specified direction (at 100 percent zoom setting)	Alt+arrow key
Six points in specified direction (at 100 percent zoom setting)	Alt+Shift+arrow key

Object alignment

If only one object is selected, the object is aligned to the page or to the anchored or graphic frame that encloses the object.

To align object along	Use this shortcut
Tops	Esc j t, Control+F1
Top/bottom centers	Esc j m,Control+F2
Bottoms	Esc j b, Control+F3
Left sides	Esc j l (lowercase L)
Left/right centers	Esc j c
Right sides	Esc j r

Object rotation

To	Use this shortcut
Rotate 90 degrees clockwise	Esc g plus
Rotate 90 degrees counterclockwise	Esc g minus
Rotate precisely by using the Rotate Selected Objects dialog box	Esc g t
Rotate again	Esc g x
Return object to its unrotated orientation (zero degrees)	Esc g zero
Rerotate object from its unrotated orientation to its previous orientation	Esc g one
Set the current orientation of an object as the new unrotated orientation	Esc g 9
Rotate an object arbitrarily	Press Alt and drag a corner or reshape handle
Constrain rotation to 45-degree increments	Press Alt+ and drag a corner or reshape handle

To	Use this shortcut
Rotate a page clockwise	Esc p Shift+o
Rotate a page counterclockwise	Esc p o
Unrotate a page	Esc p Shift+u

Graphic frames

To	Use this shortcut
Shrink-wrap an anchored frame (shrink the frame to an object and position the frame at the insertion point)	Esc m p
Unwrap an anchored frame (enlarge the frame)	Esc m e
Rename a selected reference frame	Click frame name in status bar

Markers and variables

Marker insertion

To	Use this shortcut
Insert a marker	Esc m k
Insert a hypertext marker	Esc m h
Open the Edit Marker Types dialog box	Esc e m t

Variable insertion

To	Use this shortcut
Insert a variable by typing the first characters of its name and pressing Return	Esc q v, Control+zero

Filter By Attribute

To	Use this shortcut
Open the Manage Attribute Expressions dialog box	Esc a c

Track Text Edit

To	Use this shortcut
Turn on or off the Track Text Edit feature	Esc s t o
Show Next Text Edit	Esc s t n
Show Previous Text Edit	Esc s t p
Accept Edit	Esc s t a
Reject Edit	Esc s t r
Accept All	Esc s t Shift+a

To	Use this shortcut
Reject All	Esc s t Shift+r
Preview Final	Esc s t Shift+f
Preview Original	Esc s t Shift+o
Preview Off	Esc s p o

Conditional text display

To	Use this shortcut
Display the Show/Hide Conditional Text dialog box	Esc v Shift+c
Turn condition indicators on or off	Esc v Shift+o
Select all text around the insertion point that has the same condition tag settings	Esc h Shift+c

Conditional text window

To use these shortcuts, click in the Conditional Text window.

To	Use this shortcut
Move all condition tags to the As Is scroll list	Shift+F8
Change the scroll lists to match the condition tag settings of selected text	Shift+F9
Move a condition tag between the In and the Not In scroll lists	Double-click the tag
Move a condition tag from the As Is to the In scroll list	Double-click the tag in the As Is scroll list

Condition tags

Use these shortcuts to change the condition tag settings of selected text or table rows.

To	Use this shortcut
Apply a condition tag to selected text by typing the first characters of the tag and then pressing Return	Esc q Shift+c, Control+4
Remove a condition tag from selected text by typing the first characters of the tag and then pressing Return	Esc q Shift+d, Control+5
Make the selected text unconditional	Esc q Shift+u, Control+6

Equations

Equations pop-up menu

Command	Shortcut
New Small Equation	Esc m s
New Medium Equation	Esc m m
New Large Equation	Esc m l (lowercase L)

Command	Shortcut
Shrink-Wrap Equation	Esc m p
Unwrap Equation	Esc m e
Equation Sizes	Esc p e
Equation Fonts	Esc m f
Insert Math Element	Esc m i
Add Definition to Catalog	Esc m c
Update Definition	Esc m Shift+u

Symbols page

Greek letters

Press Return to end the backslash sequence shown in the third column.

Element	Shortcut	Backslash sequence
α	Control+Alt+a	\alpha
β	Control+Alt+b	\beta
γ	Control+Alt+Shift+g	\Gamma
γ	Control+Alt+g	\gamma
Δ	Control+Alt+Shift+d	\Delta
Δ	Control+Alt+d	\delta
ρ	Control+Alt+e	\epsilon
ζ	Control+Alt+z	\zeta
η	Control+Alt+h	\eta
Θ	Control+Alt+Shift+q	\Theta
θ	Control+Alt+q	\theta
ϑ	Control+Alt+Shift+j	\vartheta
ι	Control+Alt+i	\iota
κ	Control+Alt+k	\kappa
Λ	Control+Alt+Shift+l (L)	\Lambda
λ	Control+Alt+l	\lambda (lowercase L)
μ	Control+Alt+m	\mu
ν	Control+Alt+n	\nu
Ξ	Control+Alt+Shift+x	\Xi
ξ	Control+Alt+x	\xi
Π	Control+Alt+Shift+p	\Pi

Element	Shortcut	Backslash sequence
π	Control+Alt+p	\pi
ρ	Control+Alt+r	\rho
Σ	Control+Alt+Shift+s	\Sigma
σ	Control+Alt+s	\sigma
ς	Control+Alt+Shift+e	\varsigma
τ	Control+Alt+t	\tau
Υ	Control+Alt+Shift+u	\Upsilon
υ	Control+Alt+u	\upsilon
Φ	Control+Alt+Shift+f	\Phi
φ	Control+Alt+f	\phi
φ	Control+Alt+j	\varphi
χ	Control+Alt+c	\chi
Ψ	Control+Alt+Shift+y	\Psi
ψ	Control+Alt+y	\psi
Ω	Control+Alt+Shift+o	\Omega
ω	Control+Alt+o	\omega
ϖ	Control+Alt+Shift+i	\varpi
∂	Control+Alt+7	\cpartial

Other special symbols

Press Return to end the backslash sequence shown in the third column.

Element	Shortcut	Backslash sequence
∞	Control+Alt+1	\infty
⊥	Control+Alt+2	\bot
...	Control+g period	\ldots
ℵ	Control+Alt+3	\aleph
ℑ	Control+Alt+4	\Im
ℜ	Control+m $	\Re
℘	Control+Alt+5	\wp
∅	Control+Alt+0	\emptyset
∇	Control+Alt+6	\nabla

Element	Shortcut	Backslash sequence
°	Control+m)	\degree
'	Control+Alt+`	\prime
"	Control+m "	\pprime

Strings

Command	Shortcut
Start String	' or "
End String	Return

Diacritical marks

Element	Shortcut
x'	`(grave)
x̃	~ (tilde)
x̄	Control+g hyphen
x̀	Control+Alt+Shift+v
x̂	Control+g ^
ẋ	period
x̰	Control+g ~ (tilde)
x̲	Control+g _ (underline)
x⃗	Control+g right arrow
x̑	Control+g @

Operators page

Press Return to end the backslash sequence shown in the third column.

Element or command	Shortcut	Backslash sequence
+	plus	\plus
−	minus (after an operand)	
?x?	Control+m * (asterisk)	\cross
? · ?	Control+m period	\cdot
? • ?	Control+8	\bullet
Toggle Format	Control+Shift+t, Esc m T	
? / ?	Control+Alt+/	\fract
? ÷ ?	Control+m /	\div

Element or command	Shortcut	Backslash sequence
$\frac{?}{?}$	/	\over
?=?	=	\equal
= ?	Control+g =	\uequal
? ◊ ?	Control+j	\jotdot
?,?	comma	\comma
? ⊗ ?	Control+q Shift+d	\otimes
? ⊕ ?	Control+q Shift+e	\oplus
? ∧ ?	Control+q Shift+y	\wedge
? ∨ ?	Control+q Shift+z	\vee
? ∩ ?	Control+m i	\cap
? ∪ ?	Control+m u	\cup
,?	Control+m comma	\ucomma
;?	;	\semicolon
¬?	Control+m n	\neg
-	Control+hyphen	\minus
∓?	Control+m 1	\mp
±?	Control+q 1	\pm
∇ ?	Control+q Shift+q	\grad
∇$_?$?	Control+q Shift+q (and add operand)	
Δ ?	Control+m Control+d	\change
□ ?	Control+m x	\box
□•?	Control+m o	\boxdot
□^{2} ?	Control+m 2	\box2
∀?	Control+m a	\forall
∃?	Control+m e	\exist
∴?	Control+m t	\therefore
$\frac{?}{?}$	Control+a, Esc m v l	\atop (lowercase L)
? ?	Control+m ; (semicolon),	\list Esc m h l (lowercase L)
??	* (asterisk)	\times

Element or command	Shortcut	Backslash sequence
|?|	Control+g | (bar)	\abs
??	Esc m ^	
??	Esc m Control+Shift - (hyphen)	
??	Control+m Control+^	
??	Control+m Control+ Shift - (hyphen)	
√?	Control+r	\sqrt
?√?	Control+r (and add operand)	
?×10?	Control+Shift+e	\sn
??	^	\power
?†	Control+m d	\dagger
?!	!	\fact
?*	Control+m s	\ast
∠?	Control+q Shift+p	\angle

Large page

Press Return to end the backslash sequence shown in the third column.

Use these shortcuts to type each element on the Large page with only one operand. Then use Add Operand and Toggle Format as needed.

Element or command	Shortcut	Backslash sequence
∑ ?	Control+Shift+s	\sum
∏ ?	Control+Shift+p	\prod
∫ ?	Control+i	\int
∮ ?	NA	\oint
∩ ?	Control+m Shift+i	\bigcap
∪ ?	Control+m Shift+u	\bigcup
Add Operand	Control+Shift+n, Esc m n	
Toggle Format	Control+Shift+, Esc m Shift+t	

Delimiters page

Press Return to end the backslash sequence shown in the third column.

Element or command	Shortcut	Backslash sequence
(?)	(	\id
[?]	[(left bracket)	

? }	{ (left brace)	
? |	| (bar)	\substitution
< ? >	Control+m <	\dangle
|?|	Control+g | (bar)	\abs
(?	Control+m (	\lparen
[?	Control+m [(left bracket)	
{ ?	Control+m { (left brace)	
? |	| (bar) (and add operand)	
|? >	Control+m k	\ket
||?||	Control+m | (bar)	\norm
?)	)	\rparen
?]	] (right bracket)	
? }	} (right brace)	
? |	| (bar) (and add two operands)	
< ? |	Control+m b	\bra
$\lceil$? $\rceil$	Control+q i	\ceil
(?, ?)	Control+m Shift+n	\inprod
[?, ?]	Control+m Shift+c	\cmut
{ ?, ? }	Control+m Shift+a	\acmut
?	_ (underline)	\overline
< ? | ?>	Control+m Shift+b	\bket
$\lfloor$? $\rfloor$	Control+q k	\floor
$\binom{?}{?}$	Control+m h	\choice
} ?	Control+m Shift+d	\downbrace
?	Control+m Shift+p	\upbrace
Toggle Format	Control+Shift+t, Esc m T	
Remove Parentheses	Esc m r p	

Relations page

Press Return to end the backslash sequence shown in the third column.

Element	Shortcut	Backslash sequence
? < ?	<	\lessthan
? > ?	>	\greaterthan
? = ?	=	\equal
? ~ ?	Control+m ~ (tilde)	\sim
? ⊂ ?	Control+q Shift+l (L)	\subset
? ⊃ ?	Control+q Shift+i	\supset
? ← ?	Control+q comma	\leftarrow
? → ?	Control+q period	\rightarrow
? ↔ ?	Control+q plus	\lrarrow
? ⊥ ?	Control+m r	\perp
? ≤ ?	Control+g <	\leq
? ≥ ?	Control+g >	\geq
? ≡ ?	Control+q : (colon)	\equiv
? ≈ ?	Control+q ; (semicolon)	\approx
? ⊆ ?	Control+q Shift+j	\subseteq
? ⊇ ?	Control+q Shift+m	\supseteq
? ⇐ ?	Control+q \	\Leftarrow
? ⇒ ?	Control+q ^	\Rightarrow
? ⇔ ?	Control+q [(left bracket)	\LRarrow
? || ?	Control+m p	\parallel
? « ?	Control+q l (lowercase L)	\ll
? » ?	Control+q g	\gg
? ≠ ?	Control+q =	\notequal
? ≅ ?	@	\cong
? ∈ ?	Control+q Shift+n	\in
? ∋ ?	Control+'	\ni
? ∉ ?	Control+q Shift+o	

Element	Shortcut	Backslash sequence
$=?$	Control+g =	\uequal
$? \not\subset ?$	Control+q Shift+k	\notsubset
$? \propto ?$	Control+q 5	\propto

Calculus page

Press Return to end the backslash sequence shown in the third column.

Use these shortcuts to type each element on the Large page with only one operand. Then use Add Operand and Toggle Format as needed.

Element or command	Shortcut	Backslash sequence
$\int ?$	Control+i	\int
$\oint$	Control+Shift+i	\oint
Add Operand	Control+Shift+n, Esc m n	
Toggle Format	Control+Shift+t, Esc m T	
$\frac{d}{d?}$	Control+g t	\optotal
$\frac{d}{d}?$	Control+g Shift+t	
$\frac{\partial}{\partial?}$	Control+g p	\oppartial
$\frac{\partial}{\partial?}?$	Control+g Shift+p	
$\frac{d}{d}?$	Control+g t (and add operand)	
$\frac{d}{d}?$	Control+g Shift+t (and add operand)	
$\frac{\partial}{\partial?}$	Control+g p (and add operand)	
$\frac{\partial}{\partial?}?$	Control+g Shift+p (and add operand)	
$\delta\ ?$	Control+Alt+d	\var
$\nabla\ ?$	Control+q Shift+q	\grad
$d\ ?$	Control+d	\diff
$\nabla\times\ ?$	Control+m c	\curl
$\partial\ ?$	Control+Shift+d	\partial

Element or command	Shortcut	Backslash sequence
$\nabla \bullet$?	Control+m v	\diver
lim ? ?	Control+Shift+l (L)	\lim
∇^2 ?	Control+m l (lowercase L)	\lap

Matrices page

To insert a matrix of any size, first insert a 1 by 1 matrix. Then add rows and columns one at a time.

Command	Shortcut
Add/Remove Brackets	Control+Shift+t

Matrix commands pop-up menu

Command	Shortcut
Create 1 x 1 Matrix	Esc x m
Add Row	Esc x r
Add Column	Esc x c, Control+Shift+c
Matrix Transpose	Esc x t
Matrix Algebra	Esc x a

Matrix row height pop-up menu

Command	Shortcut
Toggle fixed/proportional	Esc m t r

Matrix column width pop-up menu

Command	Shortcut
Toggle fixed/proportional	Esc m t c

Functions page

To insert each function (except the general function and limit) from the keyboard, type its name as shown.

Element	Shortcut	Backslash sequence
? (?)	Control+f	\function
lim ? ?	Control+Shift+l (L)	\lim

Addition pop-up menu

Command	Shortcut
Add Fractions	Esc m a a
Order Sum	Esc m a o
Order Sum Reverse	Esc m a Shift+o

Multiplication pop-up menu

Command	Shortcut
Factor	Esc m u f
Factor Some	Esc m u Shift+f
Multiply Out	Esc m u m
Multiply Out Once	Esc m u Shift+m
Distribute	Esc m u d
Distribute Over Equality	Esc m u Shift+d

Division pop-up menu

Command	Shortcut
Long Division	Esc m d l (lowercase L)
Remove Division	Esc m d d
Remove Division 1 Level	Esc m d Shift+d
Remove Negative Powers	Esc m d n
Remove Negative Powers 1 Level	Esc m d Shift+n

Evaluation pop-up menu

Command	Shortcut
Number Crunch	Esc m v n
Show All Digits	Esc m v period
Evaluate	Esc m v e
Evaluate Substitution	Esc m v s
Evaluate Integrals	Esc m v i
Evaluate Derivatives	Esc m v d
Evaluate Derivatives 1 Level	Esc m v Shift+d

Rules pop-up menu

Command	Shortcut
Enter Rule	Esc m r e
Apply Rule	Esc m r a
Designate Dummy	Esc m r d

Other rewrites pop-up menu

Command	Shortcut
Simplify	Esc m o s
Simplify Some	Esc m o Shift+s
Isolate Term	Esc m o i
Expand First Term	Esc m o e
Expand All Terms	Esc m o Shift+e

Positioning page

Micropositioning
The number of points shown in the following table is based on a zoom setting of 100 percent.

To	Use this shortcut
Move up 1 point	Alt+up arrow
Move down 1 point	Alt+down arrow
Move left 1 point	Alt+left arrow
Move right 1 point	Alt+right arrow
Move up 6 points	Alt+Shift+up arrow
Move down 6 points	Alt+Shift+down arrow
Move left 6 points	Alt+Shift+left arrow
Move right 6 points	Alt+Shift+right arrow
Remove micropositioning	Alt+Home

Left/right (alignment) pop-up menu

Command	Shortcut
Left	Esc m a l (lowercase L)
Center	Esc m a c
Right	Esc m a r
Left of =	Esc m a plus
Right of =	Esc m a =

Command	Shortcut
Set Manual	Esc m a s
Clear Manual	Esc m a d
Reset Alignment	Esc m a Shift+r

Up/down (alignment) pop-up menu

Command	Shortcut
Top	Esc m a t
Baseline	Esc m a Shift+b
Bottom	Esc m a b

Line breaking pop-up menu

Command	Shortcut
Set Manual	Esc m b s
Clear Manual	Esc m b c

Navigating in an equation

Moving the insertion point

To move	Use this shortcut
Left	left arrow
Right	right arrow
From beside a fraction to the numerator	down arrow

Changing the selection

To	Use this shortcut
Select next prompt	Tab
Increase scope of selection	space
Select next element to the left	left arrow
Select next element to the right	right arrow

Moving math elements while retaining algebraic equivalency

To move	Use this shortcut
Left	Shift+left arrow
Right	Shift+right arrow
Up	Shift+up arrow
Down	Shift+down arrow

To move	Use this shortcut
To far left	Control+Alt+left arrow
To far right	Control+Alt+right arrow
Left into expression	Control+Shift+left arrow
Right into expression	Control+Shift+right arrow

Moving math elements without retaining algebraic equivalency

To swap	Use this shortcut
With element on left	Control+m Control+left arrow
With element on right	Control+m Control+right arrow

Tables

Selection in tables

To select	Use this shortcut
A cell	Press Control and click the cell
A row	Press Control and double-click column (vertical) border in the row
A column	Press Control and double-click row (horizontal) border in the row
All text in current cell	Esc t h a
Current cell, then next cell	Esc t h e
Current row, then next row	Esc t h r
Current column, then next column	Esc t h c
Body cells in current column, then next body cells	Esc t h b
Current table	Esc t h t, or press Control and triple-click a cell
Extend or shorten the election	Press Control+- and click the last cell you want in the selection

Movement in tables
Use these shortcuts to move to the indicated cell.

To move to the	Use this shortcut
Cell to the right	Esc t m r
Cell to the left	Esc t m l (lowercase L)
Cell below	Esc t m d
Cell above	Esc t m u
Rightmost cell in the current row	Esc t m e
Leftmost cell in the current row	Esc t m a

To move to the	Use this shortcut
Top cell in the current column	Esc t m t
Bottom cell in the current column	Esc t m b
Top-left selected cell	Esc t m s, Esc t h zero
Top-left cell	Esc t m Shift+t
Beginning of cell	Control+Page Up
End of cell	Control+Page Down
Next cell and select all text in cell	Tab, Esc t m n
Previous cell and select all text in cell	Shift+Tab, Esc t m p
Cell below and select all text in cell	Control+Alt+Tab
Cell above and select all text in cell	Control+Alt+Shift+Tab
Anchor point of a table	Esc t Shift+i

Tab characters in cells

To	Use this shortcut
Type a tab character in a cell	Esc Tab

Row and column manipulation
FrameMaker adds or deletes as many rows or columns as are currently selected.

To	Use this shortcut
Add rows above top selected row	Esc t Shift+r a
Add rows below bottom selected row	Esc t Shift+r b, Control+Return, Control+j
Add columns to left of leftmost selected column	Esc t c l (lowercase L)
Add columns to right of rightmost selected column	Esc t c r
Delete contents of selected rows or columns, but leave cells in table	Esc t c e
Delete selected rows or columns from table	Esc t c x
Sort rows and columns	Esc t s

Row and column replacement
If the Clipboard doesn't contain whole rows or columns, these shortcuts always replace the selected cells.

To paste whole rows or columns	Use this shortcut
By replacing selected rows or columns	Esc t p r
Before current selection (above top selected row or to left of leftmost selected column)	Esc t p b
After current selection (below bottom selected row or to right of rightmost selected column)	Esc t p a

Vertical alignment in cells

To use these shortcuts, click in the first paragraph in a cell.

To achieve	Use this shortcut
Top alignment	Esc j t, Control+F1
Middle alignment	Esc j m, Control+F2
Bottom alignment	Esc j b, Control+F3

Column width

To resize	Use this shortcut
Columns so no paragraphs in selected cells wrap	Esc t w
Selected column without changing table's width	Press Alt and drag selected cell's handle

Table Designer

To use these shortcuts, click in the Table Designer.

To	Use this shortcut
Change all settings to As Is	Shift+F8
Change all settings to match the selected table	Shift+F9
Display previous page of properties	Page Up
Display next page of properties	Page Down
Apply only the current group of properties	Press Control and click Apply

Table formats

To	Use this shortcut
Apply the current table's format to the catalog and to all tables that have the same tag	Esc t u t
Display the Edit Ruling Style dialog box	Esc t e

Text

Insertion point movement

Use these shortcuts to move the insertion point.

To move to	Use this shortcut
Next character	right arrow
Previous character	left arrow
Beginning of a word	Control+left arrow
End of a word	Control+right arrow

To move to	Use this shortcut
Beginning of the next word	Esc b w
Beginning of a line	Home
End of a line	End
Previous line	up arrow
Next line	down arrow
Beginning of a sentence	Control+Home
End of a sentence	Control+End
Beginning of the next sentence	Esc b s
Beginning of a paragraph	Control+up arrow
End of the current paragraph	Control+down arrow
Beginning of the next paragraph	Esc b p
Top of a column	Control+Page Up
Bottom of a column	Control+Page Down
Beginning of a flow	Alt+Shift+Page Up
End of a flow	Alt+Shift+Page Down
Start of first visible text flow	Control+Shift+i

Insertion point placement

Use these shortcuts to put the insertion point in an unrotated text frame on the current page. The draw order is the order in which FrameMaker displays objects on a page; the first object in the draw order is the one at the back.

To put the insertion point in the	Use this shortcut
First column of the first text frame in the draw order	Esc b f
Next column, traversing text frames in the draw order	Esc b n

Text selection

Click in text before using these shortcuts. If you use a shortcut with text already selected, FrameMaker extends the selection.

To select	Use this shortcut
Next character	Esc h c, Esc Shift+h c,Shift+right arrow
Previous character	Esc Shift+h Shift+c, Shift+Shift+left arrow
Current word, then next word	Esc h w, Esc Shift+h w, Control+Shift+right arrow
Current word, then previous word	Esc Shift+h Shift+w, Control+Shift+left arrow
Current sentence, then next sentence	Esc h s, Esc Shift+h s, Control+Shift+End
Current sentence, then previous sentence	Esc Shift+h Shift+s, Control+Shift+Home
Current line, then next line	Esc Shift+h l (lowercase L) Esc h l (lowercase L), Shift+End
Current line, then previous line	Esc Shift+h Shift+l (L), Shift+Home
Current paragraph, then next paragraph	Esc h p, Esc Shift+h p, Control+Shift+down arrow
Current paragraph, then previous paragraph	Esc Shift+h Shift+p, Control+Shift+up arrow
One line width of text, starting at insertion point	Esc h d, Shift+down arrow
One line width of text, ending at insertion point	Esc h u, Shift+up arrow
To top of a column	Esc h t, Shift+Page Up
To bottom of a column	Esc h m, Shift+Page Down
To beginning of flow	Esc h g, Control+Shift+Page Up
To end of flow	Esc h n, Control+Shift+Page Down
All text around the insertion point that has the same character format	Esc h Control+Shift+f
To Shift the selection	**Use this shortcut**
Right one character	Esc h f
Left one character	Esc h b

To select	Use this shortcut
Extend or shorten a text selection	Press and click where you want the selection to begin or end
Remove highlighting	Esc h zero
Select a word	Double-click the word
Select a word, then next words	Double-click the word and then drag
Deselect a text frame or text line and place the insertion point in it	Double-click in the text frame or text line

Text editing

To	Use this shortcut
Select a paragraph	Triple-click the paragraph
Select a paragraph, then next paragraphs	Triple-click the paragraph and then drag
Transpose characters	Control+F9
Cut	Esc e x, Control+x, Shift+Delete
Copy	Esc e c, Control+c, Control+Insert
Paste text that you cut or copied	Esc e p, Shift+Insert, Control+v, Control+y
Quick-copy text	Click where you want to place the copied text. Then press Alt and drag through the text you want to copy.

Asian text

To	Use this shortcut
Type rubi text	Esc s r
Display the Rubi Properties dialog box	Esc o r
Define a combined font of Western and Japanese characters (only available on Asian operating systems)	Esc o c o

Text deletion

To delete	Use this shortcut
Previous character	Control+h, Backspace
Backward to the start of the previous word	Control+Backspace
Backward to the end of the previous sentence	Esc k a
Next character	Delete
Forward to the end of a word	Esc k f, Control+Delete
Forward to the end of a line	Control+Shift+Delete
Forward to the start of the next sentence	Esc k s

Capitalization
Use these shortcuts to change the capitalization of selected text.

To	Use this shortcut
Change the current word to all lowercase	Control+Alt+l (lowercase L), Control+Alt+Shift+L
Change the current word to all uppercase	Control+Alt+u, Control+Alt+Shift+u
Change the current word to initial caps	Control+Alt+c
Display the Capitalization dialog box	Esc e Shift+c

Text formatting

Character and Paragraph Designers

To	Use this shortcut
Change all settings to As Is	Shift+F8
Change all settings to match selected text	Shift+F9
Display the previous set of properties	Page Up
Display the next set of properties	Page Down
Apply only the current group of properties	Press Control and click Apply

Paragraph formats

Use these shortcuts to format selected paragraphs or the paragraph containing the insertion point.

To	Use this shortcut
Apply a paragraph format by typing the first characters of its tag and pressing Return	Esc q p, F9, Control+9
Center a paragraph	Esc j c
Left-align a paragraph	Esc j l (lowercase L)
Right-align a paragraph	Esc j r
Justify a paragraph (left and right)	Esc j f
Position the current paragraph in the column, removing any straddling or run-in formatting	Esc j p n
Change current paragraph to a run-in head	Esc j p r
Change current paragraph to a side head	Esc j p s
Make current paragraph straddle all columns	Esc j p t
Make current paragraph straddle both the side-head area and columns	Esc j p Shift+t
Change line spacing to single spacing	Esc j one
Change line spacing to 1-1/2 spacing	Esc j /
Change line spacing to double spacing	Esc j 2
Change line spacing to fixed (default font size plus leading)	Esc j x
Change line spacing to floating (largest font size plus leading)	Esc j o
Increase line spacing 1 point	Esc j plus, Esc plus one
Decrease line spacing 1 point	Esc j minus, Esc minus one
Make paragraphs with the current paragraph's tag and the Paragraph Catalog definition match the current paragraph's format (unify)	Esc j Shift+u
Start a paragraph anywhere	Esc j Shift+a
Start a paragraph at the top of a column	Esc j Shift+c

To	Use this shortcut
Start a paragraph at top of a page	Esc j Shift+p
Start a paragraph at the top of a left page	Esc j Shift+l (L)
Start a paragraph at the top of a right page	Esc j Shift+r
Turn on hyphenation	Esc j h
Turn off hyphenation	Esc j n
Repeat last paragraph-related command	Esc j j
Display Paragraph Catalog	Esc o p c
Display Update Paragraph Format dialog box	Esc o p u
Display Space Between Paragraphs dialog box	Esc j w
Display Custom Line Spacing dialog box	Esc j u

Character formats

Use these shortcuts to change the character format of selected text or of text you are about to type.

To	Use this shortcut
Apply a character format by typing the first characters of its tag and pressing Return	Esc q c, F8, Control+8
Change text to default paragraph font; remove character tag from text in a text line	Esc o c p
Turn bold on or off	Esc c b, F4, Control+b, Control+Shift+b
Turn italic on or off	Esc c i, F5, Control+i
Turn underline on or off	Esc c u, F3, Control+u, Control+Shift+u
Turn double underline on or off	Esc c d
Turn numeric underline on or off	Esc c 2
Turn strikethrough on or off	Esc c s, Control+/
Turn overline on or off	Esc c o, Shift+F3
Change text to plain	Esc c p, F2
Turn superscript on or off	Esc c plus
Turn subscript on or off	Esc c minus
Put text on baseline	Esc c =
Change text to small caps	Esc c m, Control+e
Turn change bars on or off	Esc c h, Control+Shift+h
Turn pair kerning on or off	Esc c k
Manually kern text 1 point in specified direction (at 100 percent zoom setting)	Alt+arrow key
Manually kern text 6 points in specified direction (at 100 percent zoom setting)	Alt+Shift+arrow key

To	Use this shortcut
Remove all manual kerning	Alt+Home
Increase size 1 point	Esc c] (right square bracket)
Decrease size by 1 point	Esc c [(left square bracket)
Squeeze 20 percent of an em space	Esc [(left square bracket) Shift+d
Spread 20 percent of an em space	Esc [(left square bracket) Shift+c
Set font stretch to 100 percent	Esc [(left square bracket) n
Reduce font stretch by 5 percent	Esc [(left square bracket) c
Increase font stretch by 5 percent	Esc [(left square bracket) e
Repeat the last font-related command	Esc c c
Toggle Tsume (Japanese only)	Esc c t
Display the Character Catalog	Esc o c c

Working with structure

To move the insertion point	Press
To start of the current element	Esc s Shift+s
To end of the current element	Esc s Shift+e
After the next element	Esc s Shift+d, Alt+Control+down arrow
Before the previous element	Esc s Shift+u, Alt+Control+up arrow
Before the current element's parent	Esc s Shift+b, Alt+Control+left arrow
To start of the next element's contents	Esc s Shift+n, Alt+Control+right arrow
To select	**Press**
Current element	Esc h Shift+e
Next element	Esc h Shift+n, Alt+Control+Shift+down arrow
Previous element	Esc h Shift+p, Alt+Control+Shift+up arrow
Siblings of the current element	Esc h Shift+s
Parent of the current element	Esc h e Shift+p, Alt+Control+Shift+left arrow
To extend the selection	**Press**
Up by one element	Alt+Control+Shift+up arrow
Down by one element	Alt+Control+ down arrow

To	Press
To include the parent	Alt+Control+Shift+left arrow
Insert element	Esc Shift+e i, Control+1 (one)
Wrap element	Esc Shift+e w, Control+2
Unwrap element	Esc Shift+e u
Change element	Esc Shift+e c, Control+3
Merge into first element	Esc Shift+e m
Merge into last element	Esc Shift+e Shift+m
Move element up one level	Esc Shift+e Shift+p
Move element down one level	Esc Shift+e Shift+d
Transpose element with previous element	Esc Shift+e Shift+t
Transpose element with next element	Esc Shift+e t
Split element	Esc Shift+e s
Edit attribute value	Control+7
Repeat last Element Catalog command	Esc e e
Toggle display of element boundaries (as brackets)	Esc v Shift+e
Toggle display of element boundaries (as tags)	Esc v Shift+t
Validate a document	Esc Shift+e v
Display Structure View	Esc Shift+e Shift+v

Keyboard shortcuts for UNIX

Keyboard shortcuts instructions:
- \+ indicates that each key must be pressed simultaneously (for example, Control+z means to press the Control key and the z key simultaneously). If the shortcut keystrokes do not contain the Shift+ sign, press each key in the order the shortcut calls for (for example, Esc m p means to press and release the Esc (Escape) key, then the m key, then the p key).

Navigating through documents

To display	Press
Previous page	Esc p p, F6
Next page	Esc p n, F7, Control+v
First page	Esc p f, Shift+F6, and click the Previous Page button
Last page	Esc p l (lowercase L), Shift+F7, and click the Next Page button
Go To Page dialog box	Esc v p, Control+g

To go to	Do this
Source of a cross-reference	Press Control and right-click an active area
A specific page	Press Control+g or click the Page Status area and then type the page number
Page containing the insertion point	Press Control+g or click the Page Status area and then click Page Containing the Insertion Point

To move the insertion point in text to	Press
Start of the next word	Esc b w
Start of the next paragraph	Esc b p

Drawing tools

To choose this tool	Use this shortcut
Arc	Esc one a
Graphic Frame	Esc one m
Freehand	Esc one f
Last tool selected	Esc one one
Line	Esc one l (lowercase L)
Object Selection	Esc one o
Oval	Esc one e
Polygon	Esc one p g
Polyline	Esc one p l (lowercase L)
Rectangle	Esc one r
Rounded Rectangle	Esc one Shift+r
Smart Selection	Esc one s

To	Use this shortcut
Text Frame	Esc one t f
Text Line	Esc one t l (lowercase L)

To draw	Use this shortcut
Vertical, horizontal, or diagonal line	Press and draw a line
Square	Press and draw a rectangle
Circle	Press and draw an oval
Circular arc	Press and draw an arc

To	Use this shortcut
Display the Tools palette	Esc one w, Esc g Shift+t
Keep a tool active after use	Press and click a drawing tool
Return to the Object Selection tool after drawing	Press and click the Object Selection tool

Book Commands

To	Do this
New Book	Esc f Shift+n
Save Book	Esc f s
Rename File	Esc f e
Update Book	Esc e Shift+u or Esc f g
Delete File from Book	Esc f x
Display filenames (in book window)	Esc Shift+v Shift+m
Display paragraph headings (in book window)	Esc Shift+v Shift+x
Select All Files	Esc e a
Select All FrameMaker Files	Esc e Shift+a Shift+f
Save all files in book	Esc f Shift+s

To	Do this
Close all files in book	Esc f Shift+c
Select All Non-Generated FrameMaker Files	Esc e Shift+a Shift+n
Select All Generated FrameMaker Files	Esc e Shift+a Shift+g
Select a range of files	Shift+click
Select discontiguous files	Control+click
Move file up in book	Esc m u
Move file down in book	Esc m d
Print Book	Esc f p
Print Selected Files in Book	Esc f Shift+f

To	Do this
Close all files in book	Esc f Shift+c
Select All Non-Generated FrameMaker Files	Esc e Shift+a Shift+n
Select All Generated FrameMaker Files	Esc e Shift+a Shift+g
Select a range of files	Shift+click
Select discontiguous files	Control+click

Move file up in book	Esc m u
Move file down in book	Esc m d
Print Book	Esc f p
Print Selected Files in Book	Esc f Shift+f

Finding and changing

To	Press
Search forward	Esc f i n, Esc e Shift+f
Search backward	Esc f i p
Change current selection	Esc r o, Control+%
Change all occurrences of Find text in document	Esc r g
Change and search again	Esc r a
Change settings to As Is in Find Character Format and Change To Character Format dialog boxes	+F8
Change settings to match selected text in Find Character Format and Change To Character Format dialog boxes	+Control+F8, Shift+F9
Display Set Find/Change Parameters dialog box	Esc f i s

To find	Type
Tab symbol	\t
Forced return	\r
End-of-paragraph symbol	\p
Start of paragraph	\P
Nonbreaking space	\ (space)
Thin space	\i, \st

To find	Type
En space	\ Shift+n, \sn
Em space	\ _m, \sm
Numeric space	\#, \s#
End-of-flow symbol	\f
' (grave)	\{
\ (backslash)	\ \
Discretionary hyphen	\ - (hyphen)

Suppress hyphenation symbol	_ (underscore)
Start of word	\\<
End of word	\\>

With Use Wildcards turned on...	
Any number of characters	`*`
Spaces or punctuation	`|` (bar)
Any one character	`?`
The beginning of a line	`^`
The end of a line	`$`
Any one of the bracketed characters *ab*	`[ab]`
Any character except *ab*	`[^ab]`
Any character from *a* to *f*	`[a-f]`

Editing text

To	Press
Cut	Esc e x, Shift+Delete, Control+w
Copy	Esc e c
Paste	Esc e p, Control+y
Clear	Esc e b
Undo/Redo	Esc e u

To select	Do this
A word	Double-click it
A word, then next words	Double-click it and drag, double-click it and -click

To select	Do this
Current sentence, then next	Press Esc h s
Current sentence, then previous	Press Esc Shift+h Shift+s
A paragraph	Triple-click it
A paragraph, then next paragraphs	Triple-click it and drag, triple-click it and -click

To delete	Press
Previous character	Control+h, Delete, Backspace
Backward to start of a line	Control+u, Control+Delete

Backward to end of the previous sentence	Esc k a
Next character	Control+d
Forward to end of a word	Esc k f
Forward to end of a line	Control+k
Forward to start of the next sentence	Esc k s

Working with tables

To select	Press
A cell	Control and click the cell
A row	Control and double-click column border
A column	Control and double-click row border
Current row	Esc t h r
Current column	Esc t h c
Current table	Esc t h t

To move to	Press
Rightmost cell in current row	Esc t m e
Leftmost cell in current row	Esc t m a
Top cell in current column	Esc t m t
Bottom cell in current column	Esc t m b
Next cell and select its text	Tab, Esc t m n
Previous cell and select its text	Shift+Tab, Esc t m p

To	Press
Type a tab character in a cell	Esc Tab
Add rows above selected row	Esc t Shift+r a
Add rows below selected rows	Esc t Shift+r b, Control+Return
Add columns to left	Esc t c l (lowercase L)
Add columns to right	Esc t c r
Paste by replacing selected rows or columns	Esc t p r
Paste rows or columns before selection	Esc t p b
Paste rows or columns after selection	Esc t p a
Resize columns so no paragraphs in selected cells wrap	Esc t w
Resize selected columns without changing table's width	and drag cell's handle
Copy column width to Clipboard	Esc e y w

Entering special characters

To type	Press
• (bullet)	Control+q %
† (dagger)	Control+q space
‡ (double dagger)	Control+q `
™ (trademark)	Control+q *
© (copyright)	Control+q)
® (registered trademark)	Control+q (
¶ (paragraph symbol)	Control+q &
§ (section symbol)	Control+q $
… (ellipsis)	Control+q Shift+i
(em dash)	Control+q Shift+q
(en dash)	Control+q Shift+p
'	Control+'
"	Control+"
(with Smart Quotes off)	Control+q Shift+t
(with Smart Quotes off)	Control+q Shift+u
(with Smart Quotes off)	Control+q Shift+r
(with Smart Quotes off)	Control+q Shift+s
Em space	Esc space m

To type	Press
En space	Esc space n
Nonbreaking space	Esc space h, Control+space
Numeric space	Esc space 1 (one)
Thin space	Esc space t
Nonbreaking hyphen	Esc hyphen h
Suppress hyphenation symbol	Esc n s
Discretionary hyphen	Esc hyphen Shift+d, Control+hyphen
Forced return	Shift+Return, Control+j

To type	Press
En space	Esc space n
Nonbreaking space	Esc space h, Control+space
Numeric space	Esc space 1 (one)
Thin space	Esc space t
Nonbreaking hyphen	Esc hyphen h
Suppress hyphenation symbol	Esc n s
Discretionary hyphen	Esc hyphen Shift+d, Control+hyphen
Forced return	Shift+Return, Control+j

To use this accent	Press Esc, then type this	Followed by one of these	Example
´ (acute)	' (apostrophe)	a, A, e, E, i, I, o, O, u, U	É, é
` (grave)	` (left quote)	a, A, e, E, i, I, o, O, u, U	È, è
˜ (tilde)	~ (tilde)	a, A, n, N, o, O	Ñ, ñ
¨ (dieresis)	% (percent)	a, A, e, E, i, I, o, O, u, U, y, Y	Ü, ü
^ (circumflex)	^ (caret)	a, A, e, E, i, I, o, O, u, U	Ê, ê
° (ring)	* (asterisk)	a, A	Å, å
¸ (cedilla)	, (comma)	c, C	Ç, ç

Object selection

Use these shortcuts to select objects on the current page.

To	Use this shortcut
Select a text line or text frame	Press Control and click a text line or text frame
Extend or shorten the selection	Press and click an object
Force selection border to appear (when dragging from outside all objects is not possible)	Press Control+ and drag diagonally

To	Use this shortcut
Select the first object in the draw order	Esc o Shift+f
Select the next object in the draw order	Esc o n
Extend the selection to the next object in the draw order	Esc o e
Deselect a text frame or text line and put the insertion point inside it instead	Double-click in the text frame or text line

Function keys

Key	Function	Control	Shift	+Control
F1	Help	Info		
F2	Change selected to text to plain text		Plain	
F3	Underline the selected text		Underline	
F4	Apply Bold format to the selected text		Bold	
F5	Italicize the selected text		Italics	
F6	Page up		First page	
F7	Page down		Last page	
F8	Choose character format by typing	Choose paragraph format by typing	Change dialog box settings to As Is	Change settings to match current text
F9	Choose paragraph format by typing		Change dialog box settings to match current text	
F10	Keyboard input to the menu bar			

Character and Paragraph Designers

To	Use this shortcut
Change all settings to As Is	Shift+F8
Change all settings to match selected text	Control+Shift+F8, Shift+F9
Display the previous set of properties	Esc p p, F6

To	Use this shortcut
Display the next set of properties	Esc p n, F7, Control+v
Apply only the current group of properties	Press Control and click Apply

Other useful shortcuts

To	Press
Redraw the document display	Control+l (lowercase L)
Quick-copy a selected object	Control and drag the object with the middle mouse button
Rotate an object arbitrarily	Control and use the right mouse button to drag a corner or reshape handle
Move an object along vertical or horizontal axis	and drag object

To	Press
Nudge an object 1 point/6 points	Control+arrow key/+Control+arrow key
Fit page in window	Esc z p
Fit window to page	Esc z w
Zoom to 100 percent	Esc z z
Lock or unlock a document or book	Esc Shift+f l (lowercase L) k

Conventions and Function keys

Keys

When you use keyboard shortcuts, Caps Lock must be off and, unless otherwise noted, the pointer must be in the document window.

The following table lists the terms used for special keys.

This notation	Means
arrow key	The up, down, right, or left arrow key
Esc	The key labeled Esc
Control	The key labeled Control
Shift	The key labeled Shift
F2, L2, or R11	The function key labeled F2, L2, or R11. (If you should type F followed by 2, the characters are shown as F 2)
space	The space bar
plus	The key labeled with a plus sign (+)
minus or hyphen	The key labeled with a hyphen (-)
period	The key labeled with a period (.)
comma	The key labeled with a comma (,)
zero	The key labeled with the numeral 0
one	The key labeled with the numeral 1

Shortcuts

The following table explains the conventions for showing key sequences and key combinations. When an uppercase letter appears in a shortcut, use the Shift key when typing the letter.

When two or more shortcuts accomplish the same action, the shortcuts are separated by commas; for example: Esc q v, Control+zero. You can use either Esc q v or Control+zero to accomplish the same action.

This shortcut	Means
Esc Shift+t r	Press and release these keys in succession: the Esc key, the uppercase letter T, and the letter r
Control+e	Hold down Control and press the letter e
Control+Shift+F8	Hold down Control and Shift and press the F8 key

Function keys

Key	Function	Control	Shift	+Control
F1	Help	Info		
F2	Change selected to text to plain text		Plain	
F3	Underline the selected text		Underline	
F4	Apply Bold format to the selected text		Bold	
F5	Italicize the selected text		Italics	
F6	Page up		First page	
F7	Page down		Last page	
F8	Choose character format by typing	Choose paragraph format by typing	Change dialog box settings to As Is	Change settings to match current text
F9	Choose paragraph format by typing		Change dialog box settings to match current text	
F10	Keyboard input to the menu bar			

Mouse

The following table lists the terms used for mouse actions.

This instruction	Means
Click	Click the left mouse button
Middle-click	Click the middle button of a three-button mouse, or simultaneously click both buttons of a two-button mouse
Right-click	Click the right mouse button

This instruction	Means
Double-click	Click the left mouse button twice rapidly without moving the mouse
Triple-click	Click the left mouse button three times rapidly without moving the mouse
-click	Hold down Shift and click the left mouse button

Color

Color selection

To	Use this shortcut
Keep a color selected after use	Press and choose a color from the Color pop-up menu
Assign a color to all objects in a document, including text	Press Control+ and choose a color from the Color pop-up menu in the Tools palette
Display the Color Definitions dialog box	Press Esc v c d

Color views

To	Use this shortcut
Display Define Color Views dialog box	Press Esc v c v
Choose view number (1, 2, 3, 4, 5, or 6) from the Define Color Views dialog box	Press Esc v and then the number

DITA

To choose	Use this shortcut
DITA>New DITA File>New <map$_i$> *Note: map<i> refers to an element whose class attribute starts with map/map and can vary from 1 to i.*	Esc Shift+n Shift+m i
DITA>New DITA File>New <topic$_i$>	Esc Shift+n Shift+t 1
DITA>New DITA File>New <concept$_i$>	Esc Shift+n Shift+t 2
DITA>New DITA File>New <task$_i$>	Esc Shift+n Shift+t i
DITA>New DITA File>New <reference$_i$> *Note: topic<i> refers to an element whose class attribute starts with topic/topic and can vary from 1 to i..*	
DITA>New DITA File>Refresh Menu	Esc Shift+r Shift+m
DITA>Insert Conref	Esc Shift+i Shift+c
DITA>Assign ID to Element	Esc Shift+a Shift+i
DITA>Update References	Esc Shift+u Shift+r
DITA>Open all Topicrefs	Esc Shift+o Shift+a

DITA>Insert Topicref	Esc Shift+i Shift+t
DITA>Build FM Document From DITA Map	Esc Shift+g Shift+d
DITA>DITA Options	Esc Shift+d Shift+o

Windows and dialog boxes

Main FrameMaker window

To use these shortcuts, point or click in a document window, or point in the main FrameMaker window.

To choose	Use this shortcut
New Document	Esc f n
New Book	Esc f Shift+n
Open	Esc f o, Control+x Control+f, Control+x Control+v
Help	F1 or Esc f h
Info	Esc f Shift+i, Esc ? v, Control+Help
Exit	Esc f c, Control+x Control+c

Window manipulation

To use these shortcuts, point or click in any FrameMaker window.

To	Use this shortcut
Expose	Esc w e
Hide	Esc w h
Redisplay a document	Control+l (lowercase L), Esc w r
Close any window or modeless dialog box	Control+x Control+c
Close the document window	Esc f c, Esc f q, Control+x Control+c

Context menus

To	Do this
Display a pop-up menu of commands that apply to the current selection or context	Right-click on an object, in a document margin, or in a book window

Display and pointer placement

Use these shortcuts to display a window or dialog box and direct keyboard input to it. If it is already open but is behind another window, these shortcuts bring it to the front.

To display this and direct keyboard input to it	Use this shortcut
Current document window	Esc Shift+f i d, F2
Find/Change	Esc Shift+f i f
Hypertext	Esc Shift+f i h

To display this and direct keyboard input to it	Use this shortcut
Marker	Esc Shift+f i m
Spelling Checker	Esc Shift+f i s
Paragraph Designer	Esc Shift+f i p
Character Designer	Esc Shift+f i c
Conditional Text	Esc Shift+f i o
Show/Hide Conditional Text	Esc s Shift+c
Show Conditional Text Indicators	Esc Shift+v Shift+o s
Hide Conditional Text Indicators	Esc Shift+v Shift+o h
Toggle Conditional Indicators On/Off	Esc v Shift+o
Show One Conditional Text Tag	Esc q Shift+s
Manage Conditional Text	Esc m Shift+c
Apply Conditional Text	Esc s Shift+c
Select Same Condition Tags	Esc h Shift+c
View the Condition applied to the text where the cursor is placed	Esc q Shift+c
Focus In Conditional Text	Esc Shift+f i o
Close Conditional Text dialog box	Esc Shift+c o
Custom Ruling and Shading	Esc Shift+f i r
Table Designer	Esc Shift+f i t
Structure View	Ctrl-r F i v
Element Validation	Ctrl-r F i w

Navigation within windows

Use these shortcuts for windows and dialog boxes. When you use a keyboard shortcut in a window or dialog box, the shortcut's effect depends on the active setting. The active setting has a box around it.

To move to the	Use this shortcut
Next setting	Tab
Previous setting	Shift+Tab
First setting	Control+Tab

Command buttons

To	Use this shortcut
Click a default button that initiates a command (if no other command button is active)	Return, space
Click a command button	Return
Cancel a dialog box	Control+c

Radio buttons and checkboxes

To	Use this shortcut
Turn on a radio button	space
Cycle through checkbox states (off, on, As Is)	space
Turn off a checkbox	0 (zero)
Turn on a checkbox	1 (one)

Pop-up menus

To	Use this shortcut
Display the pop-up menu	space
Move to the first menu item	0 (zero)
Move to the next menu item	down arrow, Control+n
Move to the previous menu item	up arrow, Control+p
Choose the selected item	Return, space

Scroll lists

To	Use this shortcut
Move to the previous item in a list	up arrow, Control+p
Move to the next item in a list	down arrow, Control+n
Choose an item	space
Search forward and select an item starting with a typed letter	UnShifted key
Search backward and select an item starting with a typed letter	Shifted key
Move an item in a scroll list to the opposite scroll list	Double-click the item
Move all items in a scroll list to the opposite scroll list	Press and click arrow between scroll lists

Custom menus

To	Use this shortcut
Display a custom menu bar	Esc v m u

Document design

Master and reference pages

To	Use this shortcut
Rename a master or reference page (display the master or reference page before using this shortcut)	Esc p Shift+n
Create a master page (display a master or body page before using this shortcut)	Esc o m p or Esc p m

Page layout

To	Use this shortcut
Update page layouts (display a body page before using this shortcut)	Esc o u p

Import formats

To	Use this shortcut
Import formats from another document	Esc f i o

Side-head area

To	Use this shortcut
Turn side-head area on or off	Esc j p Shift+s

Text flows

To	Use this shortcut
Split a text frame below the insertion point	Esc Shift+c Shift+s
Disconnect the text frame with the insertion point from the previous frame in a flow	Esc Shift+c Shift+p
Disconnect the text frame with the insertion point from the next text frame in a flow	Esc Shift+c Shift+n
Disconnect the text frame with the insertion point from both the previous and next text frames	Esc Shift+c Shift+b
Connect two selected text frames	Esc Shift+c Shift+c

Documents

Help

To	Use this shortcut
Display online Help	Esc f h, F1
Display Help on using the templates provided with FrameMaker	Press Esc f n and click Explore Standard Templates

Open

To open	Use this shortcut
A document in a book file	Double-click the filename in the book window, Control+o
All files in a book	Esc f Shift+o, or press and choose Open All Files in Book from the File menu
An MIF or an MML file as a text file	Press and click Open in the Open dialog box

Save and Close

To	Use this shortcut
Display the Save Document dialog box	Esc f a, Control+x Control+w
Save a document or book	Esc f s, Control+x Control+s
Save all open files	Esc f Shift+s, or press and choose Save All Open Files from the File menu
Save all open files in a book	Esc f Shift+s, or press and choose Save All Files in Book from the File menu
Save As PDF	Esc f w p
Save As XML	Esc f w x
Close all open files	Esc f Shift+c, or press and choose Close All Open Files from the File menu
Close all open files in a book	Esc f Shift+c, or press and choose Close All Files in Book from the File menu

Cancel and Undo

To	Use this shortcut
Cancel some FrameMaker commands	Control+c
Undo some FrameMaker commands	Esc e u

Zoom

To zoom	Use this shortcut
In one zoom setting	Esc z i
Out one zoom setting	Esc z o
To fit page in window	Esc z p
To fit window to page	Esc z w
To fit window to text frame	Esc z f
To 100 percent	Esc z z

Hypertext documents

To	Use this shortcut
Go to previous location on the hypertext stack	Esc v Shift+p
Go to next location on the hypertext stack	Esc v Shift+n
Activate a hypertext command without locking a document	Press Control and right-click an active area
Lock or unlock a document	Esc Shift+f l (lowercase L) k
Open Hypertext dialog box	Esc s h

To	Use this shortcut
Move focus to Hypertext dialog box	Esc Shift+f i h
Validate a hypertext command	Esc v h
Toggle FluidView locked format	Esc Shift+v Shift+f

Document utilities

Spelling Checker

To	Use this shortcut
Check selected text or a word containing the insertion point	Esc l (lowercase L) s, or press and click Start Checking in the Spelling Checker dialog box
Check the entire document	Esc l (lowercase L) e
Check the current page	Esc l (lowercase L) p
Correct a word	Esc l (lowercase L) c w
Add a word to your personal dictionary (Learn)	Esc l (lowercase L) a p
Add a word to the document dictionary	Esc l (lowercase L) a d
Add a word to automatic corrections	Esc l (lowercase L) a c
Delete a word from your personal dictionary (Unlearn)	Esc l (lowercase L) x p
Delete a word from the document dictionary	Esc l (lowercase L) x d
Clear automatic corrections	Esc l (lowercase L) c a
Display the Spelling Checker Options dialog box	Esc l (lowercase L) Shift+o
Display the Dictionary Functions dialog box	Esc l (lowercase L) c d
Create a file of unknown words	Esc l (lowercase L) b
Mark all paragraphs for rechecking	Esc l (lowercase L) r
Rehyphenate a document	Esc l (lowercase L) Shift+r
Replace a questioned word	Double-click word in the Correction scroll list in the Spelling Checker dialog box

Thesaurus

To use this shortcut, point or click in the document window, not in the Thesaurus dialog box.

To	Use this shortcut
Replace a selection with the Thesaurus selection	Esc Shift+t r

Document comparison

To	Use this shortcut
Display the Compare Documents dialog box	Esc f t c

Document reports

To	Use this shortcut
Display the Document Reports dialog box	Esc f t r

Macros

To	Use this shortcut
Start/stop recording keys	Control+] (right bracket)

HTML and PDF export

To	Use this shortcut
Create and apply formats	Esc f t f
Open the HTML Setup dialog box	Esc f t h
Open the PDF Setup dialog box	Esc o d p

Reference Updating

To	Use this shortcut
Display the Suppress Automatic Reference Updating dialog box	Esc e Shift+s

Graphics

Drawing tools

To choose this tool	Use this shortcut
Arc	Esc one a
Graphic Frame	Esc one m
Freehand	Esc one f
Last tool selected	Esc one one
Line	Esc one l (lowercase L)
Object Selection	Esc one o
Oval	Esc one e
Polygon	Esc one p g
Polyline	Esc one p l (lowercase L)
Rectangle	Esc one r
Rounded Rectangle	Esc one Shift+r

Smart Selection	Esc one s
Text Frame	Esc one t f
Text Line	Esc one t l (lowercase L)
To draw	**Use this shortcut**
Vertical, horizontal, or diagonal line	Press and draw a line
Square	Press and draw a rectangle
Circle	Press and draw an oval
Circular arc	Press and draw an arc

To draw	**Use this shortcut**
Vertical, horizontal, or diagonal line	Press and draw a line
Square	Press and draw a rectangle
Circle	Press and draw an oval
Circular arc	Press and draw an arc
To	**Use this shortcut**
Display the Tools palette	Esc one w, Esc g Shift+t
Keep a tool active after use	Press and click a drawing tool
Return to the Object Selection tool after drawing	Press and click the Object Selection tool

Tool usage

To	**Use this shortcut**
Display the Tools palette	Esc one w, Esc g Shift+t
Keep a tool active after use	Press and click a drawing tool
Return to the Object Selection tool after drawing	Press and click the Object Selection tool

Fill patterns

"First," "last," "next," and "previous" refer to positions in the Fill pop-up menu in the small Tools palette, and in the Fill area in the large Tools palette.

To change pattern to	**Use this shortcut**
First fill pattern (solid)	Esc zero f
Last fill pattern (none)	Esc 9 f
Next fill pattern (if at the last pattern, this does nothing)	Esc plus f
Previous fill pattern (if at the first pattern, this does nothing)	Esc minus f

Pen patterns

"First," "last," "next," and "previous" refer to positions in the Pen pop-up menu in the small Tools palette, and in the Pen area in the large Tools palette.

To change pattern to	Use this shortcut
First pen pattern (Solid)	Esc zero p
Last pen pattern (none)	Esc 9 p
Next pen pattern (if at the last pattern, this does nothing)	Esc plus p
Previous pen pattern (if at the first pattern, this does nothing)	Esc minus p

Line widths

"Next" and "previous" refer to positions in the Line Widths pop-up menu in the small Tools palette, and in the Line Widths area in the large Tools palette.

To change width to	Use this shortcut
Thinnest line width	Esc zero w
Thickest line width	Esc 9 w
Next line width (if at the last line width, this does nothing)	Esc plus w
Previous line width (if at the first line width, this does nothing)	Esc minus w

Line styles

To change an object's line style, select the style from the Line Styles pop-up menu in the small Tools palette, or the Line Styles area in the large Tools palette.

To change the current dashed line style, choose a pattern in the Dashed Line Options dialog box. "First," "last," "next," and "previous" refer to positions in this dialog box.

To	Use this shortcut
Apply the solid line style to an object	Esc one d s
Apply the dashed line style to an object	Esc one d d
Display the Dashed Line Options dialog box	Esc one d i
Change to the first dashed line pattern	Esc zero d
Change to the last dashed line pattern	Esc 9 d
Change to the next dashed line pattern(if at the last pattern, this does nothing)	Esc plus d
Change to the previous dashed line pattern (if at the first pattern, this does nothing)	Esc minus d

Object selection

Use these shortcuts to select objects on the current page.

To	Use this shortcut
Select a text line or text frame	Press Control and click a text line or text frame
Extend or shorten the selection	Press and click an object
Force selection border to appear (when dragging from outside all objects is not possible)	Press Control+ and drag diagonally
Select the first object in the draw order	Esc o Shift+f
Select the next object in the draw order	Esc o n
Extend the selection to the next object in the draw order	Esc o e
Deselect a text frame or text line and put the insertion point inside it instead	Double-click in the text frame or text line

Object manipulation

To	Use this shortcut
Move an object horizontally or vertically	Press and drag the object
Maintain an object's proportions while resizing	Press and drag a corner handle
Display the properties of the currently selected object in the Tools palette	Press Esc g Shift+o or press and choose Pick up Object Properties from the Graphics menu
Display the reshape handle and control points for the line, polyline, polygon, or freehand curve currently selected	Esc g r
Move the control point horizontally or vertically	Press and drag the control point
Change the curve on only one side of a reshape handle (crimp curve)	Press Control and drag the control point
Run text around the contour of a selected graphic	Esc g w
Run text around the bounding box of a selected graphic	Esc g Shift+w
Turn text runaround off for a selected graphic	Esc g q
Quick-copy the selected object	Press Control and drag the object with the middle mouse button
Turn display of graphics off or on	Esc v v
Add a reshape handle and control points	Middle-click a line, polyline, polygon, or freehand curve with reshape handles and control points currently displayed
Delete a reshape handle	Middle-click the reshape handle

Object alignment

If only one object is selected, the object is aligned to the page or to the anchored or graphic frame that encloses the object.

To align objects along	Use this shortcut
Tops	Esc j t
Top/bottom centers	Esc j m
Bottoms	Esc j b
Left sides	Esc j l (lowercase L)
Left/right centers	Esc j c
Right sides	Esc j r

Object rotation

To	Use this shortcut
Rotate 90 degrees clockwise	Esc g plus
Rotate 90 degrees counterclockwise	Esc g minus
Rotate precisely using the Rotate Selected Objects dialog box	Esc g t
Rotate again	Esc g x
Return object to its unrotated orientation (0 degrees)	Esc g zero
Return object from its unrotated orientation to its previous orientation	Esc g one
Set the current orientation of an object as the new unrotated orientation	Esc g 9
Rotate an object arbitrarily	Press Control and use the right mouse button to drag a corner or reshape handle
Constrain rotation to 45-degree increments	Press Control+ and use the right mouse button to drag a corner or reshape handle
Rotate a page clockwise	Esc p Shift+o
Rotate a page counterclockwise	Esc p o
Unrotate a page	Esc p Shift+u

Graphic frames

To	Use this shortcut
Shrink-wrap an anchored frame (shrink the frame to an object and position the frame at the insertion point)	Esc m p
Unwrap an anchored frame (enlarge the frame)	Esc m e
Rename a selected reference frame	Click frame name in status bar

Graphic insets

To	Use this shortcut
Edit a graphic inset	Double-click the inset

Markers and variables

Marker insertion

To	Use this shortcut
Insert a marker	Esc m k
Open the Edit Marker Types dialog box	Esc e m t

Variable insertion

To	Use this shortcut
Insert a variable by typing the first characters of its name and pressing Return	Esc q v, Control+zero

Filter By Attribute

To	Use this shortcut
Open the Manage Attribute Expressions dialog box	Esc a c

Track Text Edit

To	Use this shortcut
Turn on or off the Track Text Edit feature	Esc s t o
Show Next Text Edit	Esc s t n
Show Previous Text Edit	Esc s t p
Accept Edit	Esc s t a
Reject Edit	Esc s t r
Accept All	Esc s t Shift+a
Reject All	Esc s t Shift+r
Preview Final	Esc s t Shift+f
Preview Original	Esc s t Shift+o
Preview Off	Esc s p o

Conditional text display

To	Use this shortcut
Display the Show/Hide Conditional Text dialog box	Esc v Shift+c
Turn condition indicators on or off	Esc v Shift+o
Select all text around the insertion point that has the same condition tag settings	Esc h Shift+c

Conditional text window

To use these shortcuts, point or click in the Conditional Text window.

To	Use this shortcut
Move all condition tags to the As Is scroll list	Shift+F8
Change the scroll lists to match the condition tag settings of selected text	Control+Shift+F8, Shift+F9
Move a condition tag between the In and Not In scroll lists	Double-click the tag
Move a condition tag from the As Is to the In scroll list	Double-click the tag in the As Is scroll list

Condition tag settings

Use these shortcuts to change the condition tag settings of selected text or table rows.

To	Use this shortcut
Apply a condition tag to selected text by typing the first characters of the tag and pressing Return	Esc q Shift+c, Control+4
Remove a condition tag from selected text by typing the first characters of the tag and pressing Return	Esc q Shift+d, Control+5
Make selected text unconditional	Esc q Shift+u,Control+6

Equations

Equations pop-up menu

Command	Shortcut
New Small Equation	Esc m s
New Medium Equation	Esc m m
New Large Equation	Esc m l (lowercase L)
Shrink-Wrap Equation	Esc m p
Unwrap Equation	Esc m e
Equation Sizes	Esc p e
Equation Fonts	Esc m f

Command	Shortcut
Insert Math Element	Esc m i
Add Definition to Catalog	Esc m c
Update Definition	Esc m Shift+u

Symbols page

Greek letters

Press Return to end the backslash sequence shown in the third column.

Element	Backslash sequence
α	\alpha
β	\beta
Γ	\Gamma
γ	\gamma
Δ	\Delta
δ	\delta
ϵ	\epsilon
ζ	\zeta
η	\eta
Θ	\Theta
θ	\theta
ϑ	\vartheta
ι	\iota
κ	\kappa
Λ	\Lambda
λ	\lambda
μ	\mu
ν	\nu
Ξ	\Xi
ξ	\xi
Π	\Pi
π	\pi
ρ	\rho

Σ	\Sigma
σ	\sigma
ς	\varsigma
τ	\tau
ϒ	\Upsilon
υ	\upsilon
Φ	\Phi
φ	\phi
φ	\varphi
χ	\chi
Ψ	\Psi
ψ	\psi
Ω	\Omega
ω	\omega
ω	\varpi
∂	\cpartial

Other special symbols

Press Return to end the backslash sequence shown in the third column.

Element	Backslash sequence
α	\infty
β	\bot
...	\ldots
ℵ	\aleph
ℑ	\Im
ℜ	\Re
℘	\wp
∅	\emptyset
∇	\nabla
°	\degree
′	\prime
″	\pprime

Strings

Element	Shortcut
Start String	' or "
End String	Return

Diacritical marks

Element	Shortcut
x'	` (grave)
x̃	~ (tilde)
ẋ	period

Operators page

Element or command	Shortcut	Backslash sequence
+	plus	\plus
–	minus (after an operand)	
?x?	Control+Shift+* (asterisk)	\cross
? · ?	Control+period	\cdot
? • ?	Control+8	\bullet
Toggle Format	Control+Shift+t, Esc m Shift+t	
? / ?	NA	\fract
? ÷ ?	Control+m /	\div
$\frac{?}{?}$	/	\over
?=?	=	\equal
= ?	Control+=	\uequal
? ◊ ?	Control+j	\jotdot
?,?	comma	\comma
? ⊗ ?	Control+q Shift+d	\otimes
? ⊕ ?	Control+q Shift+e	\oplus
? ∧ ?	Control+q Shift+y	\wedge
? ∨ ?	Control+q Shift+z	\vee
? ∩ ?	Control+m i	\cap
? ∪ ?	Control+m u	\cup
,?	Control+comma	\ucomma

;?	; (semicolon)	\semicolon
¬?	Control+m n	\neg
-	Control+hyphen	\minus
∓?	Control+m one	\mp
±?	Control+q one	\pm
∇ ?	Control+q Shift+q	\grad
∇??	Control+q Shift+q (and add operand)	
Δ?	Control+m Control+d	\change
□?	Control+m x	\box
□•?	Control+m o	\boxdot
□²?	Control+m 2	\box2
∀?	Control+m a	\forall
∃?	Control+m e	\exist
∴?	Control+m t	\therefore
? ?	Control+a, Esc m v l (lowercase L)	\atop
? ?	Control+; (semicolon), Esc m h l (lowercase L)	\list
??	* (asterisk)	\times
|?|	Control+| (bar)	\abs
??	Control+^	
??	Control+_ (underline)	
??	Control+m Control+^	
??	Control+m Control+_ (underline)	
√?	Control+s	\sqrt
?√?	Control+s (and add operand)	
?×10?	Control+Shift+e	\sn
??	^	\power
?†	Control+m d	\dagger
?!	!	\fact
?*	Control+m s	\ast
∠?	Control+q Shift+p	\angle

Large page

Press Return to end the backslash sequence shown in the third column.

Use these shortcuts to type each element on the Large page with only one operand. Then use Add Operand and Toggle Format as needed.

Element or command	Shortcut	Backslash sequence
$\sum$?	Control+Shift+s	\sum
$\prod$?	Control+Shift+p	\prod
$\int$?	Control+i	\int
$\oint$?	NA	\oint
$\bigcap$?	Control+m Shift+i	\bigcap
$\bigcup$?	Control+m Shift+u	\bigcup
Add Operand	Control+Shift+n, Esc m n	
Toggle Format	Control+Shift+, Esc m Shift+t	

Delimiters page

Press Return to end the backslash sequence shown in the third column.

Element or command	Shortcut	Backslash sequence
(?)	(	\id
[?]	[(left bracket)	
? }	{ (left brace)	
? |	| (bar)	\substitution
< ? >	Control+m <	\dangle
|?|	Control+g | (bar)	\abs
(?	Control+m (	\lparen
[?	Control+m [(left bracket)	
{ ?	Control+m { (left brace)	
? |	| (bar) (and add operand)	
|? >	Control+m k	\ket
||?||	Control+m | (bar)	\norm
?)	)	\rparen
?]	] (right bracket)	
? }	} (right brace)	
? |	| (bar) (and add two operands)	

< ? |	Control+m b	\bra
⌈ ? ⌉	Control+q i	\ceil
(?, ?)	Control+m Shift+n	\inprod
[?, ?]	Control+m Shift+c	\cmut
{ ?, ? }	Control+m Shift+a	\acmut
?	_ (underline)	\overline
< ? | ?>	Control+m Shift+b	\bket
⌊ ? ⌋	Control+q k	\floor
(? ?)	Control+m h	\choice
} ?	Control+m Shift+d	\downbrace
?	Control+m Shift+p	\upbrace
Toggle Format	Control+Shift+t, Esc m T	
Remove Parentheses	Esc m r p	

Relations page

Press Return to end the backslash sequence shown in the third column.

Element	Shortcut	Backslash sequence
? < ?	<	\lessthan
? > ?	>	\greaterthan
? = ?	=	\equal
? ~ ?	Control+m ~ (tilde)	\sim
? ⊂ ?	Control+q Shift+l (L)	\subset
? ⊃ ?	Control+q Shift+i	\supset
? ← ?	Control+q comma	\leftarrow
? → ?	Control+q period	\rightarrow
? ↔ ?	Control+q plus	\lrarrow
? ⊥ ?	Control+m r	\perp
? ≤ ?	Control+g <	\leq
? ≥ ?	Control+g >	\geq
? ≡ ?	Control+q : (colon)	\equiv
? ≈ ?	Control+q ; (semicolon)	\approx

Element	Shortcut	Backslash sequence
? ⊆ ?	Control+q Shift+j	\subseteq
? ⊇ ?	Control+q Shift+m	\supseteq
? ⟸ ?	Control+q \	\Leftarrow
? ⟹ ?	Control+q ^	\Rightarrow
? ⟺ ?	Control+q [(left bracket)	\LRarrow
? ‖ ?	Control+m p	\parallel
? « ?	Control+q l (lowercase L)	\ll
? » ?	Control+q g	\gg
? ≠ ?	Control+q =	\notequal
? ≅ ?	@	\cong
? ∈ ?	Control+q Shift+n	\in
? ∋ ?	Control+'	\ni
? ∉ ?	Control+q Shift+o	
= ?	Control+g =	\uequal
? ⊄ ?	Control+q Shift+k	\notsubset
? ∝ ?	Control+q 5	\propto

Calculus page

Press Return to end the backslash sequence shown in the third column.

Use these shortcuts to type each element on the Large page with only one operand. Then use Add Operand and Toggle Format as needed.

Element or command	Shortcut	Backslash sequence
∫ ?	Control+i	\int
∮	Control+Shift+i	\oint
Add Operand	Control+Shift+n, Esc m n	
Toggle Format	Control+Shift+t, Esc m T	
$\frac{d}{d?}$	Control+g t	\optotal
$\frac{d\,?}{d?^?}$	Control+g Shift+t	

Element or command	Shortcut	Backslash sequence
$\dfrac{\partial}{\partial ?}$	Control+g p	\oppartial
$\dfrac{\partial}{\partial ?}?$	Control+g Shift+p	
$\dfrac{d}{d?}$	Control+g t (and add operand)	
$\dfrac{d}{d?}?$	Control+g Shift+t (and add operand)	
$\dfrac{\partial}{\partial ?}$	Control+g p (and add operand)	
$\dfrac{\partial}{\partial ?}?$	Control+g Shift+p (and add operand)	
$\delta ?$	Control+Alt+d	\var
$\nabla ?$	Control+q Shift+q	\grad
d ?	Control+d	\diff
$\nabla \times t$	Control+m c	\curl
$\partial ?$	Control+Shift+d	\partial
$\nabla \bullet ?$	Control+m v	\diver
$\lim_{?} ?$	Control+Shift+l (L)	\lim
$\nabla^2 ?$	Control+m l (lowercase L)	\lap

Matrices page

To insert a matrix of any size, first insert a 1 by 1 matrix. Then add rows and columns one at a time.

Command	Shortcut
Add/Remove Brackets	Control+Shift+t

Matrix Commands pop-up menu

Command	Shortcut
Create 1 x 1 Matrix	Esc x m, Control+x Control+x,
Add Row	Esc x r
Add Column	Esc x c, Control+Shift+c
Matrix Transpose	Esc x t
Matrix Algebra	Esc x a

Matrix Row Height pop-up menu

Command	Shortcut
Toggle fixed/proportional	Esc m t r

Matrix Column Width pop-up menu

Command	Shortcut
Toggle fixed/proportional	Esc m t c

Functions page

To insert each function (except the general function and limit) from the keyboard, type its name as shown.

Element	Shortcut	Backslash sequence
? (?)	Control+f	\function
$\lim_{?} ?$	Control+Shift+l (L)	\lim

Addition pop-up menu

Command	Shortcut
Add Fractions	Esc m a a
Order Sum	Esc m a o
Order Sum Reverse	Esc m a Shift+o

Multiplication pop-up menu

Command	Shortcut
Factor	Esc m u f
Factor Some	Esc m u Shift+f
Multiply Out	Esc m u m
Multiply Out Once	Esc m u Shift+m
Distribute	Esc m u d
Distribute Over Equality	Esc m u Shift+d

Division pop-up menu

Command	Shortcut
Long Division	Esc m d l (lowercase L)
Remove Division	Esc m d d
Remove Division 1 Level	Esc m d
Remove Negative Powers	Esc m d n
Remove Negative Powers 1 Level	Esc m d Shift+n

Evaluation pop-up menu

Command	Shortcut
Number Crunch	Esc m v n
Show All Digits	Esc m v period
Evaluate	Esc m v e
Evaluate Substitution	Esc m v s
Evaluate Integrals	Esc m v i
Evaluate Derivatives	Esc m v d
Evaluate Derivatives 1 Level	Esc m v Shift+d

Rules pop-up menu

Command	Shortcut
Enter Rule	Esc m r e
Apply Rule	Esc m r a
Designate Dummy	Esc m r d

Other Rewrites pop-up menu

Command	Shortcut
Simplify	Esc m o s
Simplify Some	Esc m o Shift+s
Isolate Term	Esc m o i
Expand First Term	Esc m o e
Expand All Terms	Esc m o Shift+e

Micropositioning

The number of points shown in the following table is based on a zoom setting of 100 percent.

To	Use this shortcut
Move up 1 point	Control+up arrow
Move down 1 point	Control+down arrow
Move left 1 point	Control+left arrow
Move right 1 point	Control+right arrow
Move up 6 points	Control+Shift+up arrow
Move down 6 points	Control+Shift+down arrow
Move left 6 points	Control+Shift+left arrow
Move right 6 points	Control+Shift+right arrow
Remove micropositioning	Control+Home

Left/Right (Alignment) pop-up menu

Command	Shortcut
Left	Esc m a l (lowercase L)
Center	Esc m a c
Right	Esc m a r
Left of =	Esc m a plus
Right of =	Esc m a =
Set Manual	Esc m a s
Clear Manual	Esc m a d
Reset Alignment	Esc m a Shift+r

Up/Down (Alignment) pop-up menu

Command	Shortcut
Top	Esc m a t
Baseline	Esc m a Shift+b
Bottom	Esc m a b

Line Breaking pop-up menu

Command	Shortcut
Set Manual	Esc m b s
Clear Manual	Esc m b c

Moving the insertion point

To move	Use this shortcut
Left	left arrow
Right	right arrow
From beside a fraction to the numerator	down arrow

Changing the selection

To	Use this shortcut
Select next prompt	Tab
Increase scope of selection	space
Select next element to the left	left arrow
Select next element to the right	right arrow

Moving math elements while retaining algebraic equivalency

To move	Use this shortcut
Left	Shift+left arrow
Right	Shift+right arrow
Up	Shift+up arrow
Down	Shift+down arrow
To far left	Control+m Control+Shift+l (lowercase L)
To far right	Control+m Control+; (semicolon)
Left into expression	Control+m Control+i
Right into expression	Control+m Control+o

Moving math elements without retaining algebraic equivalency

To swap	Use this shortcut
With element on left	Control+m Control+left arrow
With element on right	Control+m Control+

Shortcuts for specific keyboards

Hewlett-Packard shortcuts

Redisplaying the page: To refresh a page's display, press Clear display.

Moving the insertion point: To move the insertion point to the beginning of a line, press .

Moving within a document

To move to the	Use this shortcut
First page	Shift+Page Up
Last page	Shift+Page Down
Next page	Press Page Down
Previous page	Press Page Up

Editing text

To	Use this shortcut
Remove kerning	Press Ctrl+Shift

To delete	Use this shortcut
An entire line*	Press Clear line
The next character*	Press Delete char
The previous character*	Shift+Delete char
Backward to start of current or previous word	Control+Shift+Delete char
Backward to the start of a line	Shift+Delete line
Backward to the start of a sentence	Control+Shift+Delete line
Forward to the start of current or previous word	Control+Delete char
Forward to the start of a line	Press Delete line
Forward to the start of a sentence	Control+Delete line

Note: *Does not put text on the Clipboard.

Sun shortcuts

Left keypad
The following table lists assignments for the keys on the left keypad.

Key	Function	Function when used with Shift
L3 (Props)	Displays Paragraph Designer	
L4 (Undo)	Undoes the last command	
L5 (Front)	Exposes the current window	Hides the current window
L6 (Copy)	Copies selection to the Clipboard	
L8 (Paste)	Pastes the contents of Clipboard	
L9 (Find)	Finds the next occurrence	
L10 (Cut)	Cuts the current selection and puts it on the Clipboard	

Numeric right keypad
The following table lists assignments for keys on the numeric right keypad.

If you're running the X/Motif® version of FrameMaker under Open Windows, you can turn on Num Lock to type the numbers shown on the keys instead of performing the keyboard shortcut.

Key	Function	Function when used with Shift
7 (Home)	Moves the insertion point to the start of a line	Moves the insertion point to the top of a column
9 (PgUp)	Displays the previous page	Displays the first page
5	Removes manual kerning of selected text	
1 (End)	Moves the insertion point to the end of a line	Moves the insertion point to the bottom of a column
3 (PgDn)	Displays the next page	Displays the last page

IBM shortcuts

Keys
The key referred to as Return is the key labeled Enter on the alphanumeric keypad.

Moving the insertion point

To move to the	Use this shortcut
Top of a column	Shift+Home
Bottom of a column	Shift+End
Start of a line	Press Home
End of a line	Press End

Editing text

To	Use this shortcut
Delete the previous character	Press Delete
Cut text and put it on the Clipboard	Shift+Delete
Paste from the Clipboard	Shift+Insert

Selecting text

To select	Use this shortcut
The character to the right of the insertion point	Shift+right arrow
The character to the left of the insertion point	Shift+left arrow
One line width of text, starting at the insertion point	Shift+down arrow
One line width of text, ending at the insertion point	Shift+up arrow

Printing

To print the	Use this shortcut
Current document	Press Print Screen

Tables

Selection in tables

To select	Use this shortcut
A cell	Control and click the cell
A row	Control and double-click column (vertical) border in the row
A column	Control and double-click row (horizontal) border in the row
All text in current cell	Esc t h a
Current cell, then next	Esc t h e
Current row, then next	Esc t h r
Current column, then next	Esc t h c
Body cells in current column, then next	Esc t h b
Current table	Esc t h t, or press Control and triple-click a cell
To	Use this shortcut
Extend or shorten the selection	Control+ Shift and click the last cell you want in the selection

Movement in tables

Use these shortcuts to move to the indicated cell.

To move to the	Use this shortcut
Cell to the right	Esc t m r
Cell to the left	Esc t m l (lowercase L)
Cell below	Esc t m d
Cell above	Esc t m u
Rightmost cell in the current row	Esc t m e
Leftmost cell in the current row	Esc t m a
Top cell in the current column	Esc t m t
Bottom cell in the current column	Esc t m b
Top-left selected cell	Esc t m s, Esc t h zero
Top-left cell	Esc t m T
Next cell and select all text in cell	Tab, Esc t m n
Previous cell and select all text in cell	Shift+Tab, Esc t m p
Anchor point of a table	Esc t Shift+i

Tab characters in cells

To	Use this shortcut
Type a tab character in a cell	Esc Tab, Control+i

Row and column manipulation

FrameMaker adds or deletes as many rows or columns as are currently selected.

To	Use this shortcut
Add rows above top selected row	Esc t Shift+r a
Add rows below bottom selected row	Esc t Shift+r b, Control+Return
Add columns to left of leftmost selected column	Esc t c l (lowercase L)
Add columns to right of rightmost selected column	Esc t c r
Delete contents of selected rows or columns, but leave cells in table	Esc t c e
Delete selected rows or columns from table	Esc t c x
Sort rows and columns	Esc t s
Resize Columns	Esc t z
Straddle/Unstraddle	Esc t l (lowercase L)

Row and column replacement

If the Clipboard doesn't contain whole rows or columns, these shortcuts always replace the selected cells.

To paste whole rows or columns	Use this shortcut
By replacing selected rows or columns	Esc t p r
Before current selection (above top selected row or to left of leftmost selected column)	Esc t p b
After current selection (below bottom selected row or to right of rightmost selected column)	Esc t p a

Vertical Alignment in Cells

To acheive	Use this shortcut
Top alignment	Esc j t
Middle alignment	Esc j m
Bottom alignment	Esc j b

Column width

To resize	Use this shortcut
Columns so no paragraphs in selected cells wrap	Esc t w
Selected column without changing table's width	Press and drag selected cell's handle

Table Designer

To use these shortcuts, point or click in the Table Designer.

To	Use this shortcut
Change all settings to As Is	Shift+F8
Change all settings to match the selected table	Control+Shift+F8, Shift+F9
Display previous page of properties	Esc p p, F6
Display next page of properties	Esc p n, Control+v, F7
Apply only the current group of properties	Press Control and click Apply

Table formats

To	Use this shortcut
Apply the current table's format to the catalog and to all tables that have the same tag	Esc t u t
Display the Edit Ruling Style dialog box	Esc t e

StructureTools

To choose	Use this shortcut
Set Structured Application	Esc f Shift+a
Convert Structured Documents	Esc f t s
Convert Documents to Structured Format	Esc f t d
Structure Current Document	Esc f t Shift+c
Structure Documents	Esc f t Shift+d
New EDD	Esc f Shift+d Shift+n
Export Element Catalog as EDD	Esc f Shift+d Shift+x
Import CSS Styles	Esc f Shift+d Shift+j
Show Element context	Esc f Shift+d Shift+e
Open DTD	Esc f Shift+d Shift+o
Import DTD	Esc f Shift+d Shift+m
Save as DTD	Esc f Shift+d Shift+s
Open Schema	Esc f Shift+d Shift+y
Import Schema	Esc f Shift+d Shift+z
Edit Application Definitions	Esc f Shift+d Shift+a
Read Application Definitions	Esc f Shift+d Shift+r
New Read/Write Rules	Esc f Shift+d Shift+w
Check Read/Write Rules	Esc f Shift+d Shift+c
Parse Structured Document	Esc f Shift+d Shift+p
Generate Conversion Table	Esc f Shift+d Shift+g
Generate CSS2	Esc f Shift+d Shift+h

Text

Insertion point movement

Use these shortcuts to move the insertion point. Many of these shortcuts are based on Emacs commands.

To move to	Use this shortcut
Next character	right arrow, Control+f
Previous character	left arrow, Control+b
Beginning of the next word	Esc b w
Beginning of a line	Control+a
End of a line	Control+e
Previous line	up arrow, Control+p
Next line	down arrow, Control+n
Beginning of the next sentence	Esc b s
Beginning of the next paragraph	Esc b p
Top of a column	Shift+Home
Bottom of a column	Shift+End
Start of first visible text flow	Control+Tab

Insertion point placement

Use these shortcuts to put the insertion point in an unrotated text frame on the current page. The draw order is the order in which FrameMaker displays objects on a page; the first object in the draw order is the one at the back.

To put the insertion point in	Use this shortcut
First column of the first text frame in the draw order	Esc b f
Next column, traversing text frames in the draw order	Esc b n

Text selection

Click in text before using these shortcuts. If you use a shortcut with text already selected, FrameMaker extends the selection.

To select	Use this shortcut
Next character	Esc h c, Esc Shift+h c, Control+Shift+f, Shift+right arrow
Previous character	Esc Shift+h Shift+c, Control+Shift+b, Shift+left arrow
Current word, then next word	Esc h w, Esc Shift+h w
Current word, then previous word	Esc Shift+h Shift+w
Current sentence, then next sentence	Esc h s, Esc Shift+h s
Current sentence, then previous sentence	Esc Shift+h Shift+s
Current line, then next line	Esc h l (lowercase L), Esc Shift+h l (lowercase L)
Current line, then previous line	Esc Shift+h Shift+l (L)
Current paragraph, then next paragraph	Esc h p, Esc Shift+h p
Current paragraph, then previous paragraph	Esc Shift+h Shift+p
One line width of text, starting at insertion point	Esc h d, Control+Shift+n, Shift+down arrow
One line width of text, ending at insertion point	Esc h u, Control+Shift+p, Shift+up arrow
To top of a column	Esc h t
To bottom of a column	Esc h m
To beginning of flow	Esc h g
To end of flow	Esc h n
All text around the insertion point that has the same character format	Esc h Shift+f
To Shift select	**Use this shortcut**
Right one character	Esc h f
Left one character	Esc h b
To	**Use this shortcut**
Extend or shorten a text selection	Press and click where you want the selection to begin or end
Remove highlighting	Esc h zero
Select a word	Double-click the word
Select a word, then next words	Double-click the word and then drag
Deselect a text line or text frame and place the insertion point in it	Double-click in the text line or text frame

Text editing

To	Use this shortcut
Select a paragraph	Triple-click the paragraph
Select a paragraph, then next paragraphs	Triple-click the paragraph and then drag
Transpose characters	Control+t
Cut	Esc e x, Control+w, Shift+Delete
Copy	Esc e c
Paste	Esc e p
Create a paragraph below the insertion point without moving the insertion point	Control+o
End a paragraph	Return, Control+m

Asian text

To	Use this shortcut
Type rubi text	Esc s r
Display the Rubi Properties dialog box	Esc o r
Define a combined font of Western and Asian characters (only available on Asian operating systems)	Esc o c o

Text deletion

To delete	Use this shortcut
Previous character	Control+h, Delete, Backspace
Backward to the start of the previous word	Esc k b
Backward to the start of a line	Control+u, Control+Backspace, Control+Delete
Backward to the end of the previous sentence	Esc k a
Next character	Control+d
Forward to the end of a word	Esc k f
Forward to the end of a line	Control+k
Forward to the start of the next sentence	Esc k s

Capitalization

Use these shortcuts to change the capitalization of selected text.

To	Use this shortcut
Display the Capitalization dialog box	Esc e Shift+c

Text formats

Character and Paragraph Designers

To	Use this shortcut
Change all settings to As Is	Shift+F8
Change all settings to match selected text	Control+Shift+F8, Shift+F9
Display the previous set of properties	Esc p p, F6
Display the next set of properties	Esc p n, F7, Control+v
Apply only the current group of properties	Press Control and click Apply

Paragraph formats

Use these shortcuts to format selected paragraphs or the paragraph containing the insertion point.

To	Use this shortcut
Apply a paragraph format by typing the first characters of its tag and pressing Return	Esc q p, F9, Control+9
Center a paragraph	Esc j c
Left-align a paragraph	Esc j l (lowercase L)
Right-align a paragraph	Esc j r
Justify a paragraph (left and right)	Esc j f
Position the current paragraph in the column, removing any straddling or run-in formatting	Esc j p n
Change the current paragraph to a run-in head	Esc j p r
Change the current paragraph to a side head	Esc j p s
Make the current paragraph straddle all columns	Esc j p t
Make the current paragraph straddle both the side-head area and columns	Esc j p Shift+t
Change line spacing to single spacing	Esc j one
Change line spacing to 1-1/2 spacing	Esc j /
Change line spacing to double spacing	Esc j 2
Change line spacing to fixed (default font size plus line spacing)	Esc j x
Change line spacing to floating (largest font size plus line spacing)	Esc j o
Increase line spacing 1 point	Esc j plus, Esc plus one
Decrease line spacing 1 point	Esc j minus, Esc minus one
Make paragraphs with the current paragraph's tag and the Paragraph Catalog definition match the current paragraph's format (unify)	Esc j Shift+u
Start a paragraph anywhere	Esc j Shift+a
Start a paragraph at the top of a column	Esc j Shift+c

To	Use this shortcut
Start a paragraph at the top of a page	Esc j Shift+p
Start a paragraph at the top of a left page	Esc j Shift+L
Start a paragraph at the top of a right page	Esc j Shift+r
Turn on hyphenation	Esc j h
Turn off hyphenation	Esc j n
Repeat last paragraph-related command	Esc j j
To display the	**Use this shortcut**
Paragraph Catalog	Esc o p c
Update Paragraph Format dialog box	Esc o p u
Space between Paragraphs dialog box	Esc j w
Custom Line Spacing dialog box	Esc j u

Character formats

Use these shortcuts to change the character format of selected text or of text you are about to type.

To	Use this shortcut
Apply a character format by typing the first characters of its tag and pressing Return	Esc q c, F8, Control+8
Change text to default paragraph font; remove character tag from text in a text line	Esc o c p
Turn bold on or off	Esc c b, Shift+F2
Turn italic on or off	Esc c i, Shift+F3
Turn underline on or off	Esc c u, Shift+F4
Turn double underline on or off	Esc c d
Turn numeric underline on or off	Esc c 2
Turn strikethrough on or off	Esc c s, Shift+F5
Turn overline on or off	Esc c o
Change text to plain	Esc c p, Shift+F1
Turn superscript on or off	Esc c plus
Turn subscript on or off	Esc c minus
Put text on baseline	Esc c =
Change text to small caps	Esc c m
Turn change bars on or off	Esc c h
Turn pair kerning on or off	Esc c k

To	Use this shortcut
Manually kern text 1 point in specified direction (at 100 percent zoom setting)	Control+arrow key
Manually kern text 6 points in specified direction (at 100 percent zoom setting)	Control+Shift+arrow key
Remove all manual kerning	Control+z, Control+Shift+z
Increase size 1 point	Esc c] (right square bracket)
Decrease size 1 point	Esc c [(left square bracket)
Squeeze 20 percent of an em space	Esc c left arrow, Esc [(left square bracket) Shift+d
Spread 20 percent of an em space	Esc c right arrow, Esc [(left square bracket) Shift+c
Set font stretch to 100 percent	Esc [(left square bracket) n
Reduce font stretch by 5 percent	Esc [(left square bracket) c
Increase font stretch by 5 percent	Esc [(left square bracket) e
Repeat the last font-related command	Esc c c
Toggle Tsume (Japanese only)	Esc c t
Display the Character Catalog	Esc o c c

Working with structure

To move the insertion point	Press
To start of the current element	Esc s Shift+s
To end of the current element	Esc s Shift+e
After the next element	Esc s Shift+d
Before the previous element	Esc s Shift+u
Before the current element's parent	Esc s Shift+b
To start of the next element's contents	Esc s Shift+n

To select	Press
Current element	Esc h Shift+e
Next element	Esc h Shift+n
Previous element	Esc h Shift+p
Siblings of the current element	Esc h Shift+s
Parent of the current element	Esc h e Shift+p

To	Press
Insert element	Esc Shift+e i, Control+1 (one)
Wrap element	Esc Shift+e w, Control+2
Unwrap element	Esc Shift+e u
Change element	Esc Shift+e c, Control+3
Merge into first element	Esc Shift+e m
Merge into last element	Esc Shift+e Shift+m
Move element up one level	Esc Shift+e Shift+p
Move element down one level	Esc Shift+e Shift+d
Transpose element with previous element	Esc Shift+e Shift+t
Transpose element with next element	Esc Shift+e t
Split element	Esc Shift+e s
Edit attribute value	Control+7
Repeat last Element Catalog command	Esc e e
Toggle display of element boundaries (as brackets)	Esc v Shift+e
Toggle display of element boundaries (as tags)	Esc v Shift+t
Validate a document	Esc Shift+e v
Display Structure View	Esc Shift+e Shift+v

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