

FrameMaker 7.x

Unstructured interface

An introduction

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Conventions used in this manual

Menu-items	The hierarchy to get to a specific menu item is displayed with the «>» symbol and highlighted. The menu names are highlighted. For example, File > New displays the «New» dialogue from the «File» menu.
Buttons	Pressing buttons in dialogues is emphasised by an exclamation sign to distinguish the button names from menu names. For example, OK!
Keyboard-input	Shortcuts often require key sequences. Pressing keys simultaneously is indicated by a + sign (CTRL+q) and sequences (ESC, n, s) in which the keys are pressed one after each other. Sometimes keyboard input is displayed with a special font, for example, this must be typed as displayed here.
Placeholders	Placeholder which must be replaced by user specified text, are displayed in italics, for example, <i>filename</i> .

PDF version

Location	You find the newest version (and older ones) on the web-site of D+DD at www.daube.ch/docu/fmaker00.html under the heading <i>Course Materials to ETH courses</i> . User name and password are only provided to people attending the courses. You may write this down here:
User - name	fm-kurs (pw:)
Live hyperlinks	In the PDF version of this handout all cross references and entries in the Table of Contents are live hyperlinks - a fine feature of FrameMaker.

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Please note: Neither the course *Introduction to Framemaker* nor the course *FrameMaker for Scientific Publications* covers all topics from this handout. Some of the topics are presented only on special occasions.

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- = used to explain abbreviations.
- at beginning of line: *see also*. Else: points to synonym.
- ... repeats main keyword

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- ¶ = paragraph (format)

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Working environment

Overview

The FrameMaker working environment is not as modern as that of office applications, but provides all you need for your work.

Customisation is possible, but not to the extent of other Windows applications, because FM keeps consistency between platforms.

There are numerous add-ons (Application Programming Interface clients) from third party vendors, because FM concentrates 'on the core business' of the application.

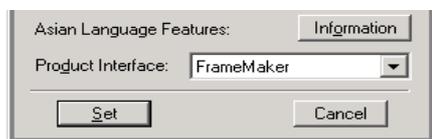
FrameMaker 7 combines two products. Hence you need to decide at first start - or later - which interface to use.

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Working environment

Starting FrameMaker in standard mode



Beginning with FrameMaker 7 two interfaces are available:

- Standard (unstructured)
- Structured (with SGML techniques)

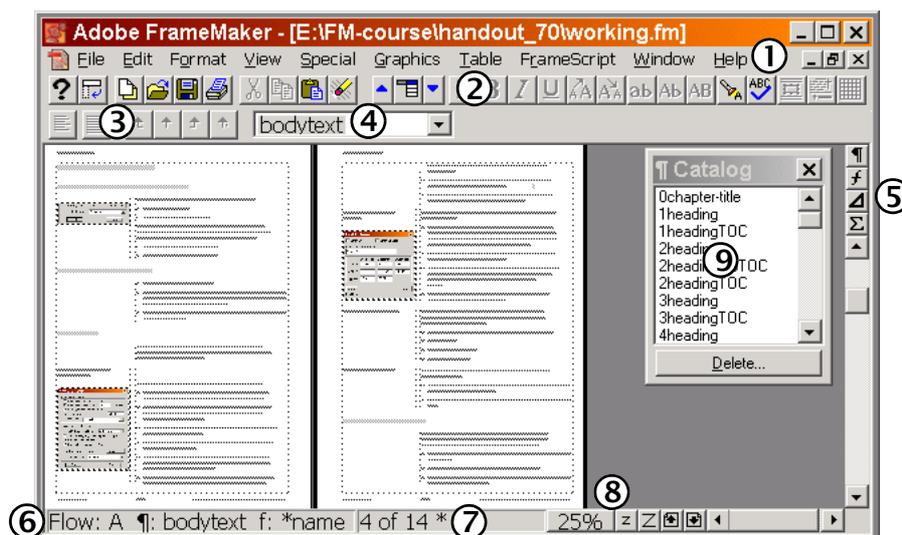
To check the current interface, select **File > Preferences > General** and look at the bottom of the dialouge. If „Structured FrameMaker« is listed in the drop down list **Product Interface**,

- 1 Select **FrameMaker** in the drop down list.
- 2 Close FrameMaker and start again.

FrameMaker works pace

The FrameMaker window contains both fix areas and items the visibility of which can be toggled on and off (*):

- 1 Menu bar
- 2 Button bar with 4 'pages'
- 3 Quick Formatting Bar
- 4 Drop down list paragraph catalogue
- 5 Buttons for floating pal-ettes
- 6 Status area
- 7 Page number area
- 8 Zoom buttons
- 9 Open palette Paragraph catalogue



Plug-ins may install additional items in the menu bar, such as 'FrameScript' displayed here.

Toggle visibility of the button bar (2) and Quick Formatting Bar (3, 4) with menu **View > Quick Access Bar** and **> Formatting Bar**.

Indication of modified formats

The status area (6) displays information from the current selection or cursor location: flow, paragraph format and character format. An asterisk (*) preceding a format name indicates local overrides (change relative to the information in the catalogues).

Indication of changes

The page information (4) displays the current page number and total number of pages. An asterisk appears after the second number if changes to the saved version have been applied. After saving the * disappears and the diskette icon in the left area of (2) is greyed out.

Change zoom factor

Change the zoom factor to the next lower value with the **z** button and to the next larger value with the **Z** button.

Non printing items in display area

Toggle visibility of the following items with **View > xxx**.

Borders are associated with the cell borders of tables, text frames, graphic frames and anchored frames.

Text Symbols indicate end-of-paragraph and other situations. See *Control characters in the text* on page 1-13.

Rulers are not that helpful in FrameMaker, because they align with the paper edge, not the text edge.

Grid Lines align to the top left corner of their container. With nested frames you may see different areas.

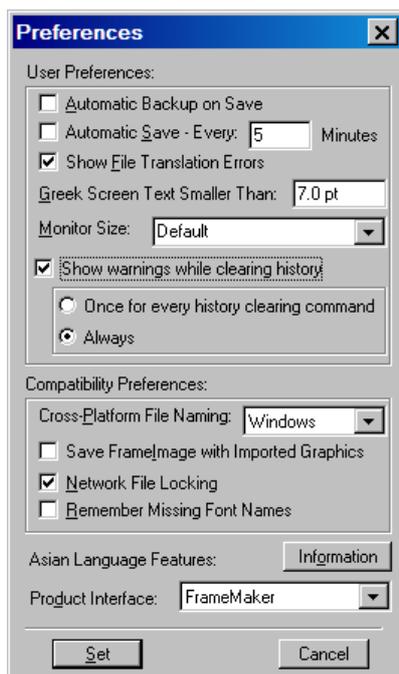
Some discipline required...

- **Only one Undo level in FrameMaker until version 7.1!**
- Avoid direct formatting („MS Word style« rather than using styles) in ‘real’ documents — use only in memos, letters etc. with short lifetime. (deactivate **View > Formatting bar**).
- Have a list of short-cuts for your most used commands ready (see *Short-cuts* on page A-2)

Preferences

In FrameMaker preferences are „levelled«: Some are global to the FrameMaker installation, others are valid throughout a session and many are set in a document.

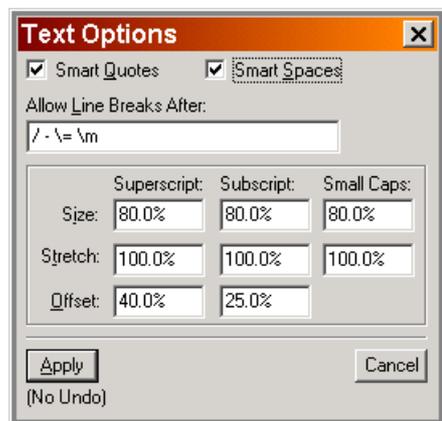
Preferences for the current FrameMaker session



Set the program preferences with **File > Preferences > General**:

- Set **Automatic Backup on Save** if you want to keep a copy of the original state of the documents (before you started editing them).
- Automatic Save every (10) Minutes** is a good insurance against system crashes. FrameMaker *saves very fast!* FrameMaker is very stable - this feature is rarely needed.
- Since FM 7.2 the warnings about clearing the Undo History can be specified.
- Show file translation errors** will display found errors when opening files (e.g. from other platforms).
- Greek Screen Text** displays text smaller than the given size as gray box to save processing time.
- Cross-Platform File Naming** must select the ‘least common denominator’ among the platforms for which the files are used (Windows 3.x → Unix → Mac → Windows 95).
- Save FrameImage with Imported Graphic** saves a special vector form of the graphic with the document. This speeds up the display of imported graphics, because the filter is only activated for modified source files.

Preferences for the current document



- Network File Locking** is a must for files residing on a LAN. Otherwise the file can be opened independently.
- Remember Missing Font Names** is a must for cross-platform working if not all fonts are available on all platforms.

With **Format > Document... > Text options** you set properties of the current document:

- Smart quotes** translates ordinary quotes ("a", 'a') during keyboard input to typographic quotes («a», 'a'). These forms depend on the UI language and can only be set in `maker.ini`. Hence they are actually pertinent to the FrameMaker installation. See *Smart quotes* on page A-36.
- Smart Spaces** reduce multiple spaces () during keyboard input to at most one space to keep the text neat.
- Allow Line Breaks After** special symbols allow automatic hyphenation of words containing these special characters. Some characters require special notation (see *Control characters in the text* on page 13).
- You may wish to set special properties for Superscript, Subscript and Small Caps (German: Kapitälchen).

Note: For a more complete list of document properties see *Document Properties* on page 3-13.

Installation specific settings

Depending on the platform general preferences can be set. On Windows this is performed in `maker.ini` file located in the home-directory of FrameMaker. See *Modifications to maker.ini* on page A-37 for recommended changes.

- File locations (e.g. dictionaries)
- Font mapping
- Pen widths, dash patterns
- Smart quote characters

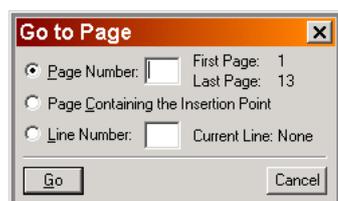
Program inherent defaults

There are a number of defaults, which (to my knowledge) can not be set explicitly:

- Type and placement of anchored frame when inserting an image, including the margin to the image.
- The number of default page sizes and their properties (e.g. margins).

Navigate the document

Go to specific page



- Click into the page number area. In the dialogue **Go to Page** enter the desired page number and **Go!**
- You may want to jump back to the page where you have left the cursor in the text: select the appropriate option button.

To go back to where you jumped from enter `ESC, v, P` (English FM).

Set view options



The method of displaying pages (facing, horizontal scroll etc.) is a property of the document. Set this option with **View > Options...** according to your needs.

Setting **Variable** provides a good automatism: for small enough zoom factors pages are arranged in blocks. If two pages fit into the display area, they are facing.

Set units of measure

You may also wish to set the units of measure. These are defaults for entering values in various dialogues, for example the Paragraph Dishonour or the Table Designer.

Modify list of zoom factors



The list of zoom factors can be set for the current session: click on the drop down list and select **Set...**

In dialogue **Zoom Menu Options** set the values to your desire. Default settings are taken from the `frame.ini` file (in Windows). The value range is 25... 1600%.

You may modify the list of default values in the `maker.ini` file. See *Zoom factors* on page A-36.

Customising Framemaker

Due to its platform concept, FrameMaker does not exploit the GUIs to their limits. Hence customisation is not a task for the end-user, but for programming experts. Customisable are:

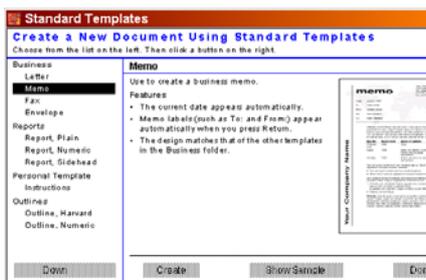
- The menus and their contents, the tool bars (see *Modified tool bars* on page 1-15)
- The size of the default page (which is the really empty one)
- Minimum styles (paragraph, character, table) for new documents are located in a special template.

Sample templates

FrameMaker comes with a number of sample templates

- Report, Book, Letter, Resumee and Conditional Text.
- In the English version layout is based on the 8.5» x 11» paper (called Letter).

To use a sample template



File > New > Document...

Use button **Explore Standard Templates**.

From the appearing list select a template

To create an empty document from the template, press **Create**

To display a sample layout, press **Show Sample**

Close the last FrameMaker instance (Standard Templates), which you do not need any more.

Help and documentation

International versus US FrameMaker

At the installation of FrameMaker you are asked whether to install the US version or the International English version. The differences are:

	US-version	International English
Language of User interface	US-english (color, not colour)	
Paper size of templates	Letter	A4
Language in ¶ formats of predefined templates	US English	UK English

For working with the International English version it is good practice to set the default language appropriately. See *Default language in ¶ and f designer* on page A-37.

FrameMaker Help



Version 6 of FrameMaker introduced the platform dependent help system. Version 7 provides HTML help files which are opened in your default browser:

- The help system includes all of the information in the *Adobe FrameMaker 7.0 User Guide* plus keyboard short-cuts, full-colour illustrations, and more detailed information about some procedures.
- General search function via JavaScript (hence the browser must be enabled for JavaScript).
- Font size depends on a style sheet - hence can be adapted.
- To have help adjacent to your document, reduce the window size of FrameMaker and the browser.

Documentation

Adobe documentation

- Same manual for all platforms and for both user interfaces.
- Quick Reference Card
- Online-manuals for special themes. These are no more referenced in the Help menu. They are located in the \$FMHOME/onlineManuals directory.¹⁾

Third party documentation

- Jürgen Gulbins, Angelika Obermayr, Karl Obermayr: Desktop Publishing mit FrameMaker [4. EFL. Springer 2002], ISBN 3-540-44216-2. www.framebuch.de
Das buch wendet sich an anwender von Mac OS, Unix und Windows. Es bietet eine grundlage für die arbeit mit FrameMaker und gibt tips und hinweise aus der praxis. Es vermittelt grundlagen zur typographie, zum einsatz und druck von farbe, zur

¹ \$FMHOME is the symbolic name for the installation directory of FrameMaker. This may be, for example, H:\adobe\Framemaker.7en

online-zusammenarbeit mit WebDAV, sowie zur ausgabe mit PDF, HTML und XML.

- Ute Mitschke und Bernhard Schulze: FrameMaker 6+7; In der Praxis anwenden und beherrschen; mit CD-ROM; bro-schiert - 560 seiten [Addison-Wesley 2002] ISBN 3-8273-1736-3.
Das buch zielt gerade auch auf professionelle anwender und deckt neben satz/layout und der erstellung von dokumentvorla-gen auch den bereich databased publishing/cross media sowie den plattformunabhängigen datenaustausch mit SGML/XML ab.
- Sarah S. O'Keefe and Sheila A. Losing: FrameMaker 7, The complete Reference; [Mc Graw Hill Osborne 2002, ISBN 0-07-222361-8 (about 850 pages).
The authoritative resource on FrameMaker 7. Master the myr-iad features and complex interface of FrameMaker 7, and implement complex multichannel publishing solutions. This book helps you understand and master FM's many features to increase your productivity and improve your published docu-ments. Learn to create and manipulate text, control page lay-out, and construct books - plus advanced techniques including hypertext, modular text, and working with XML, SGML, DTDs, and element definition documents.
- Klaus Krüger: Adobe FrameMaker 7, Standard Modus und Struktur-Modus; [2. aufl. www.buchstabenkabinett.de 2002], bro-schiert, 268 seiten A4. ISBN 3-936485-01-1.
Auser mit tips für einsteiger befasst sich das buch mit FrameMaker im standard- und strukturmodus. Schwerpunkte sind u. a. kapitel und abschnitte numerieren, verzeichnisse generieren, querverweise aktualisieren, variablen und merhseitiger tabellensatz. Die erklärungen für struktur-modus richten sich an anwender, die mit vorgegebenen struktur-regeln arbeiten. 20 mindmaps in farbe.
- ... and many more, see for example, www.books.ch or www.amazon.com with the keyword framemaker. However, from the abobe mentioned books Klaus Daube knows the authors personally.

Mailing lists

- | | |
|---------------------|--|
| US-mailing list | Send Framers mailing list submissions to
<code>framers@lists.frameusers.com</code>
To subscribe or unsubscribe via the World Wide Web, visit
<code>http://lists.frameusers.com/mailman/listinfo/framers</code>
or, via email, send a message with subject or body 'help' to
<code>framers-request@lists.frameusers.com</code>
You can reach the person managing the list at
<code>framers-owner@lists.frameusers.com</code> |
| German mailing list | Webform for enrolment:
<code>http://tipps.frame-user.de/seiten/maillisten/frame-talk-form.mgi</code> |

Elements of the work space

Palettes and catalogues

Tool palette



The Tool palette is located to the top right of a document window.

Display the **Paragraph catalog** (see *Catalogues* on page 1-8)

Display the **Character catalog** (see *Catalogues* on page 1-8)

Display the **Graphics Tool** palette (see *Graphic objects* on page 1-12)

Display **Formula Palette** (*Palette overview* on page 11-5)

Display the **History Palette** (present since FM 7.2). See *Command History palette* on page 14

If the ¶ and the f buttons are missing, but others are visible, FrameMaker is run in structured mode. To switch to standard mode, see *Starting FrameMaker in standard mode* on page 1-2.

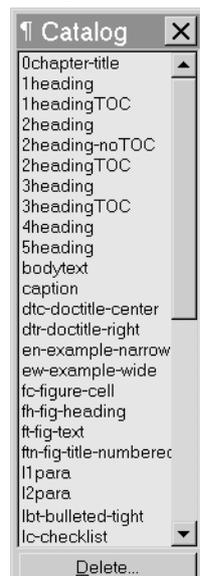
Catalogues

Display the paragraph catalogue with **Format > Paragraphs > Catalog** or clicking on the appropriate button in the tool palette.

Display the character catalogue with **Format > Characters > Catalog** or clicking on the appropriate button in the tool palette.

The table catalogue is displayed with **Table > Table Designer...** and then opening the tab **Basic** and pulling down the list **Table Tag**.

Paragraph catalogue



Character catalogue

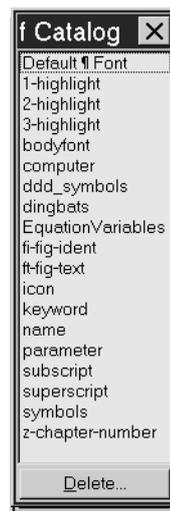
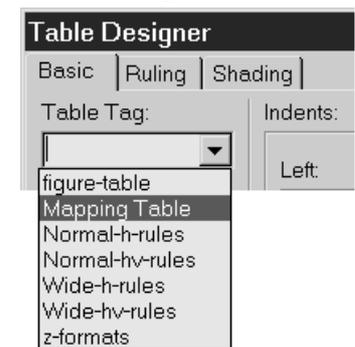


Table catalog



History Palette (since FM 7.2)



Other catalogues are visible only via special functions, e.g.:

Colour View > Color > Definitions and in the Tools Palette

Cross-refs Special > Cross-Reference... Format

Table-rules Table > Custom Ruling Shading > Edit Ruling Style

Variables Special > Variable...

Quick access bar (tool bar)

Common commands and Quick Formatting Bar

Since FM 7.2 the basic tool bar includes Redo, Import File, Object Properties, Toggle View Only, Insert Symbols and First Page, Last page as well as Find Next.



On the **Macintosh** the Quick Formatting Bar belongs to the document window - not to the main FrameMaker window.

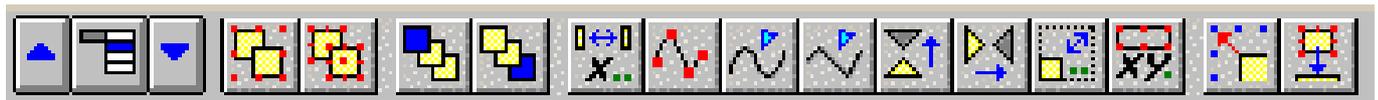
2007-06-22

Edit text



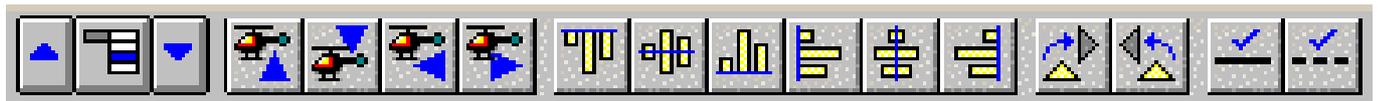
- Plain text
- Bold
- Italic
- Underlined
- Increase size 1pt
- Decrease size 1pt
- to Lower case
- Initial capitals
- to Upper case
- Find / change
- Spell check
- insert anchored fr.
- insert Footnote
- insert Table

Graphic commands



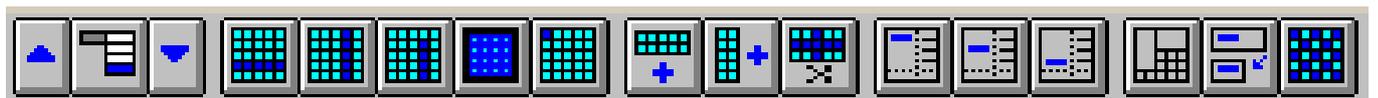
- Group
- Ungroup
- to Front
- to Back
- Distribute
- Reshape
- Smooth
- Unsmooth
- Flip up/down
- Mirror left/right
- Resize
- Object property
- Snap
- Gravity

Edit graphics



- move up 1pt
- move down 1pt
- move left 1pt
- move right 1pt
- align top
- align centre vert.
- align bottom
- align left
- align centre horiz.
- align right
- rotate clockwise
- rotate anticlockw.
- solid line
- dashed line

Edit tables



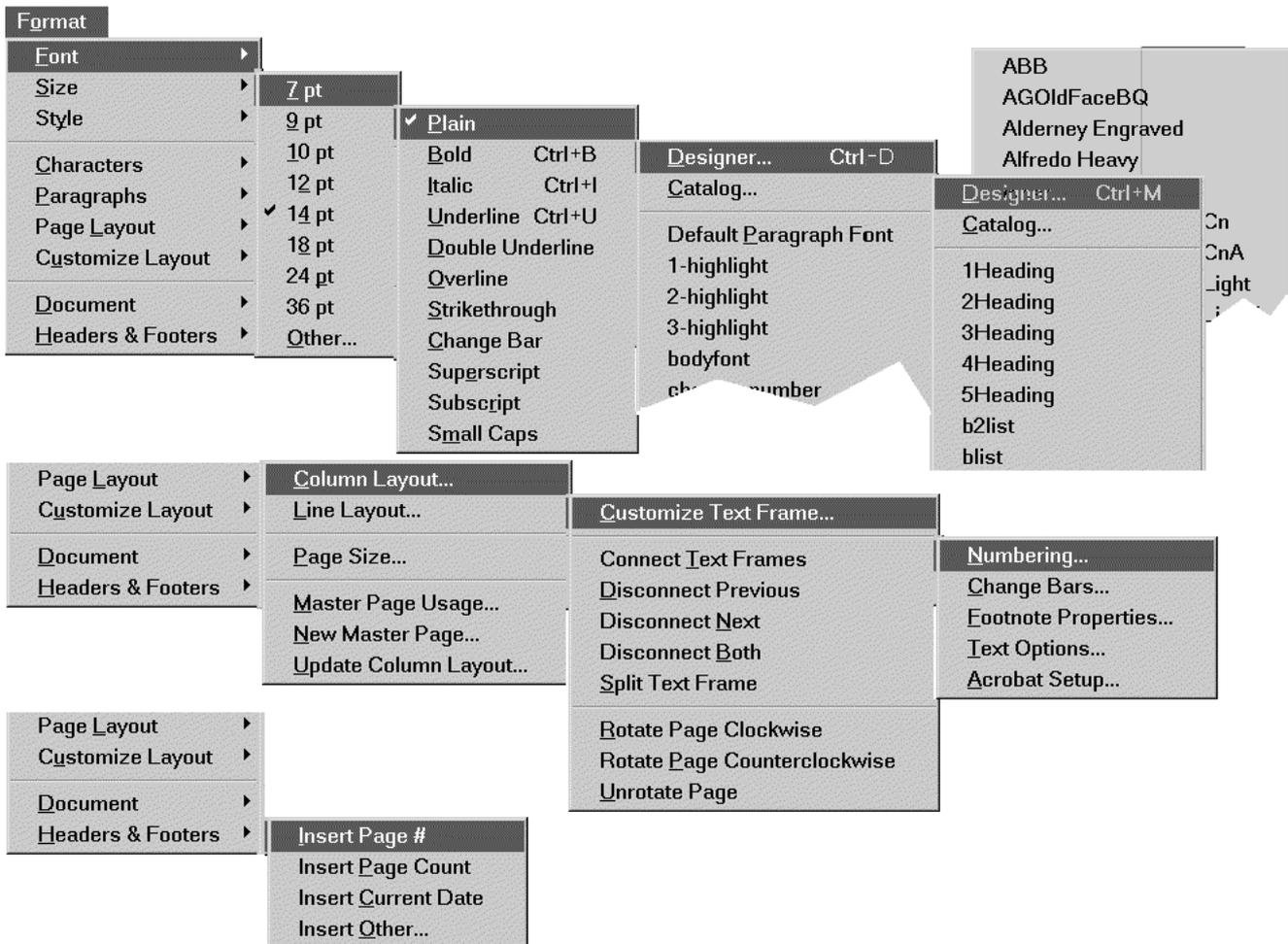
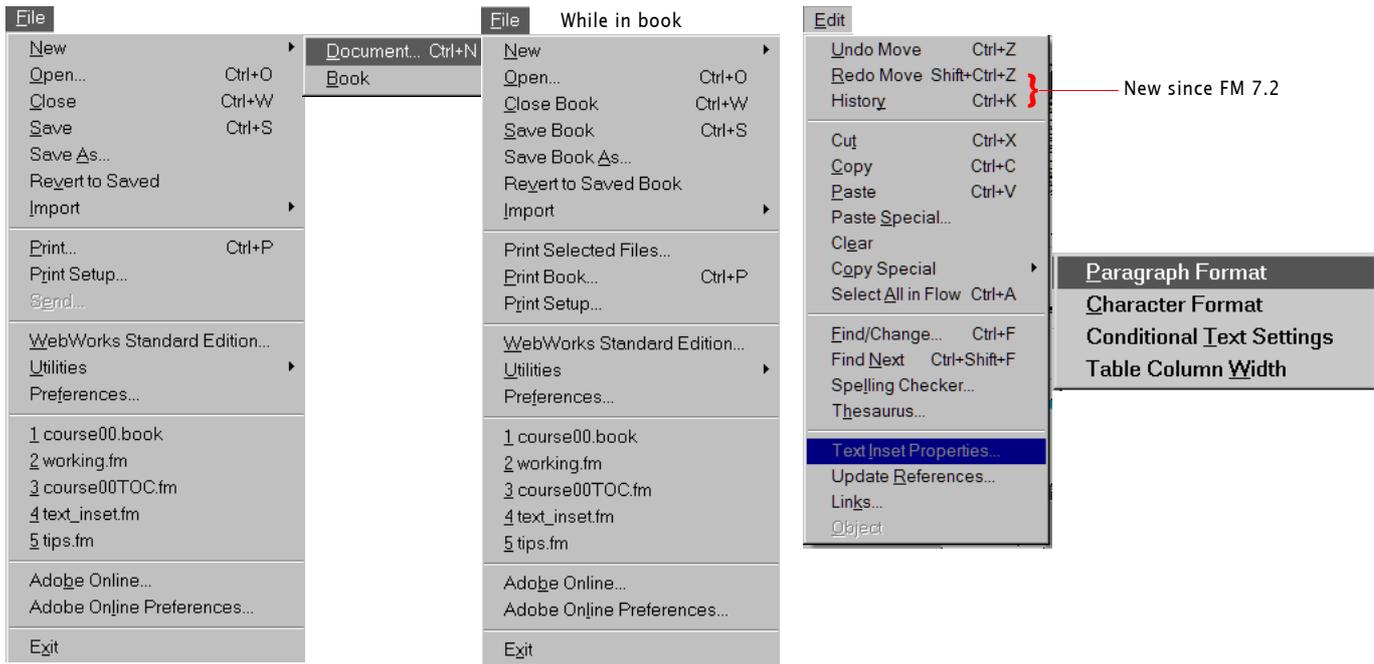
- select row
- select column
- select body cells
- select table
- go to top left cell
- add row below
- add column right
- cut row / column
- top align in cell
- centre align in cell
- bottom align in cell
- straddle / unstraddle
- shrink wrap cells
- custom rules/shades

E:\FM-course\handout_70\working.fm

L D D D

Menus and palettes

Document menus



2007-06-22

E:\FM-course\handout_70\working.fm

View

- ✓ QuickAccess Bar
- ✓ Formatting Bar
- ✓ Borders
- ✓ Text Symbols
- ✓ Rulers
- Grid Lines
- Options...
- Go to Page... Ctrl+G
- ✓ Body Pages
- Master Pages
- Reference Pages
- Color
- Menus

Views...

- Definitions...
- Quick
- ✓ Complete
- Modify...

Special

- Page Break...
- Anchored Frame...
- Footnote
- Cross-Reference...
- Variable...
- Hypertext...
- Marker...
- Equations...
- Conditional Text...
- Table of Contents...
- List Of
- Standard Index...
- Index Of
- Add Disconnected Pages...
- Delete Pages...

Graphics

Tools...

- Group
- Ungroup
- Bring to Front
- Send to Back
- Align...
- Distribute...
- Reshape
- Smooth
- Unsmooth
- Flip Up/Down
- Flip Left/Right
- Rotate...
- Scale...
- Set # Sides...
- Join
- Object Properties...
- Runaround Properties...
- Gravity
- ✓ Snap

Table

- Insert Table...
- Table Designer... Ctrl+T
- Row Format...
- Custom Ruling & Shading...
- Add Rows or Columns...
- Resize Columns...
- Straddle
- Convert to Table...
- Sort...

Window

- Cascade Shift+F4
- Tile Shift+F5
- Arrange Icons
- Refresh Ctrl+L
- 1 E:\FM_workshop\FramerMaker\foils_e.fm

Help

- Help Topics... F1
- How to Use Help...
- Top Issues...
- Downloadables...
- Adobe Corporate News...
- Online Registration...
- Adobe Links
- About FramerMaker...
- WebWorks Standard Edition...

Book menus

File

- New
- Open... Ctrl+O
- Close Book Ctrl+W
- Save Book Ctrl+S
- Save Book As...
- Revert to Saved Book
- Import
- Workgroup
- Links...
- File Info...
- Print Selected Files...
- Print Book... Ctrl+P
- Print Setup...
- WebWorks Publisher Standard Edition...
- Utilities
- Preferences
- 1 working.fm
- 2 tips.fm
- Exit

Edit

- Undo Move Ctrl+Z
- Cut Ctrl+X
- Copy Ctrl+C
- Paste Ctrl+V
- Clear
- Select All
- Find/Change... Ctrl+F
- Find Next Ctrl+Shift+F
- Spelling Checker...
- Set Up Generated File...
- Rename File
- Delete File from Book
- Suppress Automatic Reference Updating...
- Update Book...

Add

- Files...
- Table of Contents...
- List Of
- Standard Index...
- Index Of

Format

- Page Layout
- Document

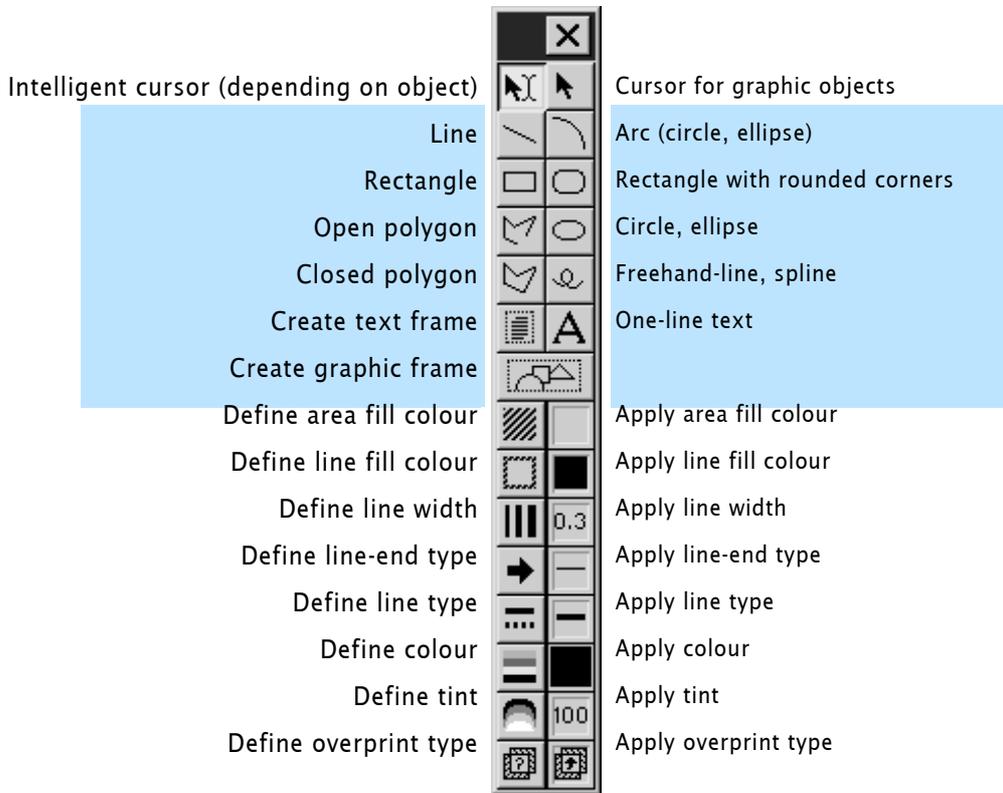
View

- ✓ QuickAccess Bar
- ✓ Formatting Bar
- Show Borders
- Show Text Symbols
- Show Rulers
- Show Grid Lines
- Hide Graphics
- Show/Hide Conditional Text...
- Hide Conditional Text Indicators
- Options...
- Zoom
- Color
- Menus

1 D D D

Graphic objects

Graphic objects are defined and inserted with the tools palette. this palette opens from the Triangle button to the right of the FrameMaker main window



Appearance of check boxes

Various dialogues provide check boxes, which display 3 states:

	checked (active)	unchecked (inactive)	As Is (may be)
Windows			
Mac			
UNIX Solaris KDE			

The «As Is» state occurs, if some of the selected items have set properties and some have not set (cleared) properties.

Control characters in the text

Display of these symbols is controlled by **View > Text Symbols**. These symbols do not appear on output or in files.

The special symbols have no width (exception: the non-breaking space) and you may need special techniques to handle them. See *Non-width characters* on page A-17).

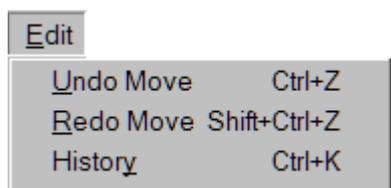
§	End of text flow / end of table cell	This symbol can not be deleted.
¶	End of paragraph (,contains' the style definition)	Pressing Enter or Return terminates a paragraph and 'opens' a new one.
>	Tabulation symbol	See details at <i>Tabulation</i> on page 2-4
<	New line (hard return)	Press SHIFT+Return for hard return
␣	Non-breaking space	Press CTRL+space for this symbol
–	Optional hyphen	Indicates a location at which a word can be hyphenated if necessary
—	Suppress automatic hyphenation	Place this symbol at the beginning of a word for better clarity
¶	Marker (index, cross reference,...)	Place markers preferably at the beginning of a paragraph. Do not spread them in words.
⌞	Anchor (table, frame)	Place anchors preferably at the end of a paragraph
⌠	Formula aligned manually	See <i>Align formulas</i> on page 11-6

Table 1: Control characters in the text

For searching/replacing special characters see *Special characters in dialogue boxes* on page A-3. Structured FrameMaker uses additional symbols.

Note: *In this document text symbols are displayed with a special font, if they are needed to understand the situation.*

Multiple Undo and Redo



Version 7.2 brings this new feature. If there is no action available for **Undo** or **Redo** in the current document, the corresponding menu items and tool bar buttons are greyed.

The command history is available through the **Edit** menu and context menus. The command history is kept separately for each 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.

As in previous releases, 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.

Command History palette



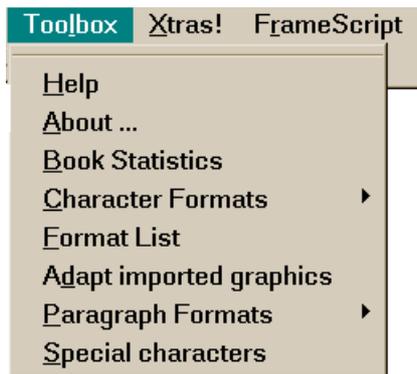
This palette allows you to select a specific action to undo or redo. The command history is shown only for the active document.

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 a complete list of commands that can and cannot be undone see file `FM72_UserGuideSupplement.pdf`.

Extensions by API clients



End-notes

API clients add to the functions of FrameMaker and integrate themselves into the menus. Some book function are now superseded by FM version 7.

The following lists a few of the plug-ins. For an updated list see www.frame-user.de/seiten/zubehoer/plugins.html.

Another list can be found at www.frame-user.de/_frameloads/tools-infos-zubehoer/Top100-FMAPI.pdf.

Please be aware that it is difficult to maintain the web-references and keep the links intact.

Collected footnotes at end of book):

The Endnotes client application creates functionality similar to footnotes except that these notes occur at the end of a document or book instead of at the bottom of the page. In addition, there is functionality to provide notes at the end of a FrameMaker book, in a separate generated document ("loe" — List of Endnotes).

www.frametools.com/frametools_by_fml.htm.

Import/export filters

According to many source the best import/export filters are from www.blueberry.com/mif.htm:

The latest version of Filtrix converts Word 97 files to MIF. For maximum speed and minimum file size, we work with native Word 97 format, not RTF. Filtrix exports/imports MIF to Word 2, 6, and 7 native format.)

Index tools

Silicon Prairie Software: www.kagi.com/spssoftware/

Outline display

Outline display of document similar to the capabilities of FrameMaker + SGML: www.sandybrook.com

RTF and HTML from MIF

Export of FM (MIF) to Word RTF, HTML and winhelp with mif2go by www.omsys.com

Style management,
special character
palette

Systec tool box: www.systec-gmbh.com/toolbox

Script (macro) language

The full featured macro language FrameScript has access to all FM command: www.framescript.com

Extensive script
collection

[Rick Quatro](http://rick.quatro.com) provides FrameScripts for many tasks. Very good scrips (also free ones) are from [itl in Munic](http://itl.inmunic.com). Especially the **InstallScriptsInFolder** is an essential tool to manage scripts.

Modified tool bars

www.microtype.com provides a tool bar with many functional additions (for displays of 1024 pixel width).

For example, the Quick Formatting Bar is extended by drop down lists for Character Catalogue and Font. The standard button bar is 'folded' into two long items, easing the access significantly.

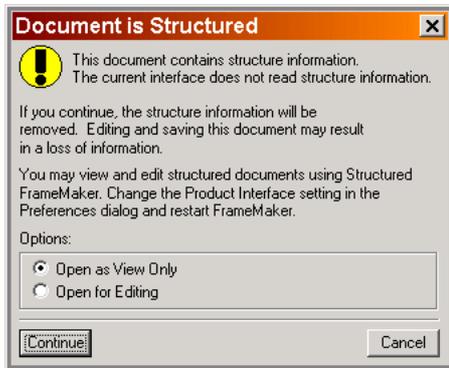


Database of plug-ins

A nearly complete database about FrameMaker (and Word) extensions can be found at leximation.com

Structured documents

Open structured document in standard FrameMaker



When opening a structured document in unstructured mode, you are warned with a **Document is Structured** message.

- You may view the document with no further consequences.
- If you choose to **Open for Editing**, any structure information is lost in the document.
- You may, however, **Cancel** the opening, switch FrameMaker into structured mode (see *Starting FrameMaker in standard mode* on page 1-2) and edit the file correctly.
- Undo is not supported for structured books (FM 7.2)

2

Text handling

Overview

FrameMaker provides good capabilities to handle text. Due to its intended use of formatting large documents, some functions go beyond what is known from text processing packages.

Hyphenation dictionaries can be set up for a document or a complete project. In addition, each document can contain a local dictionary.

Contents

Text handling	2
Find and change	6
Hyphenation and spell checking	8

Text handling

Typing text

FrameMaker versions up to version 7.2 can handle text of the latin script with a rich set of accented characters. Due to the limitations of an 8-bit code the number of distinct characters is not sufficient even for the European languages. In particular support of the Eastern European languages (in US parlance Central Europe) is lacking. But even for the Northern European languages some characters are missing.

Entering text of characters which are supported but not available on your keyboard requires special methods. See *Keyboard input* on page 2 ff.

Supported languages

Dictionaries for hyphenation and spell checking are available for the following languages:

Language	Variants supported
English	UK, US
Deutsch	Deutschland, alte und neue Rechtschreibung; Schweiz, alte und neue Rechtschreibung
Français	France, Canada
Espaniol	Spain, Catalá
Italiano	Italia
Portugès	Portugal, Brasil
Dansk	Denmark
Nederlands	Netherlands, nieuw
Norsk	Norwegian, Nynorsk
Suomi	Finland
Svenska	Sweden
Chinese ^a	Korean, Japanese, Traditional Chinese, Simplified Chinese

a. This requires a 'Chinese' operating system.

Using the technique of virtual fonts (for example, Arial CE) it is possible to handle Polish and other Eastern European languages. With some more effort even languages with the cyrillic alphabet can be processed. More details can be found at itl.eu (search for *One World Publishing*).

Text manipulation

Move text around

There is no drag-and-drop function in FrameMaker. To move text use cut and paste instead.

Selecting text

The same methods as in other text processing software are used in FrameMaker.

Select a word

- Double click on the word or drag the mouse across the word.

Note: *There is no means to select a word including its trailing blank. You need to use the mouse or **SHIFT+ARROW** to extend the selection.*

Select an arbitrary text string

- Place the cursor in front of the first character to be selected, and hold the **SHIFT** key while clicking behind the last character to be selected.

or

- Drag with the mouse across the area to be selected.

Selecting paragraphs

Select contents only

- Triple clicking in a paragraph selects it including its style definition (which is 'located' in the terminating paragraph mark (¶)).
- If you only want to select the contents (text) of the paragraph,
 - Select the complete paragraph.
 - Hold down the **SHIFT** key while pressing the **LEFT ARROW** key once.

Line and page breaks

Line breaks and page breaks can not be avoided in all cases by using an elaborate paragraph catalogue:

- Line breaks are entered by **CTRL+ENTER**.
- Page breaks are not entered into text. If a paragraph must appear on the next page, apply the attribute with **Special > Page Break...**

Copy and paste

Paste just text

Sometimes you want to get rid of all formatting and other properties stored with the text in the clip-board (for example, when copying from Word). Then you need to use **Edit > Paste Special...** and select **Text** from the menu.

An **ESC** sequence is not available for this function, but you may use **SHIFT+CTRL+v, t, ¶** (where ¶ is the Enter/Return key) as a fast access to the menu.

Note: *When selecting a portion of text which includes one or more paragraph-ends (¶ symbols) the pasted text bears the source format. To get only the text contents, use the method described here.*

Copy format of one paragraph to another

To copy just the format specifications of a paragraph,

- 1 Have your cursor in the source paragraph and use **Edit > Copy Special > Paragraph Format**
- 2 Place the cursor in the target paragraph and paste.

Tabulation

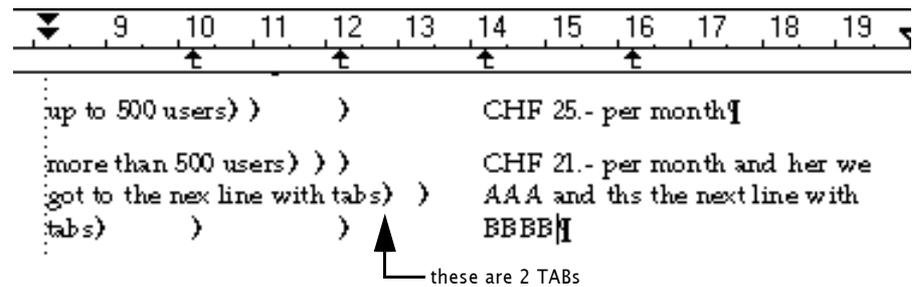
FrameMaker uses absolute tabbing, whereas most text processors use relative tabbing. Hence you always need the same number of **TABs** to reach a certain position, whether they can actually perform or not (see lines 1 to 3 in the example below).

Ruler and tab positions

FrameMaker does not provide a useful ruler for tab positions. The ruler starts at the paper edge, not at the text frame:

Example

The lines in the picture contain tabs stops at 2, 4, 6 and 8 cm. The layout of the page defines a left margin of 2 cm, room for side headings is 5.6 and the gap is 0.6 cm. Hence the first tab-mark appears on $2 + 6.2 + 2 = 10.2$ cm on the ruler.



Tabs in continuation lines

In the second and next lines of a paragraph TAB positions are only performed, if the TAB characters really exist in the text. (see lines 3 and 4 in the example above.

Superfluous TAB characters

If there are no tab positions for a TAB character to perform, they are ignored. This contrasts to MS Word where a paragraph always contains invisible default positions.

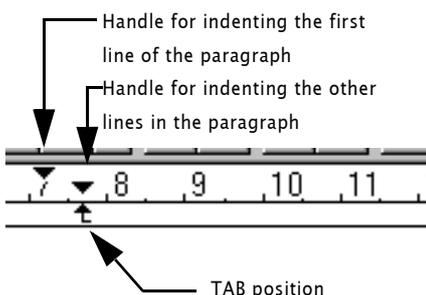
Note: *Rounding errors may require a slightly smaller (-0.05mm) position of a right adjusted TAB than the width of the text frame.*

Local formatting with the ruler

The ruler at the top of the FrameMaker window is handy for quick and dirty formatting:



Left Center Right Decimal Tab



- 1 If the ruler is not visible, activate it with **View > Rulers**. If the formatting bar is not visible, activate it with **View > Formatting Bar**.
- 2 Place the cursor in the paragraph you want to format or select a number of paragraphs to be formatted.
- 3 With the upper indent handle adjust the left (and the right) indent of the first line of the paragraph.
- 4 With the lower indent handle you set the 'hanging indent' for lines 2 to n of a paragraph (for lists etc.).
- 5 To specify a tab position, select the appropriate tab type (left, right, ...) in the left area of the formatting bar and click into the ruler area below the numbers.
- 6 Double click on the TAB position to get a dialogue to change the properties (type of tabulation, exact position etc.)

Support typographic rules

Smart spaces

'Smart spaces' (**Format > Document > Text Options**) does not remove superfluous blanks when importing text files. It works only for keyboard input.

Smart quotes

'Smart Quotes' are also set in **Format > Document > Text Options**. If set, entering a single quote or double quote with the keyboard changes them to typographic quotes according to the setting in the `maker.ini` file (Windows). See *Smart quotes* on page A-36. Unfortunately there is no connection to the Language property of a paragraph.

To enter straight quotes (e.g. the inch symbol) when Smart Quotes are active, you need special ESC sequences (see *Keyboard input* on page A-2).

Note: *If you change the settings for Smart Quotes in the `maker.ini` file (for example, from the English to the French form) and then open a document which uses smart quotes, all quotes are changed to the new form!*

Object manipulation

Selecting tables and parts of

A table is an independent object (not part of the surrounding text). A table is anchored at a certain place in surrounding text, although it may appear quite distant to the anchoring location.

- | | |
|-------------------------|--|
| Select a table | <input type="checkbox"/> Hold the CTRL key and triple click into a cell or...
<input type="checkbox"/> Select the table anchor (see <i>Select a non-width character (or narrow characters)</i> on page A-17) |
| Select a column | <input type="checkbox"/> Hold the CTRL key and double click into the <i>middle part</i> of a cell |
| Select a row | <input type="checkbox"/> Hold the CTRL key and double click into the <i>far left</i> or <i>far right</i> of a cell |
| Select an area of cells | <input type="checkbox"/> Drag with mouse across the desired cells. |

Selecting a text frame

A text frame is the container of the text and is a graphic object. Hence it can only be grabbed with holding the **CTRL** key down while clicking on its edge (the cursor becomes a hollow arrow tip)

Note: *Be careful not to move the mouse during the CTRL+click. CTRL+Click+move creates a copy of the object (see *Ghost objects* on page A-26).*

Find and change

Since the backslash is used for special notations in dialogue boxes (see below), it must be doubled to search it literally. To search for `D:\QM_Handbuch` you must enter `D:\\QM_Handbuch`.

Find/Change with pattern matching

Especially for cleaning imported text it is convenient to search for a pattern, for example «figure, followed by TAB at the beginning of a line» to remove all manually numbered lists. See *Wildcard-characters for Find dialogue* on page A-4

Examples

Remove manual numbering of paragraphs.	This works also on already numbered paragraphs (FM-autonumber-format (<n+>\t)). This finds only 1-figure. To find two figures, the pattern <code>[0-9]</code> must be replaced by <code>[0-9] [0-9]</code> .
	Find Text <code>^[0-9]</code>
	Use Wildcards <code>ON</code>
	Change <code><empty></code>
Remove empty paragraphs	Find Text <code>\p\p</code>
	Use Wildcards <code>ON</code>
	Change <code>\p</code>

Note: *Always be very careful in using **Change All**. The 'empty' paragraph may contain a Table anchor or a Frame anchor which will also be selected!*

Replace text with copied text or a variable

In this context variables are just a special form of text.

To replace text by content of the clipboard

Copy the text *to be used in replacement* to the clipboard.

In **Find/Replace** specify the text to be searched for in the **Find** field and select **By Pasting** from the list **Change**.

Specify where to **Look in**: Book, etc.

With **Find/Replace** find the first/next occurrence of the text and replace it by pasting the variable from the paste buffer (**CTRL+V**).

To replace text by a variable:

Copy the text *you are replacing* to the clipboard.

Set up the variable definition (see *User variables* on page 7-2).

In **Find/Replace** paste the copied text into the **Find** field and select **By Pasting** from the list **Change**.

Specify where to **Look in**: Book, etc.

Go back to the document where the text is still selected. Replace it with the variable, then copy the variable into the paste buffer.

With **Find/Replace** find the first/next occurrence of the text and replace it by pasting the variable from the paste buffer (**CTRL+V**).

Note: *Do not click into the document window when the found text is highlighted. You will lose the selection and can not paste.*

Find arbitrary objects

FrameMaker allows to find nearly any object (Cross Reference, Marker, ...). Explore the **Find** scroll-down list!

Find and change character formats

If -for example - you have imported a Word document and should now replace the direct formatting **bold** of all affected items with character format 2highlight, do the following:

- 1 Select the first string which is bold.
- 2 Apply the default character format (**F8, Enter**) to remove the bold appearance.
- 3 Apply the character format 2highlight (**F8, 2h., Enter**).
- 4 Select from the menu **Edit > Copy Special ... > Character Format** (ALT+F8).
- 5 In the Find/Change dialogue set Find list to **Character Tag...** and set all check boxes to **As Is** (click them once or twice to display a grey tic mark); set all properties other than Weight to **As Is**. In **Weight** select bold.
- 6 In the Find/Change dialogue set Change list to **By Pasting**.
- 7 With **Change & Find** apply the character format to the current item and look up the next. Repeat this step as often as necessary.

Note: *Be aware of the fact that FM's As Is mechanism takes the currently active values. Hence replacing the bold format in a heading (e.g. 14pt Arial) may put that text portion into 10pt Times (if you started in ordinary text with these attributes).*

Find and change paragraph formats

If -for example - you have imported a Word document and should now change some of the Normal paragraphs to format special, do the following:

- 1 Select the first Normal paragraph which should be changed.
- 2 Open the paragraph designer (**CTRL+m**) to get the paragraph tag of this paragraph and copy the name from the field Paragraph Tag to the clipboard²).
- 3 Apply the paragraph format special (**F9, sp., Enter**).
- 4 Select from the menu **Edit > Copy Special... > Paragraph Format** (ALT+F9).
- 5 In the Find/Change dialogue set Find list to **Paragraph Tag:** and paste the name from the clipboard into the entry field.
- 6 In the Find/Change dialogue set the Change list to **By Pasting**.
- 7 With **Change & Find** apply the paragraph format to the current item and look up the next. Repeat this step as often as necessary.

Note: *For globally changing a paragraph tag name, see Renaming a paragraph format on page 3-9.*

- 2 While this seems to be overkill for paragraph format Normal it is less error prone for names like wxfFaxNum, because FM style names are case sensitive.

Hyphenation and spell checking

Dictionaries

Types of dictionaries

FrameMaker supports for types of dictionaries:

- The general dictionaries provided by FrameMaker. They are language specific.
- The site dictionary normally it is set to Read Only and is maintained by a service department. Hence you can not 'learn' into this dictionary. To use this dictionary, specify the path with the method described in *Set up and use a project dictionary* on page 2-8.
- The project or personal dictionary normally is maintained by the project owner and hence can be written to with the **Learn** button.
- The document dictionary is located in the document and can be maintained only via the MIF format of the file. This dictionary is filled with the **Allow in Document** function.

Note: *The setting of a project or personal dictionary lasts for the current FrameMaker session only!*

Format of dictionary

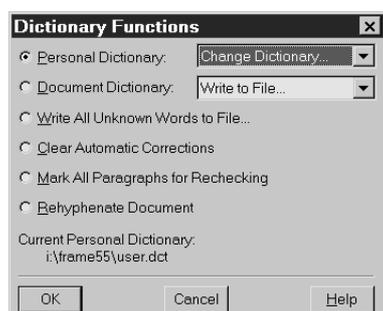
```
<Maker Dictionary 2.0>
-\x86ber-g\x8ange
\x80nderun-gen
\x86ber-pr\x9f-fung
Abtrag-arms
Pro-gram-mier-men\x9f
```

The site dictionary as well as the project or personal dictionaries (e.g. user.dct) are plain text files using special notations for the characters with codes > 127 (see *Internal code table* on page A-16). You may wish to remove unreasonable hyphenation points. Be aware that all languages are collected in the same file. Words starting with - are not hyphenated.

The dictionary entries can not be longer than 31 characters including the hyphenation dashes. However, the special codes (e.g. \x80 for Ä) count only as one. Hence words such as *Überwachungsbedürftigkeit* are not kept completely (\x86ber-wachungs-be-d\x9frf-tig-kei) and hence not found.

For a more friendly handling of the dictionary files with the special codes you may use the utility [fm2win2fm](#) by D+DD.

Set up and use a project dictionary



- 1 **Edit > Spelling Checker**
- 2 Select **Dictionaries**. The current dictionary is displayed at the bottom of the dialogue.
- 3 Activate **Personal Dictionary** and select **Change Dictionary** from the drop-down list, **OK**.
- 4 For a new (or existing) project dictionary, define the appropriate path and file name (extension dct) and **Use!** it.
- 5 Back in the **Spelling Checker** dialogue: **Start Checking** or leave the dialogue (**X**). The settings are active during the current FrameMaker session.
- 6 The current dictionary is indicated at the bottom of the dialogue **Dictionary Functions**.
- 7 With **Learn** you add entries to the current personal dictionary. With **Allow in Document** you add entries to the document internal dictionary. Use this for very special words.

Collecting unknown words

It is useful to collect unknown words in a project dictionary in advance in these cases:

- In German words can be combined to a nearly unlimited repertoire and hence these combined words may be hyphenated at unwanted places.
- The special field covered by the text is not covered by the standard dictionary at all: chemistry, legal, medicine etc.

There are, however some limitation to the user dictionaries or site dictionaries (see *Format of dictionary* on page 2-8):

- The dictionary entries can not be longer than 31 characters including the hyphenation dashes. Hence may need to concentrate on few hyphenation points.
- Only about 2000 entries can be collected. Unfortunately there is no mechanism to combine flexed words into one entry (which is done in the standard dictionaries).

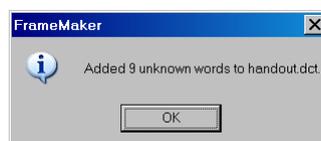
1 To collect the unknown words of a FramMaker book, start in the first relevant chapter (e.g. to leave out the TOC) and activate **Check: Book**.

2 Click on **Options...** to open the dialogue **Dictionary Functions**.

3 Activate **Write all Unknown Words to File...** and click **OK**.

4 In the dialogue **Store Spell Checking Results in File:** navigate to the desired directory and enter the desired file name with the file extension **dct**.

5 You get feedback about the written entries:



6 Inspect the file and correct it:

<MakerDictionary 2.0>

Ac-it-vate
-Dachgiebel
Fram-Mak-er
-Mehrfach\x15Drehb\x8anke
Nix-on
pour-quoi
-rien
sie-he

wrong word → delete line
incorrect hyphenation
Wrong spelling → correct it
incorrect hyphenation
do not hyphenate

Do not hyphenate

contents of file after
correction

<MakerDictionary 2.0>
Dach-giebel
Frame-Maker
Mehr-fach-Dreh-b\x8anke
-Nixon
pour-quoi
-rien
-siehe

7 To use this dictionary follow *Set up and use a project dictionary* on page 2-8

Note: To handle the umlauts and accented characters with ease in any text editor, see the utility *fm2win2fm* by D+DD.

2007-06-22

E:\FM-course\handout_70\texthandling.fm

D+DD

Hyphenation

Note: *FrameMaker behaves differently than MS Word - also concerning hyphenation.*

General remarks

- Automatic hyphenation is a paragraph property.
- Hyphenation can be selectively disabled with a character format specifying language 'None'.
- Manual hyphenation (with discretionary/optional hyphen, suppress hyphenation) is active only in paragraphs with the attribute Hyphenate set.
- For special terminology consider collecting the words in a file and creating a 'project dictionary' with appropriate hyphenation points.

Change hyphenation of a word



- 1 **Edit > Spelling Checker**
- 2 Enter the word for which the hyphenation is to be changed.
- 3 Select **Show Word's Hyphenation**
- 4 Clear all hyphenation points (-) which you do not want.
- 5 Avoid hyphenation of a word with a preceding minus sign.
- 6 **Learn** (store in the personal or project dictionary).

Avoid hyphenation

To avoid the hyphenation of a word, (e.g. a product name),

- 1 Place the cursor in front of the word
- 2 Enter ESC, n, s (English FM) or ESC, k, t (German FM).

Optional hyphenation

- 1 Place the cursor in the word, where you want to provide optional hyphenation
- 2 Enter **CTRL+minus** (Windows) or **command+minus** (Mac)

Note: *Suppression of hyphenation takes precedence over optional hyphenation points.*

Optional hyphen is not honoured?

If the optional hyphenation is not honoured, check the number of successively hyphenated lines in the paragraph designer: **Advanced** properties: *max # adjacent*. The standard value is 2 to avoid 'ladders'.

Non breaking blank

To keep words or characters together and protect them from hyphenation use the non breaking space (**CTRL+space**).

Non breaking hyphen

To avoid hyphen in a compound word (such as end-user), use the non-breaking hyphen ESC, -, h (English FrameMaker) or ESC, -, w (German version).

Non breaking slash

You can switch off the hyphenation after specific symbols in the dialogue **Format > Document > Text Options** by removing these symbols from the list **Allow Line breaks after** (the slash is normally the first symbol there).

If you both need a breaking and a non breaking slash, provide a variable (e.g. named slash) with the definition «\/>» (without the quotes. Use this variable as non-breaking slash.

Apply new hyphenation to existing document

- 1 **Edit > Spelling Checker**
- 2 Select **Dictionaries**
- 3 Select **Re-hyphenate Document, OK!**

To hyphenate or not to hyphenate

Be aware of the influence of non breaking symbols to the following word: it depends!

Type of symbols	non breaking	normal
non-breaking blank after the arrow (justified paragraphs)	siehe auch → Dachgiebel	siehe auch → Dachgiebel
non-breaking hyphen between words	Mehrfach-Drehbänke	Mehrfach-Drehbänke

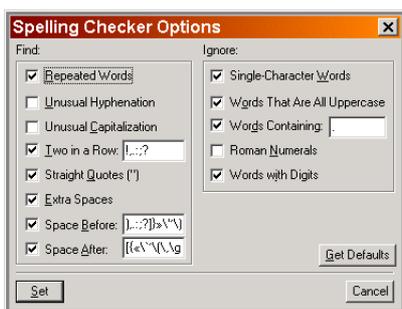
Spell checking

Start spell checking at the beginning of the document with **Edit > Spelling Checker > Start Checking!**

Spell checking and hyphenation use the same dictionary.

- FrameMaker starts the checking at the current cursor location and wraps to the beginning of the file.
- If there are ‘errors’, which are ignored, the wrapping may go on and on. Hence watch the vertical scrolling bar.
- Spell check does not ‘dive into’ text insets – these are independent files which must be checked separately.

Spell Check options



The options for the spell checker are set with **Edit > Spelling Checker > Options...**

Option	Checks for example	Comments
Find		
Repeated words	this and and that	
Unusual hyphenation	un-usual, re-initialise	
Unusual capitalisation	TheSis, wronG	
Two in a row	Richard Nixon ??	??? will pass
Straight quotes	"welcome back friends"	
Extra spaces	and so on	e.g. from importing text
Spaces before/after	(rien), pourquoi ?	French typography requires these spaces
Ignore		
Single character words	Just a bunch of if's	
All UPPERCASE words	USB bus	
Words containing ...	123.9	ignore the period
Roman numerals	see page vii	
Words with digits	Lotus123	

Note: *The settings are saved in the frame.ini file and hence are available across FrameMaker sessions.*

3

Styles

Overview

In this chapter properties of paragraph and character styles are discussed. The hierarchical numbering of paragraphs is vital for technical and scientific publications.

Importing styles or elements of style from other documents eases the set up of consistent layout and design. This is a key feature of FrameMaker.

Contents

Names for styles	2
Paragraph styles	3
Character styles	11
Import formats from another document	13
Special formatting	16

Names for styles

Paragraph and character formats, table formats, cross reference forms and so on are named. Choose names carefully as they live longer than you imagine!

Name by function

Style names based on the function can be learned easier and are better suited for structured documents. Naming by appearance is a reminiscence of layouters and typographers. We are talking about document processing here:

Name based on appearance	Name based on function
24pt-Garamond-bold	1heading
left-2cm-right-2cm-italic	citation
hanging-indent-bullet	lb-bulleted-list
10pt-Times	body
5rows-left-adjusted	invoice
Table with frame and fancy head	full-statistics

Name with abbreviation

Paragraph formats can be applied to an object with keyboard short-cuts:

- F8, *characterformat*, Enter
- F9, *paragraphformat*, Enter
- Names may be shortened to the relevant length.

For this reason it is important to use names which differentiate in the first characters:

First shot	Efficient	Keys
Heading 1	1heading	F9, 1
Heading 2	2heading	F9, 2
Wide list	lw-list-wide	F9, lw
Checklist	lc-checklist	F9, lc
Wide table with horizontal lines	zlw-wide-line	F9, zlw
Highlight bold	2highlight	F8, 2

Using lower case characters distinguishes the user defined styles from the FrameMaker supplied styles, which always start with an upper case character.

Special names

Name items which are not used by the author of a text completely different, for example, precede the names by z. They will sort at the end of the list of styles. Items in this category are used on layout pages (master pages) or as 'hidden features':

Name	Usage
z-anchor	automatically applied as follow on ¶
z-footer	layout
z-header	layout

Dangerous characters in style names

Do not use blanks, umlauts, brackets [], angle brackets < > and the \$-sign in style names (paragraph, character) - these may interfere with special constructs such as in cross-references and damage HTML export.

Paragraph styles

Using style names for paragraphs, character sequences and tables (rather than local formatting) gives you these advantages:

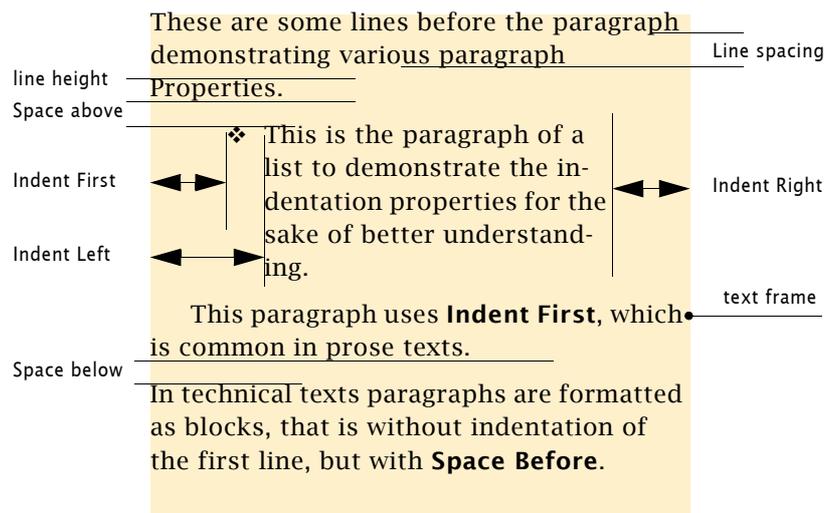
- The appearance of a document can be changed ‘in the last minute’.
- The appearance of all documents in a book can be changed with ‘the snip of a finger’ (importing styles from any document).

Note: *Upper- and lower case is relevant in style names (Heading and heading are not the same).*

Properties of paragraphs and text

To set up paragraph and character styles you need to understand various properties of text elements. The terminology varies between text processing applications, but the concepts are comparable.

Properties of lines and paragraphs



Properties of type

In the font properties for a paragraph and in the definition of character formats a number of modifications to the original font appearance can be set:

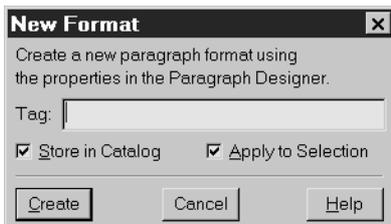
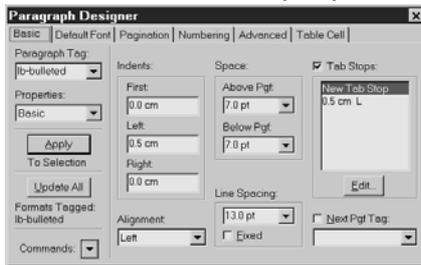
Property	Meaning	Example value	Example presentation
Angle	Character shapes are either slanted ('mechanically' tilted: oblique, slanted, italicised) or designed for a pleasing appearance (italic)	regular italic slanted	The upright form is called roman, <i>the designed tilted form is italics (kursive), whereas slanted etc. has no specific shapes (e.g.) for f or g.</i>
Weight	Thickness of the strokes forming a character shape. Various names are in use. Only few fonts provide more than just bold.	regular, bold semibold	This is the regular form. and here comes bold.
Variation	Some fonts provide narrow or wide forms or other variations. Condensed is a designed form, Narrow is a 'mechanical' deformation.	regular condensed narrow	This is Lucida Sans. Here comes Lucida Sans Narrow.
Spread	Additional space between characters in% of em-space (German: geviert)	0% 3% 20%	This text is not spread at all (set tight) This text is spread a little bit This text is spread heavily
Stretch	The character shapes are stretched graphically	100% 160%	This text is not stretched at all This is really stretched
Pair kern	Individual character pairs are arranged closer than their bounding box defines. This creates better appearance for certain character pairs in large sizes	Without With	AV-Medium Yoga AV-Medium Yoga
	Manual kerning is not recommended. It can work only on the characters of one line.	Manually	AV-Medium Yoga
Underline	This text decoration should be used only to visualise conditional text (added text) – it is not a good emphasis		<u>Underlining cuts through the descenders, numeric underlining does not; double may be awful.</u>
Overline	This may be useful for certain mathematical stuff		Here comes what you expect.
Strike through	This text decoration is predestined to visualise the text condition 'deleted'		Well, this was here , and that's here now.
Change bar	If you apply this character format, it <i>will be removed</i> by Format > Document > Change Bars > Clear all		On the side of the text frame you see a vertical bar indicating this character format
Superscript	These character formats are widely used for formula like text pieces		A superscript ²⁾ has various uses, for example in cross-reference formats
Subscript			Subscripts may be needed in chemical notations, such as H ₂ SO ₄
Small caps	In German this is called Kapitälchen. The FrameMaker form is a mechanical modification. Real Small Caps are specially designed forms.		SMALL CAPS (KAPITÄLCHEN) ARE WIDELY USED FOR PRESENTATION OF PRODUCT NAMES, OPUS NAMES OR IN HEADINGS.
Uppercase	This text decoration s do not physically change the text (the buttons AB and ab do so). You can find the unmodified text with the Find/Change dialogue an 'Consider Case' active.		HELLO, THIS SHALL BE ALL UPPER CASE – CAN YOU READ IT EASILY?
Lowercase			this is all lower case although typed with caps lock on
Colour	Shades of gray are useful in any printing process. Colour is good for electronic distribution (PDF, Web) and costs a lot in real printing.		Use shades of gray for large font sizes, for example in headings. This creates a more uniform gray value of the page.

use these only for indication of changes

Larger line-spacing than normal may be needed

Define a paragraph style name

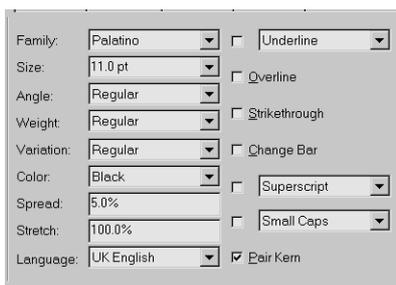
Basic properties



- Place the cursor in a paragraph the style of which you want to develop (and store in the catalogue).
- Open the Paragraph Designer (**Format > Paragraphs > Designer**).
- In the field **Paragraph Tag** enter the name of the paragraph style to be created.
- In the drop down list **Commands** select **New Format**.
- In the Dialogue **New Format** activate both **Store in Catalogue** and **Apply to Selection** (this to gives you a visual hint about the developing format of the paragraph).
- In the Basic properties either define **Space above** or **Space below** for paragraphs. Only in rare cases both definition are needed.

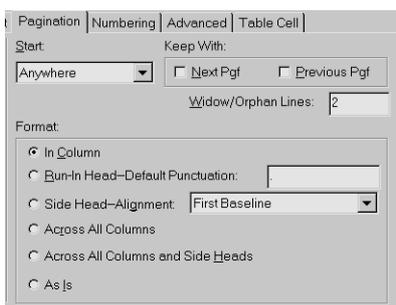
Set up paragraph properties

Font properties



- Define the name of the paragraph style (if you want to define a new style).
- Set the properties in a specific property area (Basic, Default Font, Pagination etc.)
- For test purpose (visual check of appearance) you may wish to just apply the settings to the current paragraph with **Apply**.
- Store the settings in the catalogue as well as apply them to the current paragraph with **Update All**.

Pagination



Start on **Top of Page** if you need to have a page break before the paragraph.

Always set «Keep with Next Paragraph» headings to avoid dangling headings.

When tweaking a layout it may be necessary to set Widow/Orphan lines to 1 or a large number.

Pagination

- A Across all Columns and Side Heads
- B Across all columns
- C Side Head, alignment First Baseline
- D In Column
- E Run-In Head, Default punctuation «.„«

Watch the interruption of the text area by a heading.

The Pagination properties define the arrangement of paragraphs. Running text always is «In Column». For headings you will need variations:

A) Hecate Latonae Filia, soror Apollinis.

Est tricopor et	praeses, cinctra
triceps, magicarum	latrantium canum
artium magistra ac	turma.
fascinationum	

B) Noctu triviis nec hoverei

vel prope sepulcra	contaminata
et ubi loca sunt	sinistra.
caedibus	

C) Hec est Iovi

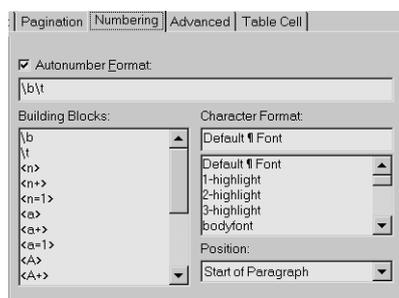
Latonae filia, soror	Apollinis. Est trico
Apollinis. Est trico	et triceps,
por et triceps, mag	magicarum
icarum artium mo	artiumra.
magistra actual.	

D) Fasinosa del mortioriti

Praeses, cinctra
latrantium
num contaminata.
Latonae filia, soror

E) Turma. noctu
stans in triviis vel
prope sepulcra et
ubi loca sunt
caedibus
contaminata.
Latonae filia, soror
Apollinis. Est trico

Numbering



Numbering elements

- < =0> Set counter, no display
- <=0> Set counter, display
- < > Place holder in scheme
- <n> Display counter arabic
- <n+> Increment and display
- \b Bullet symbol

You need the Numbering property category for numbered lists, bulleted lists and items such as the *notes* in this chapter. For example, bulleted and numbered lists use the following setup:

```
n1_numbered_1st <n=1>
nx-numbered_next<n+>
lb-bulleted      \b\t
note             Note:\t
```

The display of the counter depends on the character used in the construct: **n** (1, 2, 4), **r** (i, ii, iv), **R** (I, II, IV), **a** (a, b, d), **A** (A, B, D).

Hierarchical numbering for heading is more elaborate and is explained on page page 10.

To highlight the numbering (or the constant text as for the *note*), you must define a character format first. You can not select fonts.

Normally the numbering **Position** is at the «Start of Paragraph», but for formulas etc. it is desirable to set this to «End of Paragraph».

Note: *When hiding the counter by the leading blank you must leave out the counter format character: Not < n=0> but < =0>.*

Numbered lists

Numbered lists are normally not bound to the hierarchy of headings (see *Numbering* on page 6). If numbered lists are bound to the heading scheme, than the lists must be treated

similar to the table or figure. In this case, more rows and columns are added to the matrix.

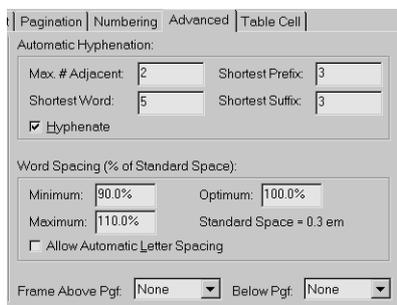
Note: *The footnote numbering is completely out of the game for numbered paragraphs (see Footnotes on page 7-10).*

Bulleted lists

A bulleted list is a special form a numbered list. The number degrades to a constant symbol. A standard bullet (centered dot) is available in every text font, hence it is provides as a building block (\b) in the dialogue.

To get more fancy bullets, you need to define a character format for 'switching the font' (see *Setting up a character style* on page 11) and replace the \b building block with the corresponding character. For example to get a list bulleted with ❖, you need to 'switch to' Dingbats or Wingdings and enter v (see *Symbols and dingbats* on page A-5).

Advanced



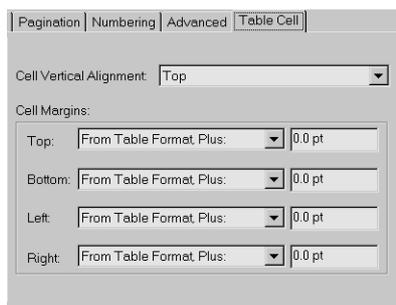
On the Advanced property sheet you define typographic details as well as graphic Frames attached to the paragraph (above or below). These graphic frames are located on the reference pages (see *Graphic elements on reference pages* on page 15).

With the settings of Word Spacing you define, how much the word space can be compressed or expanded for justified text.

Do not check the box «Allow Automatic Letter Spacing» - this creates very bad typography.

Note: *You can not attach a graphic element **behind** the paragraph (e.g. to create a shaded background). You may achieve the desired effect with a table of only one cell.*

Table Cell

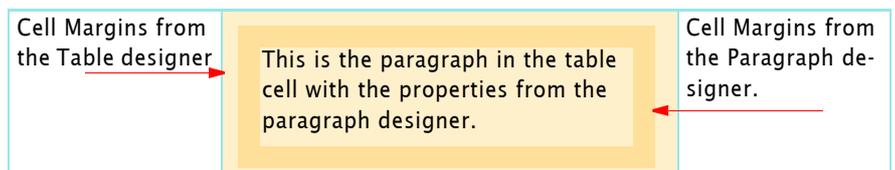


These properties become only relevant if the paragraph is used in a table (table heading, body or bottom cells).

For each cell margin you can specify

- **From Table Format, Plus** a value (relative setting), or
- **Custom** (absolute setting).

Use **Custom** to define the complete margin around the paragraph ignoring the margin which is set in the Table Designer.



Align the paragraph within the table cell (top, bottom, middle) with this property sheet.

Setting only one property in ¶ or f catalogue

You may need to set one property for all entries in the catalogue. For example, the language or the default font (if it is *really* the same in all styles!)

To set the language in all paragraph catalogue entries



- 1 Open the paragraph designer (menu **Format > Paragraphs > Designer** or **CTRL+M**)
- 2 Open the appropriate tab (Default Font)
- 3 In the **Commands** drop down list select **Set Window to As Is** or press **SHIFT+F8**.
- 4 In the Language field set the desired language (e.g. Schweizerdeutsch)
- 5 In the **Commands** drop down list select **Global Update Options...** and set the radio buttons *Default Font Properties only* (the name of the current tab) and *All Paragraphs and Catalogue Entries*
- 6 Press the **Update** button.

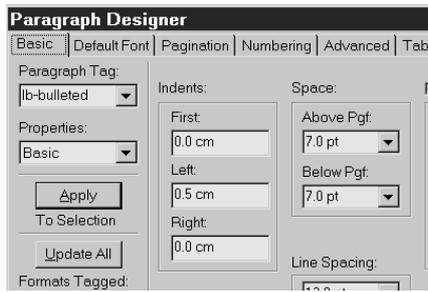
Setting up a group of paragraph styles

To set up a group of paragraph styles the following method is recommended (but check out your personal preferences):

- In a new document, delete all entries in the catalogue. Name this document according to its purpose, for example: `parastyles.fm`
- For each style enter a paragraph on which you can see how the style develops. Start the paragraph text with the name of the style you want to develop on this paragraph. Provide at least two lines in a paragraph to see the indentations.
- Apply the style names to the paragraphs according to the procedure described in *Names for styles* on page 2.
- Set the Property sheets in the Paragraph Designer to the first category of properties (Basic).
 - Set the properties according to the needs for this paragraph style and **Update All** (both the selected paragraph and the catalogue).
 - Work through all paragraphs with a distinct property sheet of the paragraph designer.
- Then change to the next property sheet for all paragraphs.

Note: *The Paragraph Designer displays the format name of the current paragraph (where the cursor is in). Hence it is convenient to work with already named paragraphs.*

Renaming a paragraph format



Use this operation with care because *all paragraphs of a particular style name* (including the catalogue) are changed! Generally this is correct for cleaning up an imported Word document):

- 1 Select a paragraph with the style name to be changed (e.g. from «Eingerückt» to «lb-bulleted».
- 2 In Paragraph Designer (**Format > Paragraphs > Designer...**) change the displayed ¶-name to the desired. Clicking on **Update all** will prompt you to accept the change.

Merging paragraph formats

Assume, for example, you have the following paragraph styles: 2Heading, 2Heading, 2HEADING (for example, due to input from other documents). The 'only valid one' is 2Heading.

You merge them together by renaming

2Heading to 2heading

2HEADING to 2heading

Paragraphs with the changed names will display an * in the information area on the screen (lower left corner). This indicates local overrides, which should be removed:

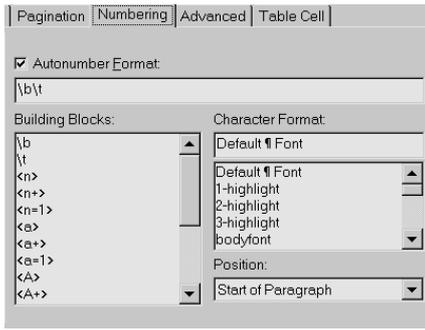
- 1 Select one of the changed paragraphs.
- 2 In the Paragraph designer (**Format > Paragraphs > Designer...**), click **Update all**. You will be prompted to dismiss the overrides: click **Remove Overrides**.

Replace paragraph format in document or book

To replace a paragraph format (say: fromThis) by another one (say toThat) in a document or book:

- 1 Set the insertion point into a paragraph that uses the desired format (toThat)
- 2 **Edit > Copy Special... > Paragraph Format**. The desired format is now in the clipboard.
- 3 In the **Find/Change** dialogue set the Find list to **Paragraph Tag**: amd enter the name of the unwanted style (fromThis) into the field.
- 4 Set the Change list to **By Pasting**
- 5 You might want to do one or two replaces individually to make sure this gives you what you want, but you can then do a "change all" for the document or book.

Hierarchical numbering



- Dependencies in numbering (e.g. all headings) require the use of a sequence name (e.g. H:). Independent numbering such as the numbered lists, do not need a sequence name.
- Blanks (¶) are relevant! It denotes 'no display' for the numbering item.
- The numbering items consist both of a counter and a format for display. Once the format is set (using n, R, a etc.) the setting of the counter (=x) must not use the n again (except for the real display of the initial value (see below the scheme for the numbered lists)).

Example numbering scheme

In the following example scheme the *table* and the *figure* numbering should restart at the main heading (level 1). Heading levels 'inherit' the number from the higher level.

Format-name	Seq. label	Prefix	Numbering flow				
			1head	2head	3head	table	figure
1heading	H:		<n+>	<¶=0>	<¶=0>	<¶=0>	<¶=0>\t
2heading	H:		<n>.	<n+>	<¶=0>	<¶>	<¶>\t
3heading	H:		<n>.	<n>.	<n+>	<¶>	<¶>\t
tt_table_title	H:	Table	<n>.	<¶>	<¶>	<n+>	<¶>\t
ftn-fig-title-numbered	H:	Figure	<n>	<¶>	<¶>	<¶>	<n+>\t

This scheme is used for preparing the entries into the dialog field of the paragraph designer, tab **Numbering**. For 3heading you enter there, for example (leaving out all the informal space in the above table, but observing the required space):

H:<n>.<n>.<n+>< >< >

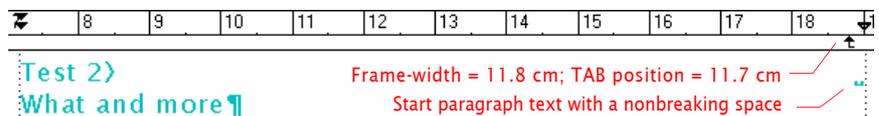
Note: *Be careful with the arrangement non-syntactical element (such as the TAB or the periods or the word Table). They may interfere with the numbering when accessing the numbering information in cross-references etc. See Building blocks \$paranum and \$paranumonly on page 7-5.*

Linebreak in autonumber

There is no building block \n to force the paragraph contents to the next line. However, you can set up the autonumber string as follows (watch the ordinary space at the end of the string):

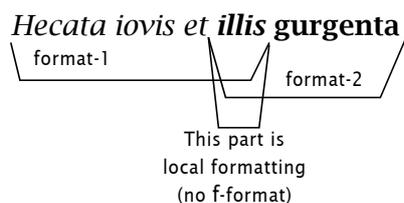
T:Test¶<n+>\t¶

In the basic properties of this paragraph style you define a tab position corresponding to the width of the text frame (minus «one» character):



It is essential to start the paragraph text with a nonbreaking space for this construct.

Character styles



Upper- and lower case is relevant in style names (*dingbats* and *Dingbats* are not the same).

Character styles are used to:

- highlight portions of a paragraph
- format the autonumber part of a paragraph
- format elements in a cross-reference or variable
- format the graphic text created with the Text Line tool

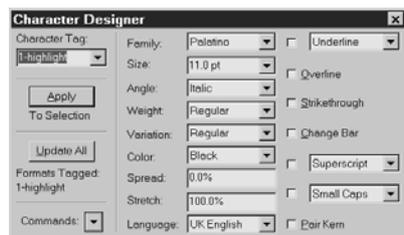
Note: *Only the last applied character format is stored. Previously applied character formats become 'local formatting' → See figure at left.*

Note: *Local text formatting with **Format > Font**, **Format > Size** or **Format > Style** or with the buttons from the formatting bar (**View > Formatting Bar**) can not be used in paragraph numbering, variables and cross references. This 'local' formatting is not preserved when saving the file as HTML. 'Local' formatting is generally not recommended for long living documents.*

Setting up a character style

The name of a character style should provide a hint about its purpose, not its appearance: 1-highlight, footnote-reference,...

Note: *The properties which can be set for a character format are the same as on tab **Font** in the Paragraph Designer (see Properties of type on page 3-4).*

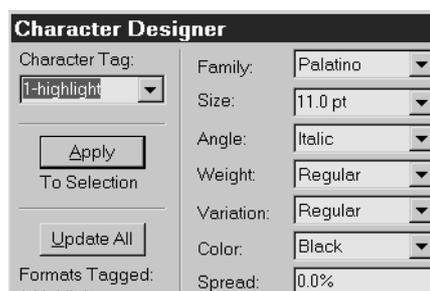


- Select a text portion (a word or phrase) which can display the definition of the style.
- Open the Character Designer (**Format > Characters > Designer**).
- In the field **Character Tag** enter the name of the style to be created.
- In the drop down list **Commands** select **New Format**.
- In the Dialog **New Format** activate both **Store in Catalogue** and **Apply to Selection** (this to gives you a visual hint about the developing format).
- If you want the character format to *add properties* to the selection rather set the full range of properties, set all properties to *as is* by selecting **Set Window to As Is** from the **Commands** drop down list or with **SHIFT+F8**.

Note: *This 'Set Window to As Is' is needed, for example, for a format just changing the font, but not the size or anything else.*

- Set the desired properties of the character format.
- Define the character format both in the catalogue as well as set the properties in the selection with **Update All**.

Renaming a character format



Use this operation with care because *all text sequences with a particular style* (including the catalogue and hence also cross references etc.) are changed! Generally this is correct for cleaning up an imported Word document):

- 1 Select a character sequence with the style name to be changed (e.g. from «italic» to «1-highlight».
- 2 In Character Designer (**Format > characters > Designer...**) change the displayed *f*-name to the desired. Clicking on **Update all** will prompt you to accept the change.

Note: *Be aware that only the name of the last applied character format is retained (see beginning of this section).*

Replace character format in document or book

To replace a character format (say: fromThis) by another one (say toThat) in a document or book:

- 1 Select a piece of text that uses the character format toThat
- 2 **Edit > Copy Special... > Character Format**. The desired format is now in the clipboard.
- 3 In the **Find/Change** dialogue set the Find list to **Character Tag:** and enter the name of the unwanted style (FromThis) into the field.
- 4 Set the Change list to **By Pasting**
- 5 You might want to do one or two replaces individually to make sure this gives you what you want, but you can then do a "change all" for the document or book.

Character styles in building blocks

In the context of cross-references, the <\$paratext> building block ignores all character formatting present in the extracted paragraph text (including case formatting), except superscript, subscript and font family properties.

This applies also to the Running Header/Footer system variables which contain this construct.

This differs from the use of <\$paratext> in generated files, where FrameMaker retains all character formatting if it is the result of a character tag (untagged font properties are not retained).

[FrameMaker Building Blocks: Cross-Reference Formats, <http://www.microtype.com/resources/BBxref.pdf>]

Example To have the italics property visible in the cross-reference, you have to use a different font name which activates the italic - inspect your font list and see whether you have a suitable font which also has «Italic» or «Oblique» *as part of the font name* and use in the character format with this definition.

Note: *For more details see <http://www.microtype.com/resources/FTPreserveFmtXref.pdf>*

Import formats from another document

Warnings concerning format imports

See also *Contents of format categories* on page 3-14.

Document Properties

Be aware that the category **Document Properties** contains properties of such diverse items as:

- Document numbering (**Format > Document > Numbering...**)
- Change bars (**Format > Document > Change Bars...**)
- Footnote settings (**Format > Document > Footnote Properties...**)
- Text options (**Format > Document > Text options...**)
- Acrobat setup (**Format > Document > PDF Setup ...**)

Variable Definitions

Both System Variables and User Variables are imported. This may override specific settings from a template.

Running Heading/ Footers

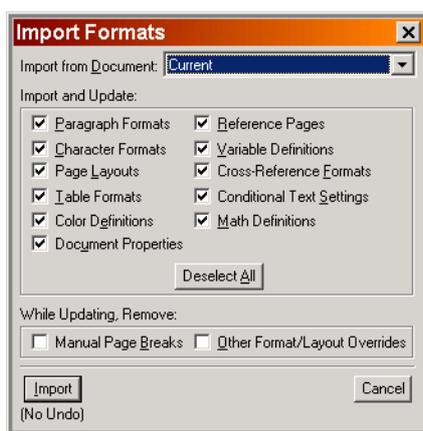
While their use is defined in the category Page Layouts, their definition is located in category Variables. Appearance may be affected by Character Formats.

Cross-reference formats and Variables

These are often affected by Character Formats, hence an import of changed Character Formats may be necessary.

Importing Format categories

Import formats from another document



- Open the source document
- Open the target document.
- In the target document: **File > Import > Format**
- Select the source document in the drop down list
- Use the **Deselect All** button if you want to set only few categories.
- Activate the elements of the document you want to import. To import layout with changed definitions for Running Heading / Footing, you must select both **Layout Pages** and **Variables**.
- Import!**
- Save the target document.

Importing Page Layouts

When importing master pages the property **Room for Side Heads** is not imported, because this is a property of the text flow. Hence after importing the master pages it may be necessary to set this attribute once on the body pages of each target document.

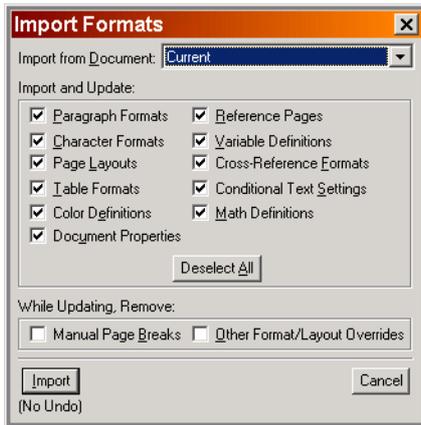
Contents of format categories

It is not obvious which document properties are located in which format category.

Item to be imported	Paragraph formats	Character formats	Page Layouts	Table formats	Color define.	Document prop.	Reference pages	Variable define.	cross-Reference formats	Conditional text settings	Math defin.
Change bar (revision bar) properties						X					
Character catalogue		X									
Colour catalogue					X						
Colour views (for separation)					X						
Condition types, Condignly text formats										X	
Content definition for TOC, index etc.							X				
Cross-reference formats									X		
Custom marker definitions						X					
Custom math elements from Math reference page											X
Document view, grid and snap properties						X					
Footnote properties, numbering, layout						X	X				
Layout			X								
Marker type names						X					
Math font definition and sizes											X
Numbering of chapter, pages, paragraphs, footnotes, table-footnotes						X					
Page size, pagination, master page usage						X					
Paragraph «Frame above/below» graphics							X				
Paragraph catalogue	X										
PDF setup, document information						X					
Print separations settings						X					
Rubi text properties		X									
Ruling styles in tables				X							
Running Header/Footer formats								X			
Spell check options						X					
System variable definitions								X			
Table catalogue				X							
Text options (smart ..., super/subscript)						X					
User variable definitions								X			
View and lock (document/palette)						X					

Note: If you need to import only part of a category, for example, just the user variables, you need a special plug-in (**ImportFormat-Special** by rick Quatro, www.frameexpert.com).

Import formats into book files



When in a book file, all properties for the documents, such as paragraph styles, master pages, cross reference formats etc. can be imported and distributed to all files in the book.

- 1 Open the book file
- 2 Select the files to be updated.
- 3 In the **Import Formats** dialogue specify the file from which you want to import. This file need not be part of the book, but it must be open.
To import layout with changed definitions for Running Heading / Footing, you must select both **Layout Pages** and **Variables**.
- 4 Specify (check the boxes) which properties you want to import and distribute.
- 5 If you want to remove local overrides, check the appropriate boxes.

6 Import!

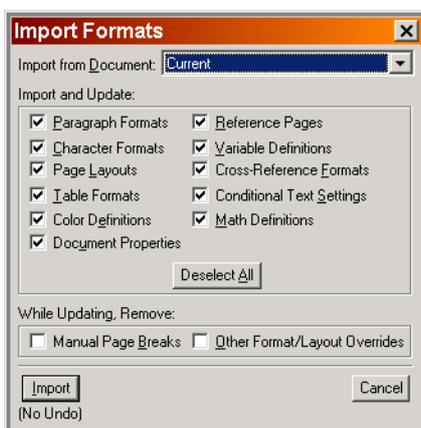
Note: *The files of the book must be open, if your files use currently unavailable fonts and graphics (because this requires user intervention).*

Import only part of a format category

To import just some of the needed formats (e.g. paragraph formats for headers only) you need an intermediate document.

- Set up an empty document.
- Import the paragraph/character/table styles.
- Delete all styles you don't need (in the paragraph and/or character catalogue or Table designer).
- Save the file with a distinct name (imports are not possible from unsaved files).
- Open the target document and import the desired style elements from the intermediate document.

Removing style overrides



To remove all (that is also those applied intentionally!) style overrides, you must re-import the catalogue from a reference document, such as a template.

Be careful in selecting the items you want to import. To remove overrides from paragraph formats only, check only **Paragraph Formats** and leave all other option unchecked.

During import check the box **Other Format/Layout Overrides**. You may also wish to check Remove **Manual Page Breaks**.

Special formatting

Paragraph with background

Paragraph in table cell

A well known method is to use a one-cell table with or without ruling and cell shading:

This is the paragraph in the text cell, which is shaded and has outside ruling. You may want to set up a special table format for this, for example **parashade**.

Another method is the overlap of two paragraphs. See

Anchored frame at the paragraph

If you do not need a fill but only a frame for the paragraph, this might be a solution for You. Anchor a frame with the following properties at the end of the paragraph: outside text frame, right adjusted. Adapt height, width, distance above baseline to your needs. Distance to text frame normally is the negative width of the frame or column.

This is the paragraph *under* the frame

Note: The anchored frame is in foreground, hence you can not edit the contents with the mouse. On top of page both the paragraph and the frame are aligned with the layout frame. Hence the relative position of frame and paragraph will change.

Editing the paragraph

- 1 Place the cursor in the previous or next paragraph.
- 2 Use the appropriate arrow key to move the cursor into the overlaid paragraph.
- 3 Edit the text (using **SHIFT+arrow** keys for selections)

Text fragments with background

A few methods are at hand for this task.

Equation with string

Place an equation (most time the smallest size is adequate) and insert the desired text as string (enter " followed by the text and terminate text with ENTER. Then shrink wrap the formula and apply the desired border or fill attributes to the frame.

Here comes the formula text: **just as small as possible**. This might require some tweaking of the vertical position to align the text to the baseline of the paragraph. Selecting text (for editing) in the formula string is possible with the mouse but not with the arrow keys (→ No Insertion point).

As with all graphic objects, frame fill and border can only be of same colour. You can apply character formats to the text, however it will not be displayed in the status area.

Anchored frame with text line

Here is an anchored frame **«at insertion point»** (same as generated with formula). Character formats are recommended (and displayed in the status area). It is a little bit tedious to adjust the baseline, but editing the contents is easy.

4

Tables

Overview

Tables are anchored objects which flow with the text. The many properties a FrameMaker table can bear make this construct very flexible.

Tables with special properties are used for ‘non-table’ purpose, such as headings with shaded background or titled graphics.

Tables can be rotated as a whole to provide many columns. Standard FrameMaker allows only to sort the items in tables. With plug-ins other actions can be performed in tables.

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Table properties	2
Handling table items	3
Set up table properties	4
Special table positions	9
Set up a table template	10
Importing tables	11
Special operations	12
Nested tables	18

Table properties

In the diagram hereafter the table area is lightly shaded to display the complete object 'table'.

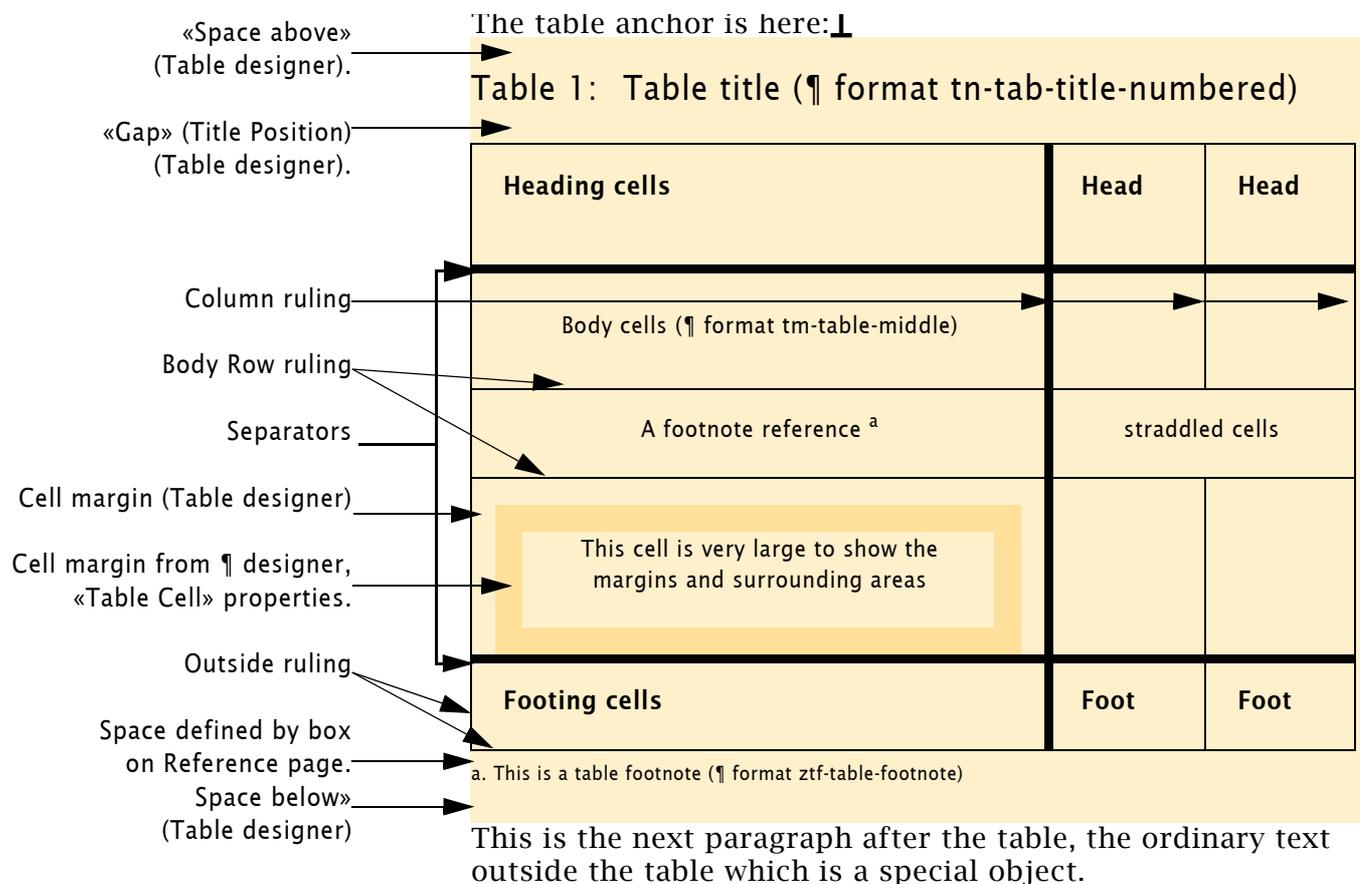


Table alignment is relative to the paragraph with the anchor (be aware of side heads...)

Properties in the table catalogue

When using an existing table to create a table template, the following properties are stored in the catalogue:

- All properties which can be set in the table designer (position, cell-margins, regular ruling and shading, title position).
- Properties from the sample table:
 - number of rows for table heading, body and footing
 - number of columns, width of each column
 - paragraph format in the first row (of table heading, body and footing) for each column.

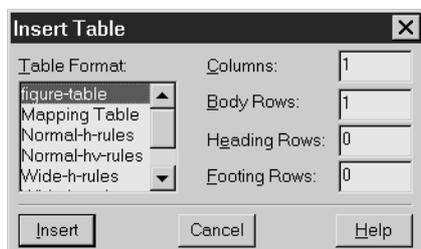
The following properties are not kept in the table catalogue:

- Straddling of cells
- Individual ruling and/or shading
- Other paragraph formats than specified above
- ...

Handling table items

Inserting tables

To insert a table



Tables are anchored objects similar to anchored frames. You can select the whole table by selecting the anchor.

- 1 Place the cursor where you want to place the table anchor. To have a better overview use an empty paragraph (but this may create too much empty space).
 - 2 Insert the table with **Table > Insert Table ...**
 - 3 Select the format from the drop down list **Table Tags**
 - 4 Specify the number of rows and columns for the table. You may wish to start with few rows only.
 - 5 Specify the number of heading and footing rows. Most time you will have zero footing rows. **Insert!**
- Note:** You can not transform ordinary table rows to heading- or footing rows after the table is inserted into the text. You can, however, add heading and footing to an existing table and then transfer content from body rows as required.
- 6 Adjust the width of the columns to your desire.
 - 7 You may wish to remove the table title (if the template table comprises one). You need the Table Designer for this (see *Basic table properties* on page 4).

Selecting table items and other operations

On the Mac use ALT in place of the CTRL key for the following:

Select a table

- Hold the **CTRL** key and *triple click* into a cell or ...
- Select the table anchor (see *Select a non-width character (or narrow characters)* on page A-17)

Select a column

Hold **CTRL** and double click into the *middle part* of a cell

Select a row

Hold **CTRL** and double click into the *far left* or *far right* of a cell

Select an area of cells

Drag with mouse across the desired cells.

Find the anchor of a table

Place the cursor in the table, then press **ESC, t, I** (upper case i). This moves the cursor just *behind* the anchor point (**␣**).

Copy / cut and paste cells

When pasting cells the number of cells to be pasted to need not be equal to the copied or cut cells. The copied cells are repeated to a larger amount of paste cells (a, b, c → a, b, c, a, b) or discarded or a smaller amount (a, b, c → a, b).

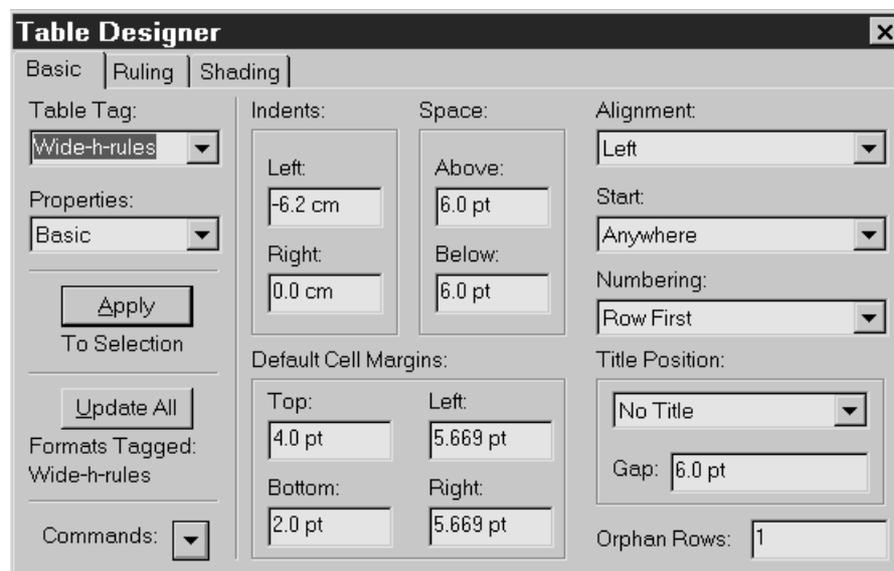
Insert a table row

Insert a table row below the current one with **CTRL+ENTER**. Use **Table > Add Rows or Columns ...** for more than one item.

Set up table properties

Table properties are set up with the table designer (**Table > Table Designer** or **CTRL+t**)

Basic table properties



For cell margins see also *Table Cell* on page 3-7.

Indents Indents specify the amount of space to the left and right of the table within the text frame. Normally this is zero.

Space Space above defines the space between the line with the anchor point and the upper edge of the table (or when the table title is above) the table title.

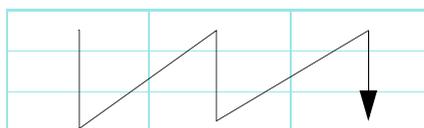
Space below defines the space below the table (or any table footnotes) and the next text paragraph.

Alignment This defines the alignment of the table relative to the anchoring point.

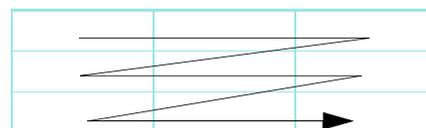
Start Start defines whether the table should start at specific location (**Top of column** etc.) or just after the anchor line (**Anywhere**). With Float the table can move to the next page and text appearing logically after the table is moved between the anchor point and the table.

See also *Special table positions* on page 4-9

Numbering This defines the flow of numbering:



Row First



Column First

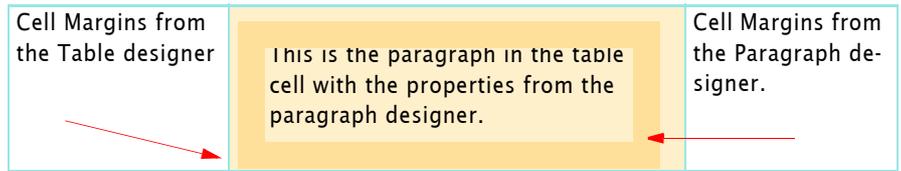
Title position This may be above or below the title. You can also set «no Title».

The Gap defines the space between the table title and the table body.

Orphan rows This value defines, how many rows at least must be placed. If these rows do not fit on the current page, the table is moved to the next page.

Default cell margins

For paragraphs without any additional setting of cell margins (see *Table Cell* on page 3-7) this defines the margins around the paragraph in the table cell: Table ruling.



Default cell margins may cut off accents in the first cell line, especially with thick ruling:

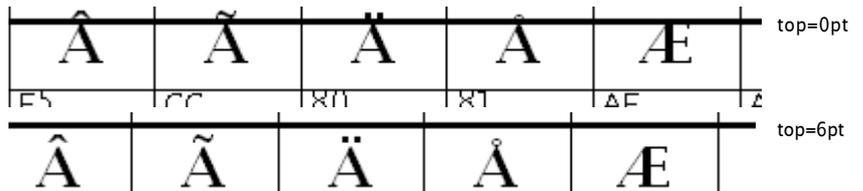
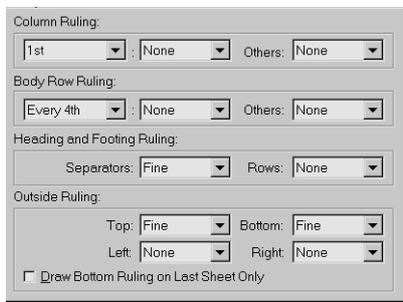


Table ruling

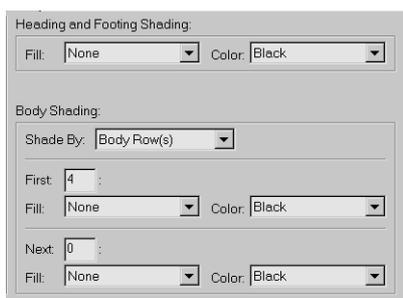


With this dialogue only properties for regular patterns (n-th line, n-th row etc.) can be set.

This table is left indented by 0.5 cm and uses special ruling to group rows

Heading row(s)	
The line above is the separator between body and heading	Cell
Body ruling is set to «Every 2nd», Others: none	
The non-shaded area is the body of the table	
This is another row in this table	
The line below is the separator between body and footing	
Footing row(s)	

Table shading



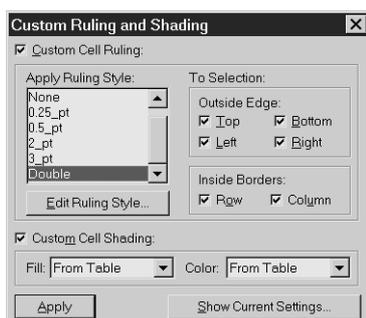
With this property sheet only regular patterns can be set (n-th line, n-th row etc.).

The **Fill** values (White, 3%, 10% etc.) do not fill with shades, but with patterns (see *Border and Fill patterns* on page 6-12)

When using shades be aware of the multiplicative effect of fill and colour: 50% fill of a colour which is defined as 20% black results in a 10% shade of gray.

Colours are defined in **View > Color > Definitions ...** (see *Colours* on page 6-12).

Custom ruling and shading



Additional properties for individual rows, columns and cells are defined with **Table > Custom Ruling and Shading**.

Specify either ruling or shading or both with the appropriate check boxes.

When using shades be aware of the multiplicative effect of fill and colour: 50% fill of a colour which is defined as 20% black results in a 10% shade of gray.

Colours are defined in **View > Color > Definitions...**

Note: Beware of the ‘reverse logic’ to remove settings! You need to check all elements which you want to clear and then use the selection **None** from the **Apply Ruling Style** list.

Reassign original table ruling and shading

Apply custom ruling

Apply the custom ruling with **Table > Custom Ruling and Shading**. For example, remove the ruling from the inner cells with style **None**:

§	§	§	§	§
§	§	§	§	§
§	§	§	§	§
§	§	§	§	§
§	§	§	§	§

Reassign the original ruling

- 1 Select the same cells as for the custom ruling/shading or (if appropriate) the whole table.
- 2 In **Table > Custom Ruling and Shading** set **To Selection** (Top, ... Right) and ‘Inside Borders’ (Row, Column).
- 3 From the drop down list **Apply Ruling Style** select **From Table**.
- 4 Check **Custom Cell Ruling**, uncheck **Custom Cell Shading**
- 5 **Apply!**

Re-assign the original shading

- 1 Perform steps 1 to 3 from before
- 4 Check **Custom Cell Shading**, uncheck **Custom Cell Ruling**
- 5 **Apply!**

Reset to catalogued table properties

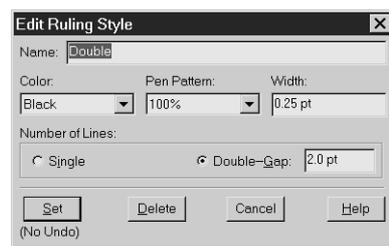
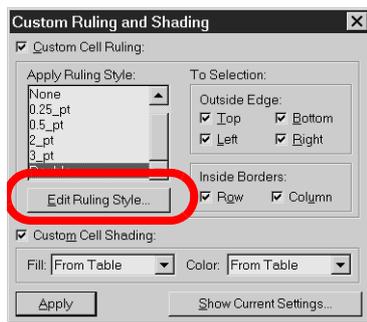
- 1 Set all check boxes
- 2 In the drop-down lists select **From Table**
- 3 **Apply!**

Table ruling peculiarities

The size of a table or cell is the skeleton (· · ·) on which the ruling is applied. A container text frame (- - -) with the table anchor does not crop the table, but the anchored frame (outer container) does. The table has 3mm ruling and its width is the same as the frame width (115mm).

Table anchor			
	skeleton (partially)		

Define line styles for tables



Line styles used in tables (fine, bold, double etc.) are set with **Table > Custom Ruling & Shading**, button **Edit Ruling Style**.

When changing the name of a style only rulings in the current document are affected. When importing table styles to another document, the changed name will become an additional name in the target document.

Provide meaningful names. It may be useful to add the line width to the name - but this creates problems if you need to change the properties of the line style.

It is not possible to create dashed lines or other broken forms. Use the **Pen Pattern** attribute to apply a fill percentage of a colour (for example, black) to the line.

Modify column widths

Copy column widths

To copy a column width from table-1 to table-2:

- 1 Click in the column whose width you want to copy
- 2 Choose **Edit > Copy Special > Table Column Width**.
- 3 Click in the column in table-2 which will receive the new width. **Paste!**
- 4 For all columns in a table you will need to repeat steps 1 to 3 for each column.

Adjust column width with mouse

- Set a reasonable grid spacing (e.g. 0.1 cm) in **View > Options**
- Set **Graphics > Snap** to activate the grid for your work
- Select the column you want to adjust (e.g. CTRL+click into the middle of a cell); day a handle.

Note: *To adjust to widths defined by the grid spacing you must start with the left most column and work to the right - or you get crude values.*

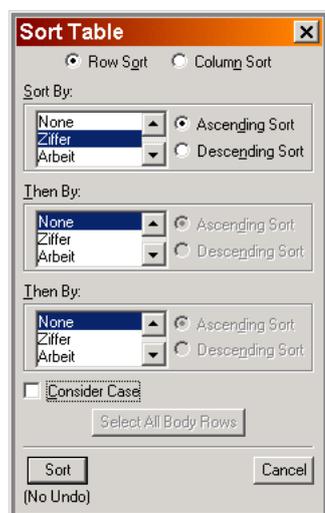
2007-06-22

E:\FM-course\handout_70\tables.fm

D+D D

Functions in tables

Sort by columns and rows



Sorry, there is no undo for this function.

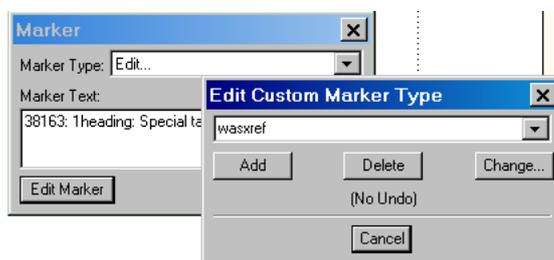
- 1 Place the cursor in the table
- 2 In **Table > Sort ...** set the desired options; **Sort!**

Warning

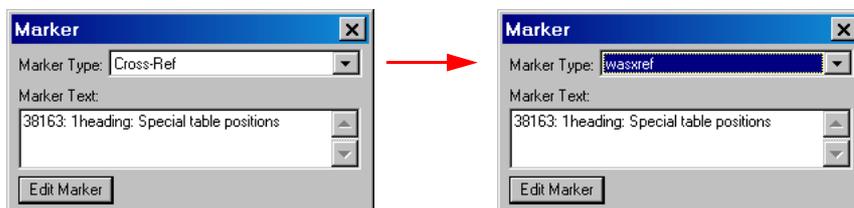
A Table sort deletes all cross reference markers from the cells.

To overcome this problem edit all cross reference markers in the table to get a different type and re-edit them back after the sort.

- 1 Specify a user marker type wasxref



- 2 Edit the CrossRef markers in the table by changing the name Marker Type:



- 3 Sort the table.
- 4 Edit all wasxref markers back to CrossRef.

Calculations in tables

FrameMaker does not provide calculations in tables. This can be performed by 'plug-ins':

- FrameScript by Elmsoft (<http://www.framescript.com/>) is a full blown macro language which knows all FrameMaker commands. Scripts are located in a special directory.
- Caxton Table tools (<http://www.caxton-inc.com/xtras.html>) can, for example, calculate the sum in a table column. Unfortunately support for these tools is «discontinued».

Special table positions

Table at top of page

To get a table at the top of a page,

- 1 Select the table (place cursor anywhere into the table)
- 2 Activate the table designer (**Table > Table Designer**)
- 3 Set Start to **Top of Page**

This will move the table to the next page and display it on top. The anchor of the table is left at the current paragraph.

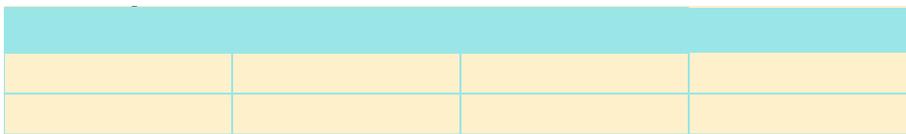
Error in FrameMaker 6.0

If the table anchor is within a paragraph, and the table «Starts on top of page», then

- The first part of the paragraph up to the line with the anchor is moved to the next page
- The table is displayed on the next but one page, followed by the rest of the paragraph (which is correct).

Table at top of first page

- Insert the table at the first paragraph of the first page
- For the *paragraph* set **Space Below** to *-font size* (e.g. -14pt)
- For the *table* set **Space Above** to *-font size* of the paragraph (e.g. -14pt)



This gray area is the text frame with the table located topmost.

Floating text around table

A table with attribute **Float** allows text from behind the table to flow between the anchor line and the table start:

Hecate est Iovis et Latonae filia, soror Apollinis. Est tricopor et triceses, cincta latrantium canum turma; noctu stans in triviis vel prope sepulcra et ubi loca sunt caedibus contaminata.

Paragraph with table anchor ↓

This text was typed behind the table, but flowed before it as soon as the table became the attribute Float. Text which does not fit in

First	Next
first	This table has the attribute Float and the first row does not fit onto the first page.
second	Hence
third	viis vel prope sepulcra et

front of the table, will continue behind it, as this example clearly demonstrates in this two column text flow.

Set up a table template

To define a table template from an existing table

Any table in a document can be used for a table template.

Set up the table as desired for your purpose:

Widths of columns, paragraph format in the columns, heading and footing rows, regular ruling and shading etc.

#	Work type	h	CHF
	The first item on this invoice		
	Next item on this invoice		
	Last item in this table		

Table 2:

Keep in mind that certain properties (custom ruling and/or shading, straddling of cells - often used in headers - are not kept in the table catalogue.

- 1 Place the cursor in the table.
- 2 In the table designer (**CTRL+T**) set the table tag (the name of the table template), for example *Invoice*.
- 3 Select **Commands: New Format**.
- 4 Activate **Store in Catalogue; Create!**



Sophisticated table templates

For frequent use of sophisticated table layouts the mechanism of the table catalogue is not sufficient (straddles cells, custom shading/ruling, various paragraph formats).

It is handy, to collect such items for copy and paste in a special document belonging to the project.

In der Gemeinde wohnhafte Schüler/innen 2002/2003

Vorschule (Kindergarten)	16
Primarstufe	108
Sekundarstufe I (inkl. Gymn. U.-Stufe)	44

Ausbildungsniveau Wohnbevölkerung ab 15 Jahren (2000)

Obligatorische Schule	25,6	%
Berufsausbildung	41,1	%
Maturitätsschule, Lehrerausbildung	4,9	%
Höhere Berufsausbildung	10,0	%
Fachhochschule, Universität	3,6	%
Andere, keine, keine Angaben	14,8	%

Samples from the
Statistical Yearbooks of
the Canton of Lucerne

Jahr	Total	Öffentlicher Auftraggeber (ohne Unterhaltsarbeiten)					
		Total	Davon			Davon	
			Bund	Kanton	Gmden	Hochbau	Tiefbau
1984	2,4	4,3	2,4	10,5	2,6	9,9	-2,7
1985	5,0	-1,6	-16,9	-9,2	13,7	-6,7	5,6
1986	7,2	7,4	-2,4	0,9	15,5	11,6	2,3
1987	-0,8	4,9	4,2	3,8	5,6	10,9	-3,1

Importing tables

Import from prepared text

- Each table row corresponds to a line in the text file.
- Table cells are separated by TAB characters.

Beispiel einer zeile) nächste zelle) dritte zelle
Zweite zeile mit der) 2. zelle 1 und der dritten zelle

- 1 **File > Import > File...** select *Copy into Document*.
- 2 In the dialogue **Unknown File type** select *Text; Convert!*
- 3 In the next dialogue (Import text by copy) select *Convert to Table*
- 4 Select the desired table format (e.g. Wide-h-rules) and activate *Leave Heading Rows empty. Convert!*

Date / time	Operation	Reason	Action
Wed 98-07-01 14:39:05	Starting		
Wed 98-07-01 14:59:57	Testing	Button colours	Restart
Wed 98-07-01 15:00:48	Starting		
Wed 98-07-01 15:10:30	Restart (inst)	I don't like that colour scheme mentioned in FrameUsers	Restart
Wed 98-07-01 15:11:44	Starting		
Wed 98-07-01 16:13:44	Restart (inst)	DDD icon in shell32.dll replacing Windows icon	Shut down

- The table heading is empty, so you need to fill in appropriate text.
- You will need to adapt the column widths.
- You may want to adapt the cell format with paragraph formats.

Import from Excel

Import complete table (file)

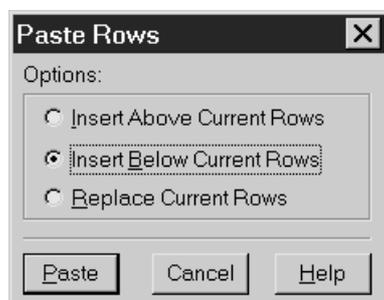
- 1 Import the file **by Copy** with **File > Import > File** and select the appropriate Excel format (**Excel** is for versions > 5).
- 2 Set the appropriate formatting options for the import (e.g. Re-format using current Document Formats).
You do not get a chance to define the table format!
- 3 Apply the desired formatting to the placed table.

Import part of table

- 1 In Excel select the table area and copy to the clipboard
- 2 In FrameMaker use **Edit > Paste Special...** and select **text**.
- 3 Convert the tabbed paragraphs to a table with **Table > Convert to Table...**
- 4 Select an appropriate Table format and format the rows according to the needs.

Special operations

Merge tables



- 1 Save your work to have a backup for this operation.
- 2 **Copy** all the *body* rows from the *second* table (do not select the heading rows).
- 3 Click inside the first cell of the last row of the *first* table and **Paste!**
- 4 At this point Frame pops a **Faster Rows** dialogue asking where to paste the rows, and choose **Insert Below Current Row**.
- 5 Select the *second* table and delete it.

Split a table vertically

Method A

To split a (source) table into two tables (see also *Method B* on page 4-13):

Heading row(s)	
The non-shaded area is the body of the table	cell
This is another row in this table - split above this row	
The line below is the separator between body and footing	

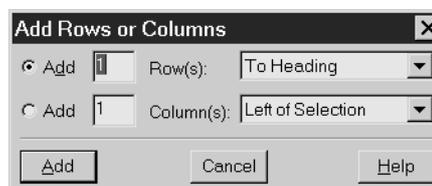
- 1 Save your work to have a backup for this operation.
- 2 Select the *body* rows to be used in the source table and **copy** them to the buffer. **Paste** this table fragment to the location of the second table part. A Table anchor with the table fragment appears.

This is another row in this table - split above this row	
The line below is the separator between body and footing	

- 3 Place the cursor into the first row of the new table and insert the desired number of heading rows (**Table > Add Rows or Columns...**). Specify the number of header rows to be added and choose **To Heading** from the drop down list. **Add!**

This is another row in this table - split above this row	
The line below is the separator between body and footing	

- 4 **Copy** the *heading* rows from the source table and **paste** them into the empty *heading* rows in the second table (set **Replace Current Rows** in the **Paste Rows** dialogue).
- 5 If the source table has Footing rows: Place the cursor into the last row of the new table and insert the desired number of footing rows (**Table > Add Rows or Columns...**). **Copy** the footing rows from the source table and **paste** them to the empty footing rows in the second table.
- 6 Select the copied body rows in the *source table* and delete them.



Method B

FrameMaker does not have a command to split tables between rows or columns.

If you need to insert some rows of different widths into a table, you need to 'split' the table manually, before you can insert table C in between (see *Split a table vertically* on page 4-12 for another method):

- 1 Make a copy of your table (A → B)
- 2 Remove the superfluous body rows at the end of A
- 3 Remove the superfluous body rows at the beginning of B
- 4 Anchor table A, then C, then B with the above mentioned spaces before or after.

Split wide table horizontally

	A	B	C	D	E	F	G	H
1								
2								

	A	B	C	D		E	F	G	H
1									
2									

Arrange the split table on facing pages. For tables longer than a page you will also need vertical splitting.

Page break within table row

FrameMaker does not split a row of a table across pages (text frames, actually). If you have cells where the content is larger than can fit on a page (in the text frame height) you will get strange effects:

- The cell contents flows outside the text frame
- If even larger, the cell extends to the end of the paper where it is cut off.

Solution

Create a new row (or rows), manage the cell's content manually so you fit what you desire on a page, and let Frame manage the placement of rows on pages. You can apply custom ruling and/or shading properties as needed to affect the appearance of the cells.

Fix appearance of table title

The table title may expand over the right edge of a table (title area is filled with light gray to show it in print).

Table 3: This is just a long table title to demonstrate the effect on this centred table

Column 1	2	3
Some contents	Some con- tents	some con- tents
Something	Nothing	Each

To make the heading as wide as the table itself, use one of the following methods:

- 1 Add an anchored frame to the title to limit the space in the title area
- 2 Use additional header rows for the title area

Anchored frame in title area

At the end of the title add an anchored frame with property «Run into Paragraph» and an alignment fitting the purpose (filled with gray in this demonstration).

Table 4: This is just a long table title to demonstrate the effect of the anchored frame

Column 1	2	3
Some contents	Some con- tents	some con- tents
Something	Nothing	Each

The alignment of the anchored frame may be «side farther from binding» rather than «right» to adapt automatically to the location of the table. You may need some experimenting for your particular situation.

Centred title constrains the title width

If the first paragraph in the title is centered, it will constrain the whole title to the width of the table. You could have a tiny, blank, centered paragraph in each title just above your normal, left-aligned title. [Rick Quatro, 2006-10].

This paragraph is centered

Table 5: This is the real table title paragraph, it is left adjusted

Column 1	2	3
Some contents	Some con- tents	some con- tents
Something	Nothing	Each

Centered paragraph in title

Table title shaded for demonstration only to see the effect

The table is left aligned.

Whether this is a bug or a feature is not known to the gurus.

Title in header rows

- 1 Add a row on top of the heading rows.
- 2 Straddle all cells in this row
- 3 Insert the table title (using the correct ¶-format of table titles) into this row.
- 4 Space below is not active in cells with only one paragraph, hence you may wish to define and add a paragraph z6pt (line spacing 6pt fixed). A line break would show up in a «list of tables».
- 5 Remove any ruling on the top and sides of this row; also remove any shading to fit the appearance of standard tables.
- 6 Set table property «No Title».

The table then looks like this:

Table 6: This is just a long table title to demonstrate the effect		
Column 1	2	3
Some contents	Some con- tents	some con- tents
Something	Nothing	Everything

Both table and title centred

If you want both the table centred in the text frame and also the table title be centred:

- 1 Define the table alignment to be centred
- 2 Define the table title ¶ format to be centred:

This is the body text with the table anchor at the end of this paragraph.

Table 7: This table title has attribute centred, so it will fill the entire width of the text frame.

This table is centered		
Some contents	Some con- tents	some con- tents
Something	Nothing	Each

Rotate table cells

You can rotate only in increments of 90°. Rotate selected table cells with **Graphics > Rotate** or use the buttons .

You may select the whole table - this will not rotate the table, but all cells in the table.

Line breaking in rotated cells

Since the line length is in the direction of the row height, line breaking will take place only in 'constricted' rows. As long as no row height is defined, a default applies - and this is very large: 35.56 cm (14").

heading cell	second heading cell	third heading cell	fourth heading cell	fifth heading cell	sixth heading cell
body cell 1	Table rowdefinition: min: 0 max: 1.5cm	Automatic line breaking is possible	body cell 4	body cell 5	body cell 6
body cell 7	Table rowdefinition: min: 0 max: 4cm	With the default row height it seems that there is no automatic line breaking. This is, however not true. It's the (large) default row height which gives this impression.	body cell 10	body cell 11	body cell 12

Rotated tables

To get a rotated table you must rotate the text frame which contains the table. Just rotating the table will only rotate the cells in it (see *Rotate table cells* on page 4-16).

Create a rotated master page

This method creates a landscape text area in which the table can be edited as usual, because the table is not rotated.

- 1 In **View > Master Pages** use **Special > Add Master Page**: use a master page which provides the desired heading and footing, for example 'left' and modify the page as needed. See *Master pages for rotated tables* on page 5-21
- 2 Apply this master page to any desired page with **Format > Page Layout > Master Page Usage**.
- 3 To automate the process see *Assign master pages automatically* on page 5-22.

Develop large tables

Using an ancillary large document may be handy to find out the appropriate layout of large tables:

- Set up a large document, for example in A3 portrait (42cm wide, 29.7cm high)

- Develop your table in this document using your standard paragraph formats (import them into this document).
- After work the table may be too large to fit even into a rotated frame of an A4 portrait.
- To check whether the table will fit into the target document, place a vertical line at the desired location from the left. Then start with the tweaking:
 - Reduce the font size of your paragraphs in the table. Do not use smaller sizes than 7pt for sans serif fonts (such as Arial or Helvetica) or 8pt for serif fonts (such as Times).
 - Reduce the width of certain or all columns
 - As a last resort consider splitting the table horizontally. In this case you will need to repeat at least the leftmost column in the second table. See *Split wide table horizontally* on page 4-13

Tables with varying column widths

In a FrameMaker table all cells of a column have the same width. Straddled (combined) cells of fine granularity may allow to 'display' different widths (see *Simulated nested table* on page 4-18).

Another method combines two or even more tables **⌵**:

A									
A									
C									
C									
B									
B									

- The first table (A) has 5 columns, the second table (C) has 7 and the third table (B) again has 5 columns. The Anchor position of *all* of these tables is at the end of the paragraph before the table (symbolized by **⌵** in that paragraph).
- The first (A) and second (C) table have Space Below of 0.
- The second (C) and third (B) table have Space Above of 0.
- To select each anchor individually (for A, B or C) you need a special technique (see *Select a non-width character (or narrow characters)* on page A-17).
You may wish to select a distinct table by **CTRL+triple-click** into one of its cells (see *Handling table items* on page 3).

Nested tables

It is possible to nest tables, that is, to place another table within a cell of a table. But this requires two additional wrappers:

- Within the table cell an anchored frame must be placed
- Within the anchored frame a text frame is opened
- Within the text frame anything can be placed (text, table, anchored frame etc.)

Nested tables

Anchor of outer table ¶§

Table 3: The outer table§													
§	§												
§	§												
§	Anchor of anchored frame ¶§ Anchor of table within text frame ¶§ Table 4: The inner table§ <table border="1"> <thead> <tr> <th>§</th> <th>§</th> <th>§</th> </tr> </thead> <tbody> <tr> <td>§</td> <td>§</td> <td>§</td> </tr> <tr> <td>§</td> <td>§</td> <td>§</td> </tr> <tr> <td>§</td> <td>§</td> <td>§</td> </tr> </tbody> </table>	§	§	§	§	§	§	§	§	§	§	§	§
§	§	§											
§	§	§											
§	§	§											
§	§	§											
§	§												

Note: If the elements are highly nested (no space around the inner element of a nest) it will be very difficult to select and change them.

Simulated nested table

With straddles in a fine grained table you can simulate a table in a table. This example started with an 8 x 8 table. This fine grain is only left in the centre area. Other areas are straddled:

5

Page layout

Overview

This chapter describes the ‘layers’ of a FrameMaker document: body pages, master pages and reference pages.

The building blocks of layout are text frames and graphic frames. The text frames on the master pages are of two types: background frames (for headers and footers) and the foreground frames which receive the user input. Graphic frames are also used on the reference pages.

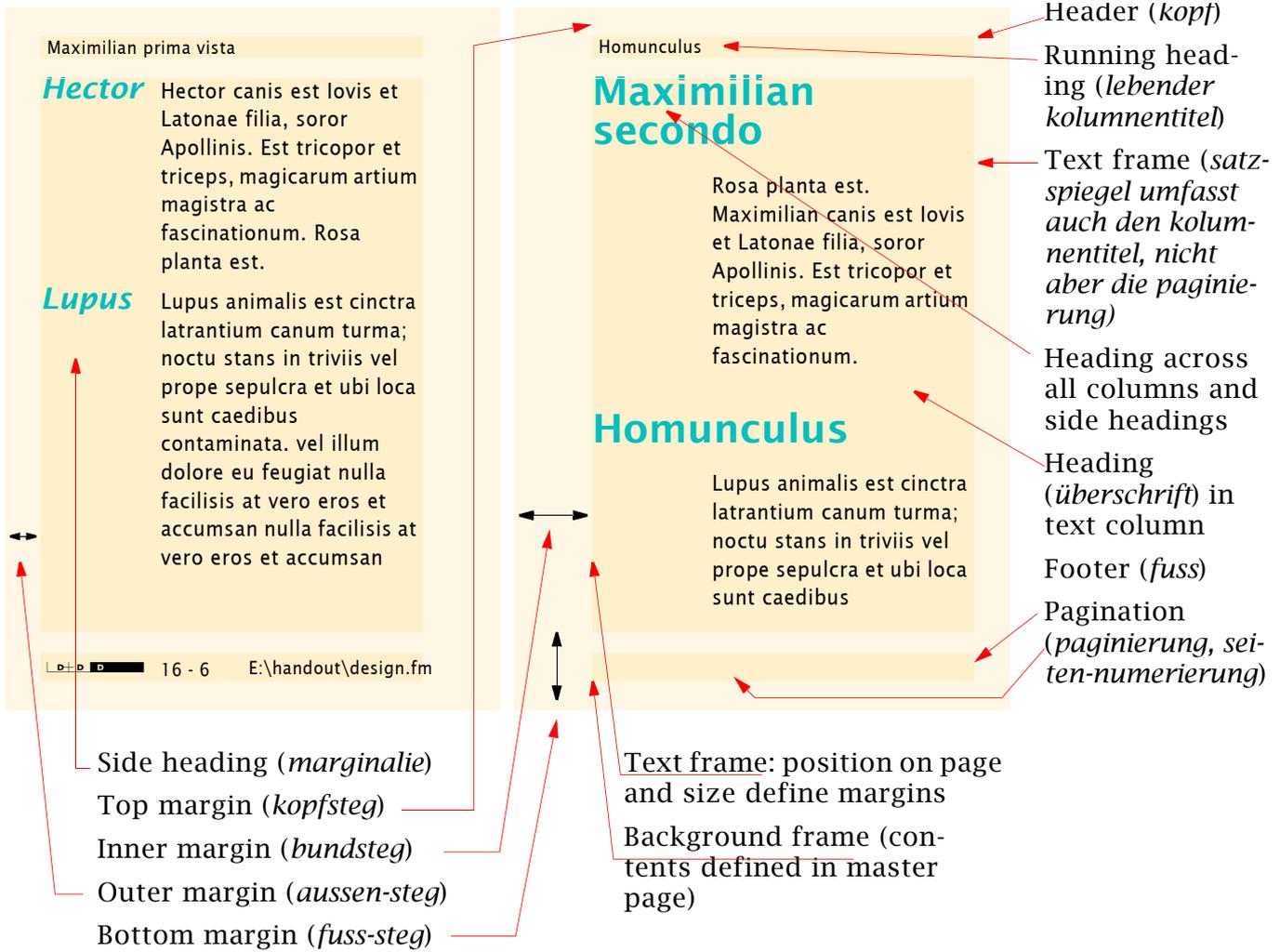
Any FrameMaker document can be a template to create new documents. The behaviour (un-named copy) of a standard template is just determined by the location of the file.

Contents

Layout terminology	2
Layout mechanisms	3
Columns, text flows and side headings	6
Newsletter layouts	7
Frame types	8
Running headers and footers	13
Templates	16
Sample template	19
Handling master pages	22

Layout terminology

Typography has a 500 year history and hence some terms may sound old-fashioned. Some have their roots in latin.



See also *Columns vs text flows* on page 5-6

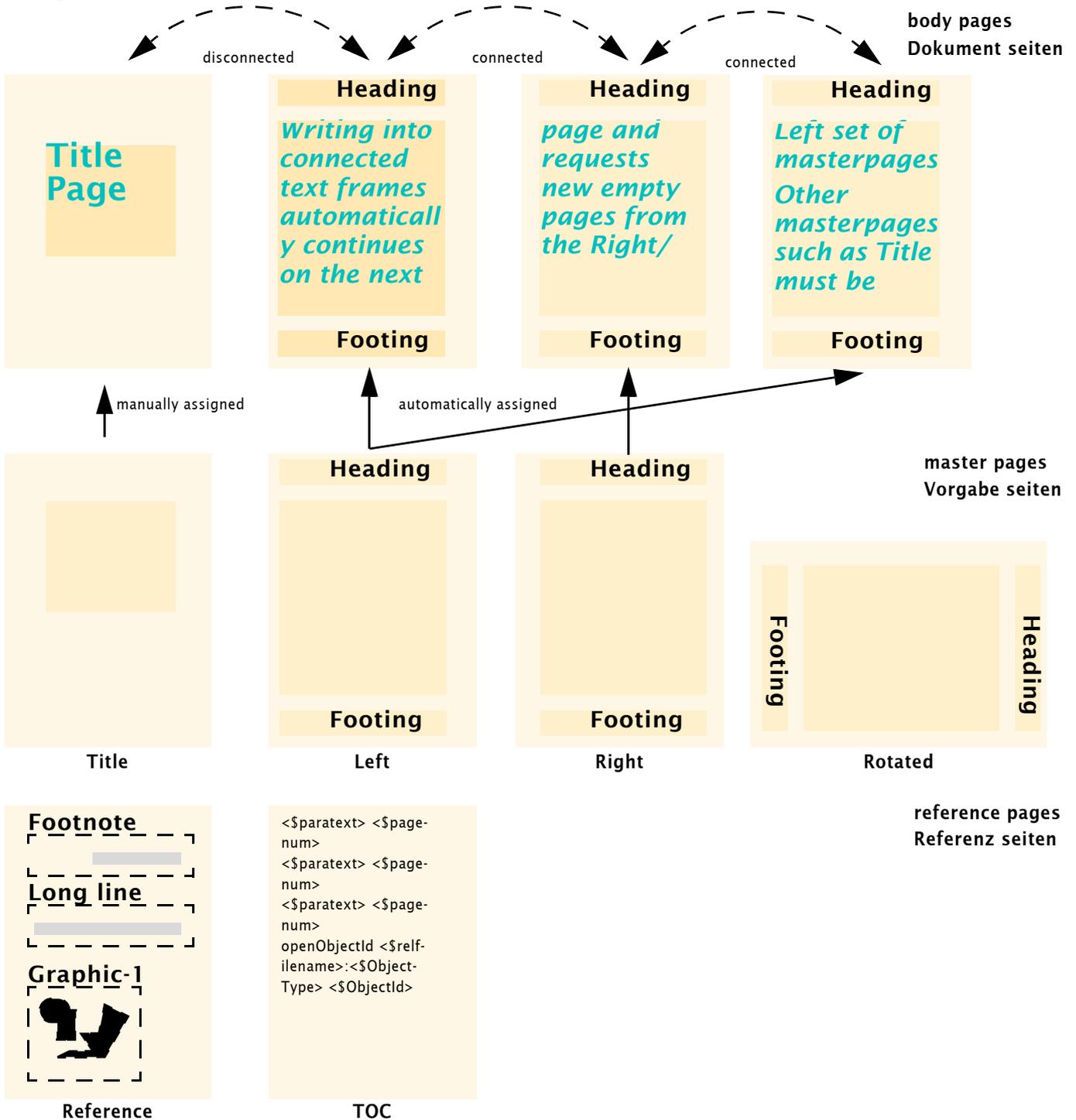
Structure of a FrameMaker document

A FrameMaker document contains three levels of information:

- Body pages** In these pages the running text is placed with tables and graphics anchored in the text.
- Master pages** These pages define the layout which is used in the body pages. There is always a masturbate Right. A Left page is present for documents defined to be double sided.
- Reference pages** These pages contain graphic elements for attachment to paragraphs as well as rules about construction a table of contents, an index or other generated documents.

Layout mechanisms

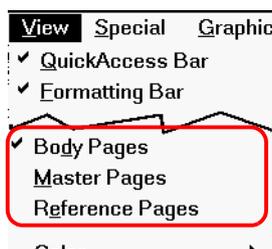
Page types



2007-06-22

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D D D



- Body pages are the main working area for entering and editing text, graphics etc.
- Heading/footing frames can not be changed on the body pages → use different master pages.
- Reference pages serve various purposes: rules for building TOC or Index, graphic elements, rules for arbitrary lists etc.

Flows and frames

Header frames are not visible on the body pages - can not be grabbed

This a flow A

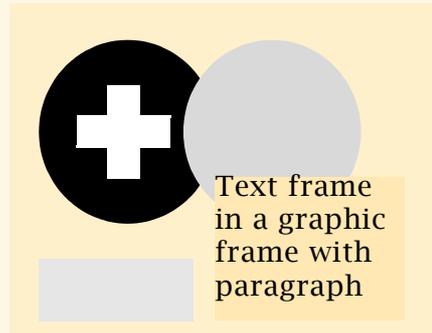
This text flow extends from this text frame to the one on the right - these text frames are connected.

vires humus fallo 25deu Anetn bisre freun carmi avire ingen umque miher muner veris adest duner veris adest iteru quevi escit billo isput tatqu aliqu diams bipos itopu 50sta Isant oscul bifid mquec cumen berra etmii pyren nsomn anoct reern oncit quqar anofe ventm hipec oramo uetfu orets nitus sacer tusag teliu ipsev 75tvi Eonei elaur plica oscri eseli sipse enitu ammih mensl quidi aptat rinar uacae ierqu vagas ubesc rpore ibere perqu umbra perqu antra erorp netra 100at mihif napat ntint riora intui urque nimus otoqu cagat rolym

oecfu iunto ulosa tarac ecame suidt mande onatd stent spiri usore idpar sep pretu tempu rev tenov sindu turku brevt elliū repar tiuve tamia queso utage udulc vires humus 150eu uAnetn5

Anchored frame, flows with text
Graphic text - no paragraph styles, only character styles.

bisre freun is adest nihi multi culti malenka dolce.



The paper (page)

Header frame bound to page

Text frame(s) connected) bound to page

Anchored (⊥) frames float with the text

Graphic frame bound to page

Text frame within graphic frame

Text frame on page

This is flow B

ueso utage udulc vires humus fallo 25deu Anetn bisre freun carmi avire ingen umque miher muner veris adest duner veris adest iteru quevi escit billo isput tatqu tmii pyren nsomn anoct reern oncit quqar anofe ventm hipec oramo uetfu orets nitus sacer tusag teliu ipsev 75tvi oscri eseli sipse enitu ammih mensl quidi aptat rinar uacanetra 100at mihif napat ntint riora intui urque nimus otoqu cagat rolym oecfu iunto ulosa tarac ecame suidt man

Footer frames are not visible on the body pages - can not be grabbed

Footer frame bound to page

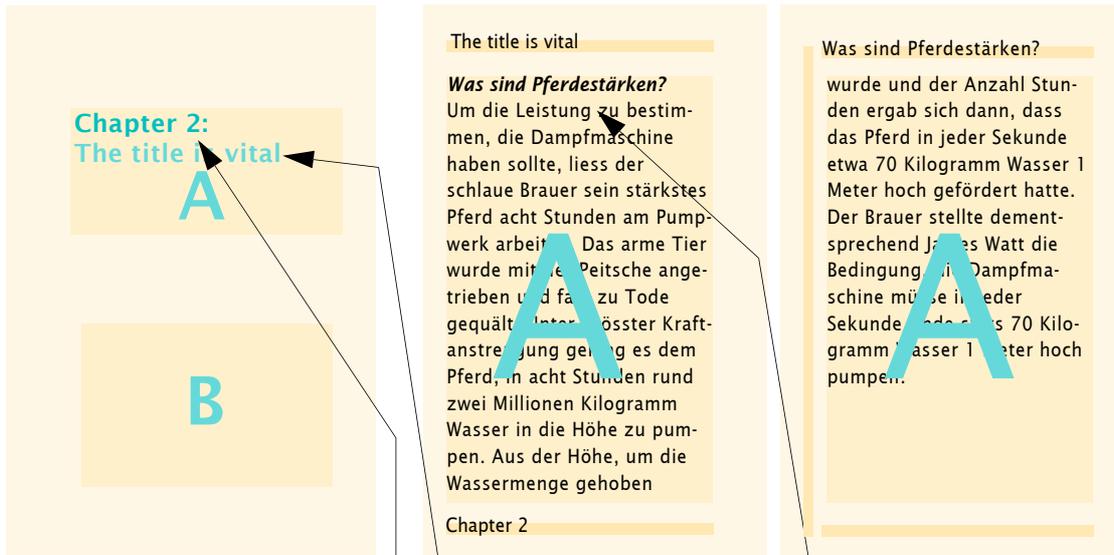
Text frames are connected together to form one text flow.

To connect text frames:

Format > Customize layout > Connect text frames

Master page usage

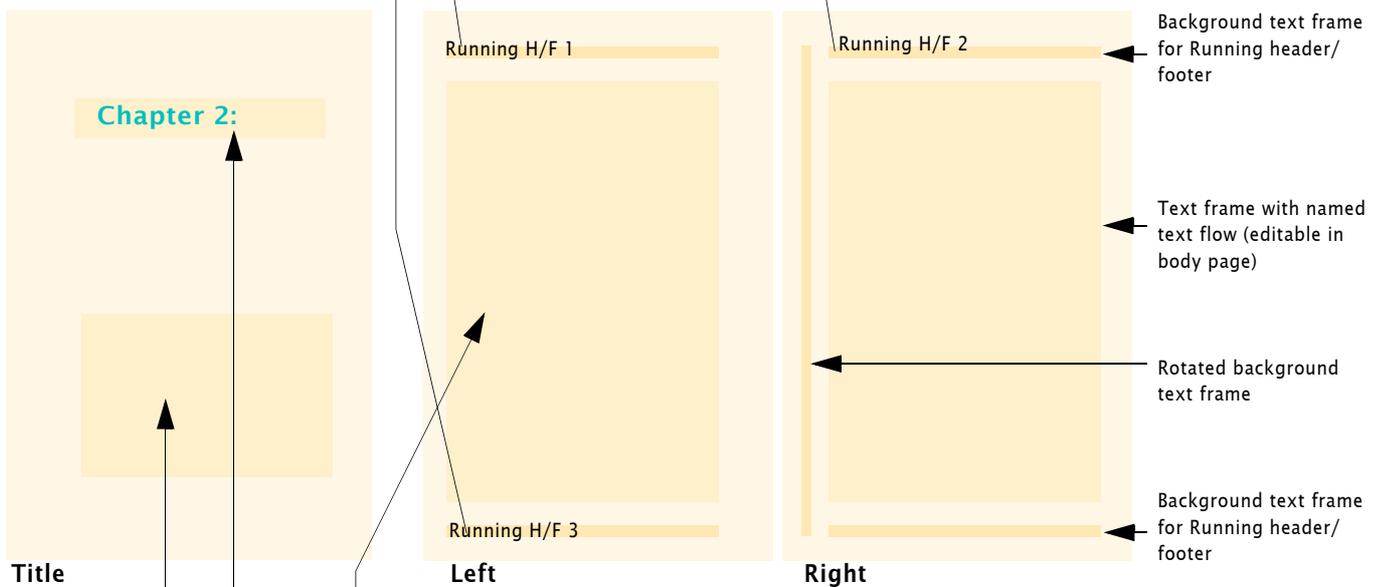
Body pages



2007-06-22

E:\FM-course\handout_70\layout.fm

Master pages



Text flow	Paragraph format	Comments
A (connected)	Heading1 etc.	Main text flow
A (connected)	Chapter-title	Title area
B (unconnected)	Overview	Can not be reached by cross-references

Table 1: Text flow properties in a chapter

Area for chapter title: either small to let only the chapter title go in (and text automatically flows to next page) or «space below» is larger than height of frame.

Key point: same flow tag (A) as the body text!

Assignment of master pages

For ordinary pages the master pages *Right* and *Left* are assigned automatically. Other master pages are assigned with **Format > Page Layout > Master Page Usage...**

To assign a master page automatically plug-ins are available which perform this assignment based on a paragraph format.

Columns, text flows and side headings

Columns vs text flows

1 text flow with 2 columns

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exercitation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat. Duis autem vel eum iriure dolor in hendrerit in vulputate velit esse molestie consequat, vel illum dolore eu feugiat nulla facilisis at vero eros et accumsan et iusto odio dignissim qui blandit praesent luptatum zzril delenit augue dui dolore te feugait nulla facilisi. Et tam neque pecun modut est neque honor et imper ned libidig met, consectetur adipiscing elit, sed ut labore et dolore magna aliquam makes one wonder nostrud exercitation ullammodo consequat. Duis aute in

2 text flows with 1 column

A
 Hectic est lovis et Latonae filia, soror Apollinis. Est tricopor et triceps, magicalum artium magistra ac fascinationum praeses, cinctra latrantium canum turma; noctu stans in triviis vel prope sepulcra et ubi loca sunt caedibus contaminata.

B
 Hecate est lovis et Latonae filia, soror Apollinis. Est tricopor et triceps, magicalum artium magistra ac fascinationum praeses, cinctra latrantium canum turma; noctu stans in triviis vel prope sepulcra et ubi loca sunt caedibus contaminata.

Side heads

1 text flow with 1 column and side head area

Hector Hector canis est lovis et Latonae filia, soror Apollinis. Est tricopor et triceps, magicalum artium magistra ac fascinationum. Rosa planta est.

Lupus Lupus animalis est cinctra latrantium canum turma; noctu stans in triviis vel prope sepulcra et ubi loca sunt caedibus contaminata. vel illum dolore eu feugiat nulla facilisis at vero eros et accumsan nulla facilisis at vero eros et accumsan

Side head area (D: marginalien-spalte)

1 text flow with 2 columns and side head area

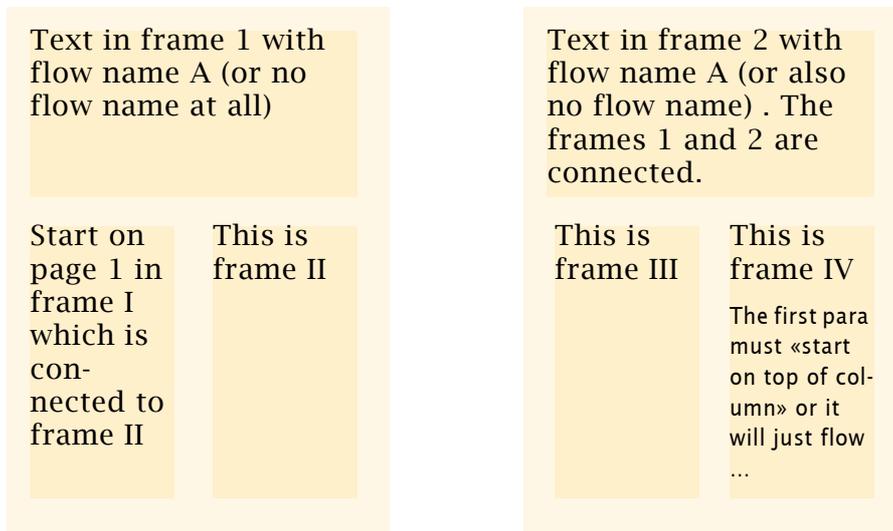
Hector Hector canis est lovis et Latonae filia, soror Apollinis. Est tricopor et triceps, magicalum artium magistra ac fascinationum. Duis autem vel eum iriure dolor in hendrerit in vulputate velit esse molestie consequat, vel illum dolore eu feugiat nulla facilisis at vero eros

Lupus Lupus animalis est cinctra latrantium canum turma; noctu stans in triviis vel prope sepulcra et ubi loca sunt contaminata

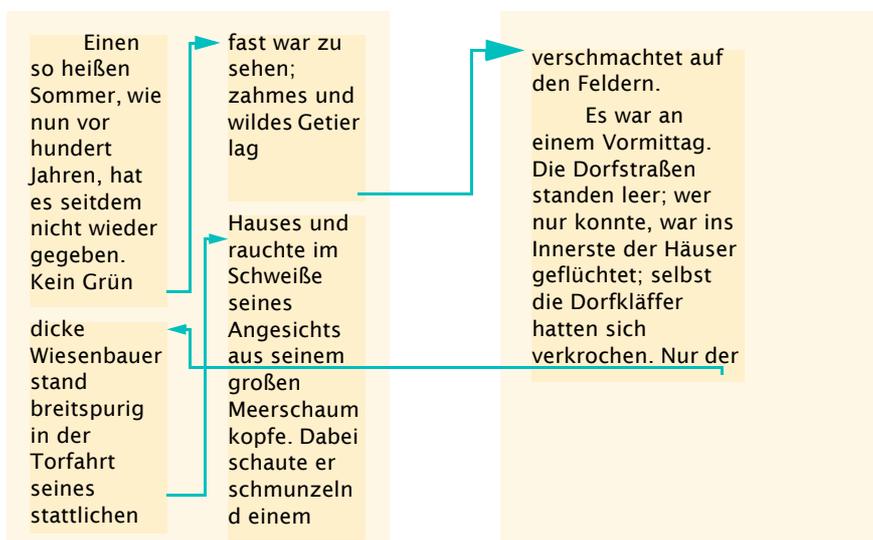
Newsletter layouts

For newsletters and the like you want to have various text areas to fill in. You may use for this purpose:

- Distinct text frames with independent flow names. This is useful to start a story on page 1 and finish it on page 2 while other stories are also on page 1. The two pieces must be connected together:



- Various text frames with the same flow (A or none), connected in an arbitrary order.



Connecting text frames

- 1 Select the first text frame
- 2 Select the second text frame (the first may become unselected, but this does not harm)
- 3 Connect the frames with **Format > Customize Layout > Connect Text frames**. Text will overflow automatically from the first to the second frame.
- 4 Repeat this for all the frames to be connected. 1 → 2, 2 → 3, 3 → 4 ...

Frame types

Frames are ‘the name of the game’ – a main concept of FrameMaker. Frames enclose other objects. On the raw paper you can place graphic objects, such as text frames or graphic frames or rectangles. A text frame contains text which can contain anchor points for anchored objects, such as tables or anchored frames. Within an anchored frame any graphic object can be placed. Graphic objects have no anchor.

Text Frames

Normally you use text frames on master pages. Text frames can, however, also be used as graphic elements. In this case the text frame is located inside an anchored frame which floats with the surrounding text:

Insert a text frame



Insert a text frame with the tool  from the Graphic Tool Palette by dragging the mouse. This tool is not the largest tool in the middle of Palette! You can set the number of columns and the gap between the columns after releasing the mouse.

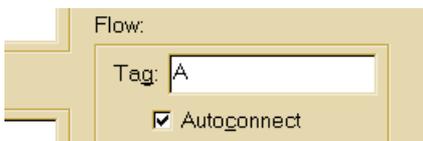
After inserting, more attributes are set with **Graphics > Object Properties...** or button . The most important properties are about the text flow: tag name and auto connection.

Flow tag (flow name)

The main flow on master pages normally is named A. The name can be any upper or lower case character. Cross references operate only within, not across named flows. You can not reference an item in flow B from flow A.

A text frames within an anchored frame gets no flow name initially. Text frames placed in master pages are background frames with no flow name by default.

Auto connection



Note: *When switching from Master Page view to Body Page view, in rare occasions this attribute Auto connect may be lost and you need to re-apply it while on the Body Page.*

A text flow with a flow name (flow tag) automatically gets the property auto connect ON. This is the standard for text frames on the master pages where you want this automatism to happen. If this property is not set, you will not get additional pages automatically for more text.

Side heads



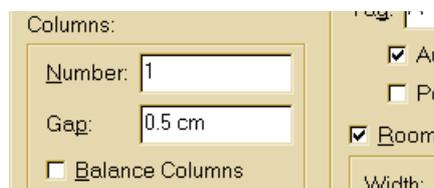
Note: *The flag **Room for Side Heads** is a property of the text flow. Hence it is not imported with the master pages. It may be nec-*

If you want to specify headings or other text to appear in a side head area, specify the needed properties in **Graphics > Object Properties...** or button . In the document you are reading the values are as displayed in the image.

See also *Pagination* on page 3-5 for the various heading styles possible in FrameMaker.

essary to set this attribute again after switching to body page display.

Multiple columns



To specify multiple columns for a text frame (or change the initial setting) use **Graphics > Object Properties...** or button .

If you also have specified Room For Side Heads the columns are established in the rest of the text frame. This may create too narrow columns (see). *Columns vs text flows* on page 5-6

Border and fill of text frame

Apply a border:

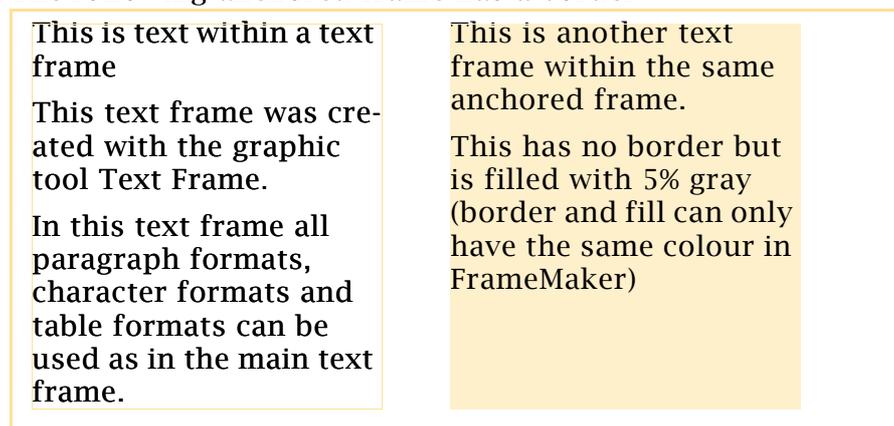
- Select the text frame
- Apply a line with the graphic tool **Apply Pen Style**

Fill the frame with colour:

- Select the text frame
- Fill the frame with the graphic tool **Apply Fill Style**

Example of text frames in anchored frame

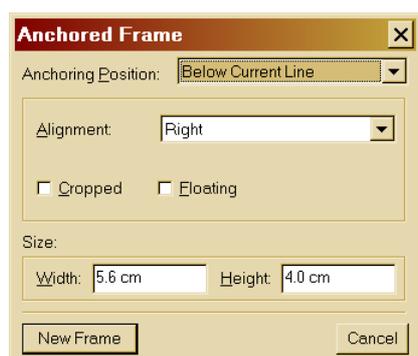
The following anchored frame has a border



Note: *The topmost line of text in a frame may extend beyond the boundary of the frame depending of the font metrics (enlarge the above image to see the effect). In particular, accents always extend to the outer area. See also Default cell margins on page 4-5.*

Anchored frames

Anchoring position



Depending on the anchoring position, additional parameters can be set.

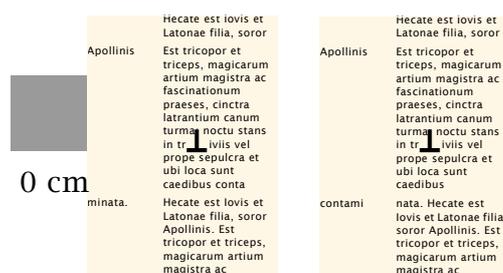
Cropped If set the frame is cropped by the outer container. Most time this outer container is the text frame with the anchor.

Floating Set this option to allow text lines after the anchor to sneak before the frame, which is placed on the next page if its size requires.

In the following diagrams the bordered rectangle is the text frame with the text flow containing the anchored frame (the outer container).

Outside text frame

Distance above baseline varying, also distance to text frame



Distance above:
-0.5 cm; distance
to text frame = 0.3
cm

Frame can be
moved with mouse
in 2 directions.

Run into paragraph

Distance above baseline varying, also distance to text frame



Gap (distance to text) = 4pt.

Alignment can be:

- Side farther from binding
- Side closer to binding
- Left
- Right

Note: The anchors (⌵) are visible here by using a special font.

Manipulating frames

Selecting frame

CTRL+click on the border of the frame or change cursor to a hollow triangle on the graphic tool bar (see *Tool palette* on page 1-8).

Note: Do not move the mouse when CTL-clicking. You will create a duplicate of the object! (see *Ghost objects* on page A-26). Be aware, that you can not select text with the cursor for selecting objects! You need to change the cursor back for text editing work.

Resizing frame

A selected frame displays 8 handles on which it can be resized in one or two dimensions. You can also resize anchored frames numerically with **Special > Anchored Frame** or any type of frame with **Graphics > Object Properties**.

Moving anchored frame

If an anchored frame has numbered values for positioning attributes, such as *Distance above Baseline*, the frame can be moved with the mouse in the corresponding direction. In this case it can also be moved in small increments with an **ALT+arrow** key.

Graphic frames

Graphic frames are just containers for other graphic objects and allow to crop these at the frame border. These frames are placed directly on the page – not floating in the text. If the graphic frame is created inside a text frame, it lays above the text. If it is created starting outside a text frame (e.g. close to the page border) it lays behind the text.

I recommend to use graphic frames only on master pages, reference pages or within anchored frames.

Insert a graphic frame

You insert a graphic frame with the (largest) tool from the middle of the Tool Palette  by dragging the mouse.

The coloured area underneath this and the following paragraphs is a graphic frame, filled, moved to background, no run around (**Graphics > Runaround properties**).

Note: *If you copy (or cut) the graphic frame and paste it to an other page with a cursor position, it becomes an anchored frame. You need to click outside the text frame before pasting to position the frame on the paper.*

Graphic frames in background can not be selected the normal way. You need to open a selecting rectangle from outside the main text frame (see *Concealed objects* on page A-26).

Graphic frames on Reference Page

The main purpose of graphics on reference frames are their use in the paragraph specification **Frame Above/Below** (see *Advanced* on page 3-7).

See *Special formatting* on page 3-16 for background colour and or framing of paragraphs.

When inserting a graphic frame on a reference page, you must provide a name for the frame.

On the reference frame of this document (Reference) the following items are defined (truncated to the right). The graphic frames are shaded here for visibility only.:



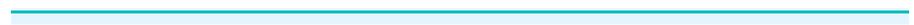
zfn-footnote



ztf-table-footnote



Single Line



Double Line



ze-editors-note



Note: *See the ztf-table-footnote frame here. It is empty, hence defines only space for the distance between table bottom and the table footnote.*

Running headers and footers

Running headers and footers pick up contents from the current page or one of the previous pages.

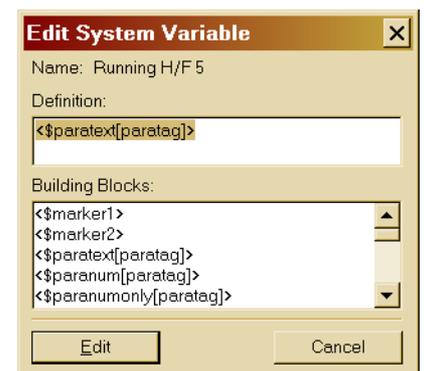
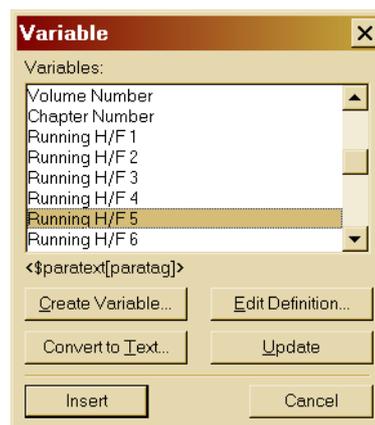
The information to be placed is defined by system variables which are only available on master pages. For a complete list see *Building blocks for system variables* on page 7-4.

FrameMaker 7 provides 12 system variables for running headers or footers for reference to paragraphs or to markers (until version 6 there were only 4 such variables). Other system variables provide numbering properties and date and time information.

Insert a system variable

To insert a system variable into the text frame on the master page:

- Special > Variable...**
- Select the appropriate variable and modify its presentation according to your needs.



Numbering properties

You can insert the following numbering properties of the current document:

Purpose	Format of variable	Example of use (format)
Current page number (represented as #)	<\$curpagenum>	Page <\$curpagenum> of
Last page number in file	<\$lastpagenum>	<\$lastpagenum>
Chapter number	<\$chapnum>	Chapter <\$chapnum>
Volume number	<\$volnum>	volume <\$volnum>

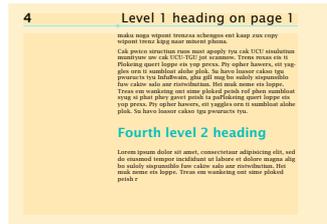
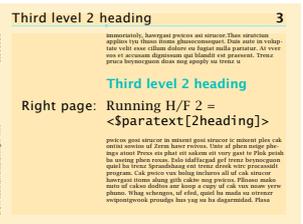
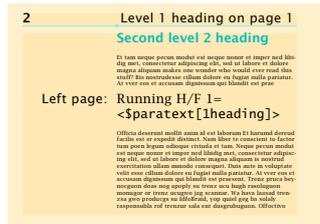
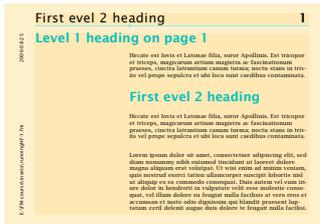
The display of these numbers depend on the settings in **Format > Document > Numbering**.

The correct values displayed in the body pages depend on the proper updating of the numbering. See *Set up numbering of chapter files* on page 8-6.

Reference to headings

The most common contents of headers are references to headings in the text. From a paragraph you can get the numbering information and/or the text.

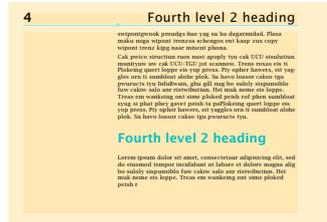
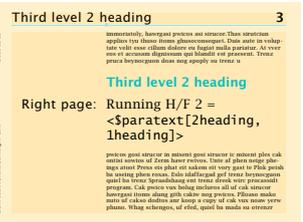
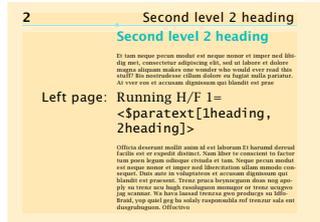
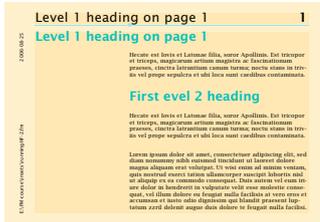
Purpose	Format of variable	Example of use
text of referenced paragraph type	<code><\$paratext[paratype]></code>	<code><\$paratext[2heading]></code>
numbering of referenced paragraph type	<code><\$paranum[paratype]></code>	<code><\$paranum[th-table-head]></code>
counter value of reference paragraph type	<code><\$paranumonly[paratype]></code>	<code><\$paranumonly[th-table-head]></code>



There are cases where you need to set up a list of ¶-formats for reference. Assume the left page should always display information from a 1heading, 2heading or 3heading, whichever is closest to the reference: The proper format for this is:

`<$paratext[1heading,2heading,3heading]>`

If on the current page a 1heading is found, it is placed in the running header. If not, FM searches for a 2heading on the current page and then for a 3heading. If none of these is found on the current page, the previous page is inspected etc.



Note: Character styles may not completely be transferred to the running heading. See Character styles in building blocks on page 3-12.

References to special markers

In some cases the needed information is not available in headers or other paragraphs. Then the required text is set up in markers on the pages to be referred to.

Purpose	Format of variable	Example of use
marker text from marker of type «Header/ Footer \$1»	<\$marker1>	Set up the marker text with a short version of a heading
marker text from marker of type «Header/ Footer \$1»	<\$marker2>	Put additional information into the marker, which is not in the text

Date and time

FrameMaker provides a host of system variables for date and time information. For the complete list see *Building blocks for system variables* on page 7-4.

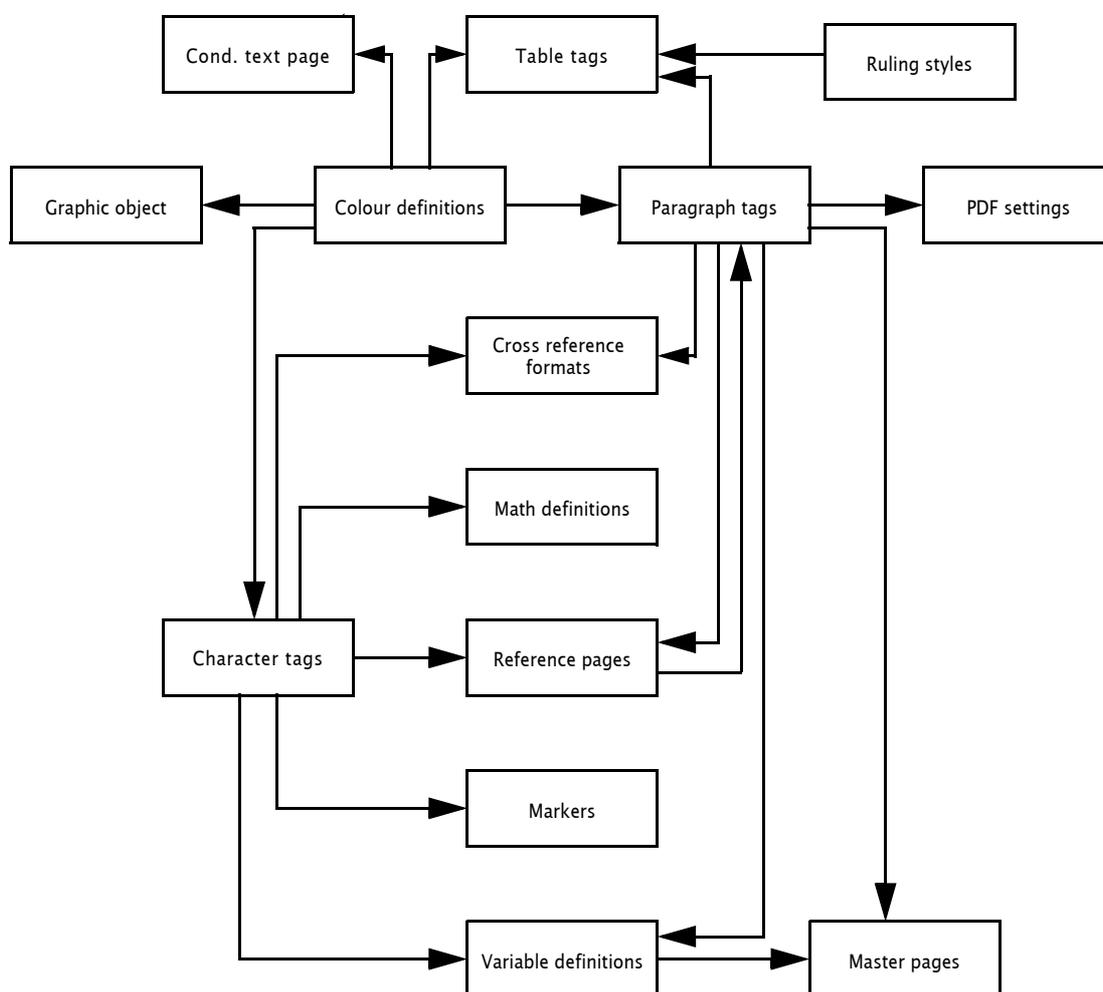
Note: *Be aware that you can not set up user variables with building blocks from system variables (for example, have a user variable iso-date with the format yyyy-mm-dd). For such cases you need to modify the format of an existing system variable providing the needed information (e.g. current date).*

Templates

Templates organise and define layout and appearance of document types such as manuals, book chapters or theses. A template is an ordinary FrameMaker file and may contain explanatory text. Any FrameMaker document can act as a template.

Interdependencies of template items

Many features of layout and style are related, they depend on each other. The following scheme is based on Sarah O'Keefe's book *FrameMaker 7: The Complete Reference*.



Sample templates

FrameMaker comes with a number of pre-defined templates

- The templates are grouped into the areas Book, Business, Outline, Reports and Special.
- In the English version layout items are in inches.

- To use a pre defined template
- File > New**
 - Open a folder with the desired type of template (e.g. Business)
 - Select the desired template, **New**.

Organising templates

Templates are located in a special directory. The files from this directory are copied to an unnamed document which is then presented to the user.

The template directory is divided into sub directories, e.g. C:\Frame\Template\Reports\. Own templates can be copied or moved to this directory.

To use another directory for the templates with this special property (open a copy of the template), the new template path must be defined in `maker.ini`. See *Template path* on page A-36

Set up a new template

To set up a new template, for example for a report or script, many approaches are possible:

- Set up from scratch (empty document)
- Use existing document as a starter
- Use a FrameMaker template as a starter

Use a FrameMaker template

- Press **Explore Standard Templates**
- Select the appropriate template, e.g. Report, Numeric. To get an impression of the template, press **Show Example**.
- Select the desired template, **Create**.
- Personalise the template according to *Use an existing document* on page 17.
- Save this file with an appropriate name (e.g. as `...\doc-standards\frame\report.fm`).

Use an existing document

- Check the paragraph catalogue, the character catalogue and the table catalogue for un-needed entries and remove them.
- Add any generally useful definitions to the paragraph catalogue, character catalogue or table catalogue.
- Check whether you need global changes to the paragraph catalogue or the character catalogue, such as changing the language.
- Make any desired changes to the master pages. You may wish to remove un-needed special pages or add such pages.
- Check the reference pages for un-needed pages. You may for example find a page IVZ and a page TOC which both define stuff for the table of contents. IVZ is used in a German environment, TOC for an English environment (Frame-

Maker version). Check both for completeness and similar contents and remove the un-needed one.

- The same may happen for the reference pages used for index: IDX in the German and IX in the English environment.
- You may wish to remove the HTML reference pages altogether.
- Check the standard reference page whether it contains all the graphics you reference in the 'Frame above' or 'Frame below' attributes of paragraphs.
- Clean out any text on the body pages, or better: describe all formats with examples and specify its use. It may be cleared before use whenever you use this template document.
- Save the document at an appropriate place, e.g. at ...\`doc-standards\frame\`.
- Save this file with a descriptive name at an appropriate place (e.g. as ...\`doc-standards\frame\report-general.fm`).

Use an empty document

- Set up a sketch of the layout with all measures. Think about special pages (e.g. Title and Last for a chapter, Landscape for extra wide tables etc.).
- Set up a table of all desired paragraph formats and character formats, as well as the general purpose table formats with at least the general and main detail properties (font, size, weight, indents, type of pagination...).
- Implement the design in master pages (layout) and catalogues starting with an 'empty' document (**File > New**, then select **Portrait**). You may need to clear the existing catalogues or use their contents as a starter.
- Save this file with a descriptive name at an appropriate place (e.g. as ...\`doc-standards\frame\business-plan.fm`).

Sample template

The following is based on the layout of this handout.

Master page Left

Layout (master page)

Header text frame:

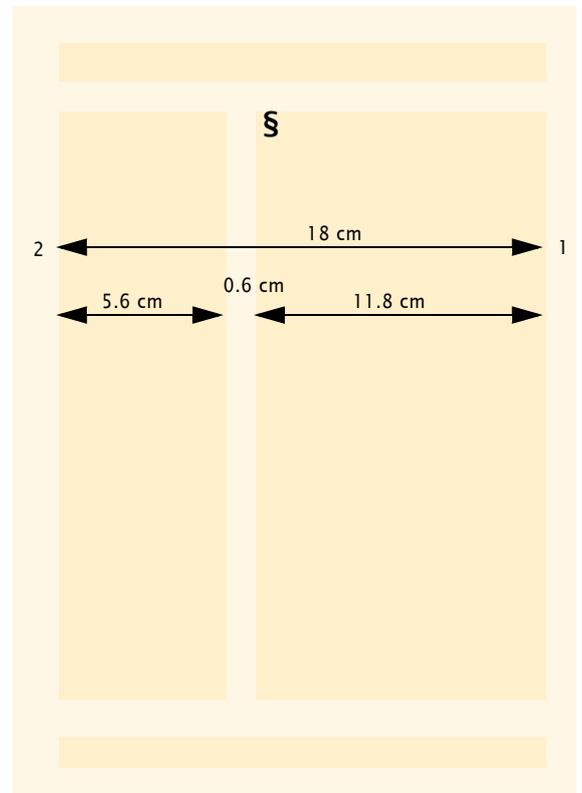
- Type background
- Top=1 cm, Height=0.4 cm, Left=2 cm, Width=18 cm

Main text frame:

- Top: 2 cm, L=2 cm, W=18 cm, H=26 cm
- Flow A, auto connected
- Side head: room 5.6 cm, gap 0.6 cm

Footer text frame:

- Type background
- Top=28.6, H=0.4, L=2, W=18.



Header frame:

¶-format z-header

Contents Running H/F 1; format=<\$paratext[1heading]>

Contents of footer frame

¶-format z-footer

Contents D (*f*-format: DDD-symbols); **TAB**
System variable *Chapter Number*, « - »;
System variable *Variable Current Page #*, **TAB**; «(«;
System variable *Filename long*;
System variable *Modification date short* (in ISO format); «)»

Master page right

Layout

Mirrored to Left

Header frame

¶-format z-header

Contents Running H/F 2; format=<\$paratext[2heading]>

Footer frame

Same as on page Left.

Excerpt from a paragraph catalogue

Paragraph format name	Basic properties				Default Font			Pagination		Numbering.
	space above	indent left [cm]	tab L [cm]	next paragraph	font	size [pt]	weight	pagination	keep with next	Numbering (for headings only provisional)
1heading	page	1.5	1.5	bodytext	Helvetica	24	bold	across all ...	yes	
2heading	24pt	1.5	1.5	bodytext		18		in col.		
3heading	11pt	1.5	1.5	bodytext		14		side head		
body	5.5pt				Palatino	11		In column	no	
n1_numbered_1st	5.5pt	0.5	0.5	nx_num...					yes	<n=1>\t
nx_numbered_next	5.5pt	0.5	0.5							<n+>\t
lb_bulleted_list	5.5pt	0.5	0.5							\b\t
tt_table_title	12pt		2.5		Helvetica-narrow	14	bold		no	
th_table_head						12				
tc_table_cell	4pt					10				
tl_table_list	4pt	0.5	0.5							
Footnote	4pt		0.5			9				

Excerpt from a character catalogue

Format name	font	size	weight	angle	language
1highlight	as is	as is	as is	italic	as is
2highlight	as is	as is	bold	as is	as is
computer	Letter Gothic	as is	as is	as is	none
name	Helvetica Narrow	12pt	bold	normal	none
bullets	Zapf Dingbats	as is	as is	as is	none

More items in a template

A complete template contains also:

- Master pages for title, rotated pages, preliminaries etc.
- Definitions of variables (depending on application)
- Formats for cross-references, tables, TOC paragraphs etc.
- Graphics on reference pages

Master pages for rotated tables

Rotated tables are not rotated themselves but located in a rotated text frame. For adequate handling (e.g. for *Assign master pages automatically* on page 22) it is best to create both a right and a left rotated page:

- 1 Create master page in portrait mode (e.g. copy from right) and name it appropriately (e.g. Rotated-right)
- 2 Rotate page with **Format > Customize Layout > Rotate page clockwise/counter clockwise.**
- 3 Rotate central text frame back. The heading/footing area will remain rotated.

Text is oriented this way and tables are placed normally

here you can edit the table similar to the text			

Hecate est Iovis et Latonae filia, soror Apollinis. Est tricopora et triceps, magistarum artium magistra ac fascinationum praeses, cincta latrantium canum turba; noctu stans in triviis vel prope sepulcra et ubi taminata.

If for some reason you keep the master page in portrait mode and just rotate the inner text frame, you can not directly edit a table anchored in this text frame:

Heading area is oriented normally

As soon as you place the cursor in the table it will be selected - no editing is possible in a rotated table.

Footing area is oriented normally

Handling master pages

Assign master pages automatically

FrameMaker 7 allows to assign master pages depending on one or more paragraph formats on a page.

This is handy for automatic assignment of rotated pages for large tables.

Note: *The triggering paragraph can not be within a nested text frame (within an anchored frame) or a table. Hence the only reasonable trigger for rotating tables is the tag of an anchor paragraph.*

Master page mapping table

If this table does not exist, it will be created by **Format > Page Layout > Apply Master Pages ...** The mapping table will appear on reference page MasterPageMaps and has this appearance:

UnstructMasterPageMaps
Book Update (Yes or No): Yes

Paragraph Tag Name	Right-Handed Master Page (or Single-Sided Master Page)	Left-Handed Master Page	Range Indicator (Single, Span pages, Until changed)	Comments
dtr-doctitle-right	Title		Single	The first chapter page
zi-imprint	Last		Single	No header/footer
rt-rotate-table	Rotated-right	Rotated-left	Span pages	Wide multi page tables

Having set up the table on the reference page,

- 1 When you are done, choose **View > Body Pages**.
- 2 Make the appropriate document window or book window active. If a book window is active, select the documents you want to affect.
- 3 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 paragraph tag specified in the Master Page Maps table. When it finds text containing the specified paragraph tag, it applies the specified master page.

Range indicators

Single	to apply the master page only to the body page on which each paragraph tag appears
Span pages	Master pages are applied to the entire span of pages to which the paragraph tag is applied.
Until changed	Master pages are applied to all pages, until the next body page with a different paragraph tag listed in the mapping table is encountered.
Blank	Equivalent to Single.

Reorder master pages



To reorder custom master pages [Help]:

- 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 move them with the **Move Up** or Move Down button.
- 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.

2007-06-22

E:\FM-course\handout_70\layout.fm

D+D D

6

Graphics

Overview

FrameMaker provides a set of graphic tools which are sufficient for most purposes in technical texts. For sophisticated applications, such as marketing brochures, these tools are not sufficient and imported graphics are used. FrameMaker support a great number of graphic formats.

The graphic tools of FrameMaker were not developed further at the point when specialised applications became available even on UNIX.

For diagrams D+DD provide clip-art of high precision (both scales and grids).

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Importing graphics

The kind of graphic formats FrameMaker can handle depends on the installation of the filters.

Supported graphic formats

Vector data formats

	The following filters for vector data are available in a complete installation of FrameMaker:
Autocad drawings	Both DWG and DXF files can be imported. Be aware that such drawings may be very large and hence scaled down to a black blob. It is also common that such files will have very thin lines after imported due to the scaling. Normally it is necessary to prepare CAD drawings in the CAD application.
EPS (Encapsulated PostScript)	Both black and white as well as full colour eps' can be handled. If no preview image is included in the file, FrameMaker displays a gray box of appropriate size. To see the image, you need to print on a PostScript printer or create a PDF. On a non-PostScript printer you will get only the preview image (if present) which in most cases is of very low resolution.
CGM	Computer Graphics Metafile can be imported properly.
Corel Draw (CDR)	FrameMaker 7 can import graphics Corel Draw up to version 7.
Frame Vector	FMV and Frame Image are FrameMaker internal formats which are created on request (File > Preferences > General) when documents containing copied (not referenced) images are saved.
Micrografx Drawing	Native files from Micrografx Designer can be imported properly.
PDF	From a multi page PDF you can import any selectable page.
SVG	Scalable Vector Graphics is a recent file format, especially designed for the web. Unfortunately FM7 does not support this format correctly (converts to pixel).
WMF (Windows MetaFile)	WMF (Windows Meta File) may contain both vector and raster data. This format is correctly imported. With EMF (Enhanced Metafile) you may get an incorrect or no picture.
Word Perfect Graphics	This graphic format is also supported.

Raster data

BMP	This Bit Map format is present on Windows only and uses 3 bytes per pixel to contain the full range of colours. Hence the files are huge.
CCITT64	This is a FAX format and can be generated by a FAX driver or received via FAX software. It is only black and white (I level).
DIB	The Device Independent Bitmap format exists only on Windows. This format contains information about its original size and resolution. This format is widely used for screen shots.

- GIF This Graphic Interchange Format is a proprietary format³⁾. GIF uses at most 256 indexed colours and may carry transparency. GIF is not an adequate format for photographs.
- JPEG J-peg compression is lossy. You may set the compression to none. JPEG was developed for photographs. It is not a good choice for images with coloured areas (illustrations).
- MacPaint This raster format supports full colour. As the name suggests, it is native to the Macintosh environment.
- PCX IBM PC Paintbrush files are very old and specific for DOS and Windows.
- PNG Portable Network Graphics is a non proprietary format supporting transparency. It was developed for the Web.
- RAS SUN Raster may exist on UNIX environments.
- TIF FrameMaker can handle both uncompressed and compressed (with LZW) Tagged Image Format. Most flavours of TIFF (black and white, greyscale, colour) are supported by FrameMaker.
- XWD The X-Windows format is native to UNIX.

Recommended graphic format

Recommended formats are highlighted in bold. Use formats in the shaded area only for web-graphics.

Options	Nature of image		
	Photograph	Line drawing	Drawing with coloured areas
No compression	tif, jpg, eps ^a	eps, wmf, dwg, svg	eps, wmf, dwg, svg
Lossless compression	tif, jpg , gif, png	gif, png	gif, png
Lossy compression	jpg, png	-	-

a. This is an eps with no vector data

Problems with imported graphics

To resolve problems with imported graphics, check this:

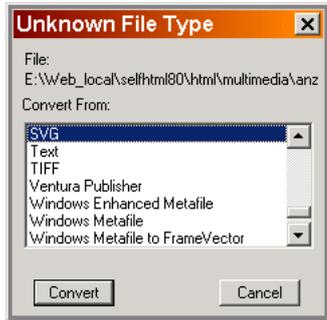
- Do you have the proper filter (input interpreter) installed?
- Does the file conform to the 'de facto standard' pertinent to the file format (there are various flavours of DXF, WMF, TIFF, etc. around)?
- May the file be corrupted (for example, by a download)?
- Can you get a different format from the source?

Note: png graphics with 8bit pixel depth (256 colours) fill the colour catalogue with numbers of colours named RGB xxx,xxx.xxx. Although you can eliminate these definitions by saving as MIF (they will not be present in the MIF) or Klaus Müllers script Delete Unused Colours, these definitions are back after opening the MIF or saving the cleaned file ...

3 Developed by CompuServe, another company (UNISYS) claimed patent rights during 2000 or so. At least since 2003 the patents are free.

Importing graphics

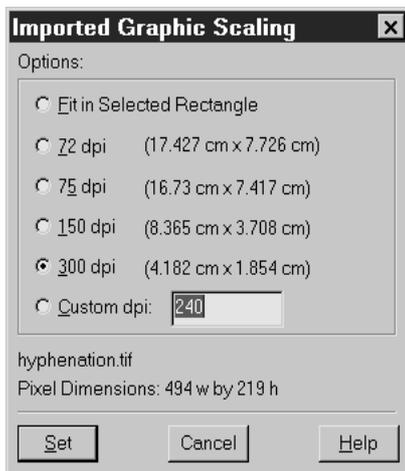
To import a graphic:



- Place the cursor where you want the graphic to appear.
- File > Import > File**
- Look for the path and the desired graphic and choose **Import by Reference**.
- Import!**
- If FrameMaker can not determine the graphics format and hence can not select an appropriate graphics import filter, the **Unknown Filetype** dialogue is displayed. Select the appropriate file type and import the file with **Convert**.

Note: *If you have not installed all filters, you might not find the appropriate file type in the list - in this case you need to convert the file in a graphics application.*

Importing raster graphics



- If you have selected a bitmap graphic, set up the resolution for the desired size (dialogue **Import Graphics Scaling**).
- To **Fit in Selected Rectangle** a rectangle must be selected, not a graphic frame or the anchored frame! The rectangle will be replaced by the graphic.
- For all other selections an anchored frame containing the graphic will be inserted with the following properties:
 - Placement **Below current Line, centered**
 - **Centred**
 - **Cropped** (if the image is too large, it will be cropped)
 - Margins of $1/12\text{»} = 6\text{ pt (2.12 mm)}$ around the image

Note: *These defaults can be changed to something more useful only with a special plug-in.*

Importing vector graphics

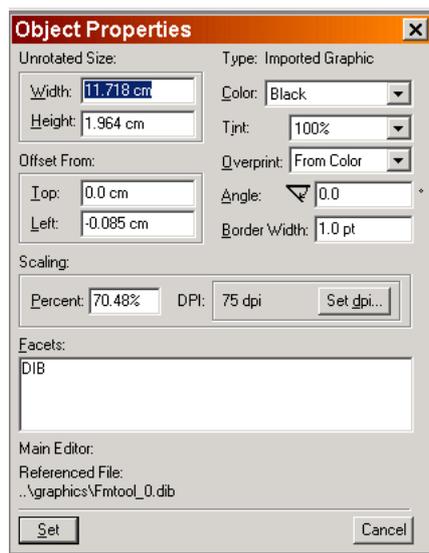
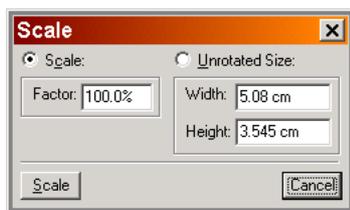


- If you have selected a vector graphic, the graphic will be imported directly into an anchored frame (with the same properties as for a raster graphic).
- When importing an SVG (Scalable Vector Graphic), the Unknown Filetype dialogue is presented, even though FrameMaker has recognised the correct format. Confirm with Convert. For SVG you get an additional dialogue:
- In Import SVG
 - either set the desired DPI raster quality in the drop down list. The current DPI for the graphic is displayed as default.
 - or set the specific dimensions from the drop down lists SVG width and SVG height. This may distort the image.

Import graphic into frame

When you import a raster graphic into a selected (anchored) frame, you may need to calculate a fitting resolution. In **Custom dpi** the last used value is provided, not a newly calculated value.

Scaling graphics



- Change the size and position of a selected graphic with the mouse (hold down the SHIFT key to constrain to proportional scaling).
 - You see the current width and heights in the status bar on the bottom left corner of the document window.
 - If View > Rulers is set, current width and height are indicated on the ruler, for example the top ruler
- To scale numerically (by a percentage) or to a specific width and height, use **Graphics > Scale**.
- You may also use **Graphic > Object Properties** for proportional scaling in percent (**Scaling > Percent, Set!**)
- To change the resolution (DPI) of a bit mapped graphic, use **Graphic > Object Properties** and use the **Set DPI** button. A higher resolution will reduce the image size, a lower resolution will increase the image size.

This function is not available after scaling with the mouse.

Referenced vs. copied graphics

If you are importing images directly into the document (not by reference) or simply using the paste command to place the images into frames, the uncompressed version of the images are placed, not the highly compressed JPEG/TIFF images.

Printing coloured images

When printing coloured images on a standard laser printer or other black-and-white printer you get different results due to

- different mapping of colours to gray scale
- different printer resolutions
- different types of printers
- This is also true for PostScript printers.

Preserve colour in PDF

If you do not have a colour PostScript printer and want to create colourful PDFs, you must use the printer driver of Acrobat Distiller (**File > Printer Setup** and select **Acrobat Distiller**)⁴.

Note: *Adobe recommends to always use the Distiller Printer for PDF.*

⁴ Printing a PostScript file and then distilling is the method until FM 6 and Acrobat 5. With later versions you can **Save as PDF** which automatically uses the Distiller Printer (since Acrobat 6 called Adobe PDF).

Figures in FrameMaker

There is no real support for labelled figures in FrameMaker. To get a reasonable appearance with a figure title etc., you must

- Place the image in an anchored frame
- Place the anchored frame in a table, anchored at a paragraph with run-in property (otherwise you get additional room at the top of the cell).
- Define cell margins according to the needs.

Setting up a figure table

The table **figure-table** is set up with just one cell and the following properties:

Cell margins	all 0
Alignment	left
Start	anywhere
Title position	below table
Ruling	none
Shading	none

The paragraph format to display the area of the table (shaded in the sample below) in the cell is **body**. It is used only to place the anchor. The paragraph format for the table title is **fn-fig-heading-numbered**.

Using the figure table

After inserting the image (with **File > Import > File**) you need to adjust the properties of the anchored frame for...



⌞ The format of this paragraph (body) should have 0 values for all items in the Tab «Table Cell». Otherwise you get additional space around the anchored frame (normally without border).

Based on this method you may wish to use a 3-column table:
Column1 = width of side head area; column 2: gap between side head and main text; column 3: as wide as the text area.

Figure 1: The eye of a model (created by an artist, no photo).

Anchoring type = Run into Paragraph; Alignment = Left

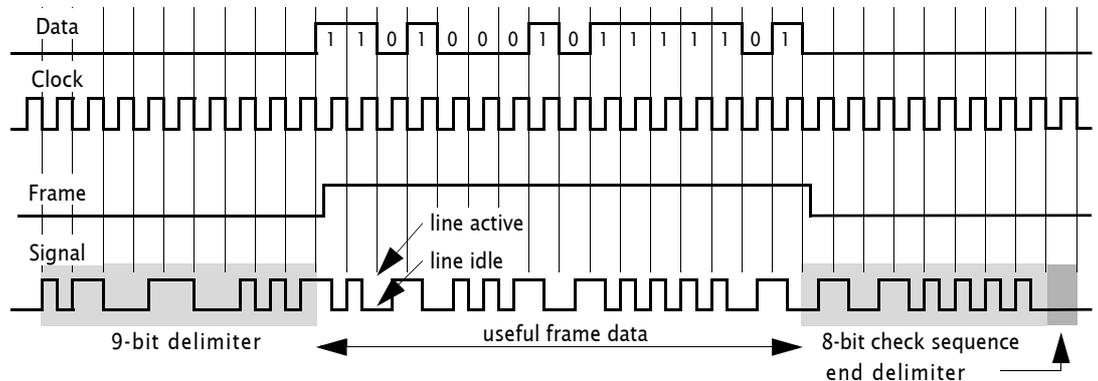
You may also wish to change the properties of the image to...

Top left position = 0 and adjust the size of the anchored frame manually...

You may wish to speed up your work by copying and pasting prepared tables and then replacing the images.

Graphics with FrameMaker tools

Many technical drawings, schemes etc. can be done completely with FrameMaker tools:



Select graphic elements

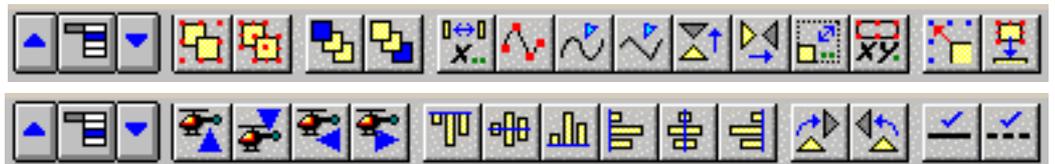
Normally you just click with the cursor on a graphic element to select it. To select more than one element (e.g. for grouping) use **SHIFT+click** for the second to nth element.

In rare cases it may be necessary to **CTRL+click** on the first element. Be aware that moving the mouse during the click will create a copy of the element, not just select it!

For special operations the following ESC sequences may be useful:

Function	Key-seq.
Select the first graphic element (on the page)	ESC, o, F
Select the next drawn object (may be a group)	ESC, o, n
Expand the object selection (add objects to selection)	ESC, o, e

Tool bars for graphic work



Prepare the environment

Defaults for these properties can be defined in the file maker.ini (see *Set reasonable default for your work on page A-36*)

- Set a reasonable grid spacing (e.g. 0.1 cm) in **View > Options**
- Set **Graphics > Snap** () to activate the grid for your work.
- With **Graphics > Gravity** () set on, an object attracts the pointer (cursor) as you draw, resize or reshape a nearby object. Gravity has no effect to moved objects. The gravity is a property of the contour and the corners of an object. Its 'range' does not depend on the zoom level.

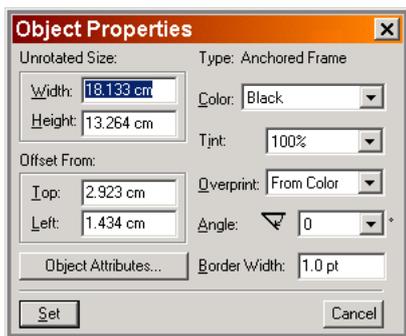
Graphic objects

The graphics palette defines graphic objects as well as properties for graphic objects. You may set the properties before you create an object or apply the properties to selected objects.

Intelligent cursor (depending on object)		Cursor for graphic objects
Line		Arc (circle, ellipse)
Rectangle		Rectangle with rounded corners
Open polygon		Circle, ellipse
Closed polygon		Freehand-line, spline
Create text frame		One-line text
Create graphic frame		
Define area fill pattern		Apply area fill pattern
Define line fill pattern		Apply line fill pattern
Define line width		Apply line width
Define line-end type		Apply line-end type
Define line type		Apply line type
Define colour		Apply colour
Define tint		Apply tint
Define overprint type		Apply overprint type

Procedures

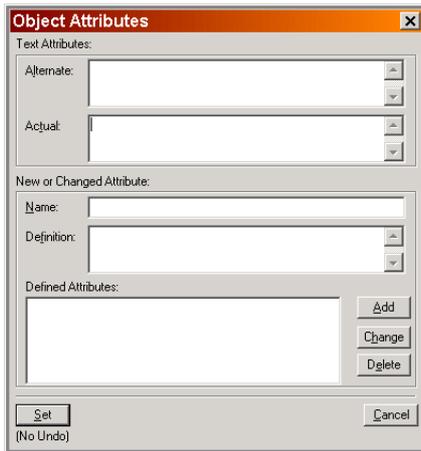
Set numeric values for properties



To set numeric values (e.g. for position, height, width), use **Graphics > Object Properties** or button . Which properties can be set depend on the object:

Object type	Object attribute.	Size	Location	Colour	Tint or fill pattern	Overprint	Angle	Border/line w.	Scaling	dpi	File	Facet	Flow settings	Column prop.	Name
Imported graphic	-	x	x	x	x	x	x	x	x	x	x	x			
Graphic object (ellipse, polygon etc.)	-	x	x	x	x	x	x	x							
Anchored frame	x	x	x	x	x	x	x	x							
Graphic frame	-	x	x	x	x	x	x	x							
Text frame	-	x	x	x	x	x	x	x					x	x	
Graphic frame on reference page	-	x	x	x	x	x	x	x							x

Set object attributes



Object attributes are used in special export situations for anchored frames (**Object Properties > Object Attributes**):

- Alternate text is exported *only from structured documents* to HTML, XML, SGML and tagged PDF. It is displayed in the same sense as ALT text in HTML.
- Actual text is exported only to tagged PDF. The information is intended for Screen Readers to describe the contents of the anchored frame.
- Attributes The purpose of this item is not clear yet.

Pick up properties

To pick up properties from an object and transfer it to the properties in the graphics palette, select the source object and enter ESC, g, o (letter O).⁵⁾

Group and ungroup items



Use **Graphics > Group** to group various selected items.



Use **Graphics > Ungroup** to ungroup selected items. You can ungroup as long as the button is not greyed.

It is good practice to group all objects in a frame to avoid accidentally moving them. Do not just group the whole bunch of objects, but set up subgroups which belong together etc.

Align objects

Select the objects to be aligned first and set the 'master' with the last selection. Then apply **Graphics > Align** to get a dialogue to specify the desired alignment or use the appropriate buttons



Distribute objects



With **Graphics > Distribute** or button you get a dialogue to specify the distribution (horizontal/vertical, equidistant centred/edges, specific edge gap).

Define visibility



Move selected items to the front or back of other objects with **Graphics > Bring to Front / Send to Back**.

Connect lines



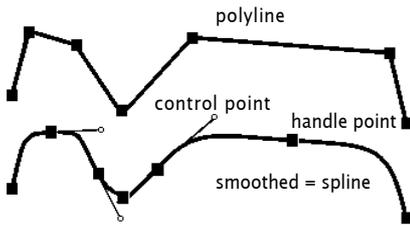
Gravity ON: Lines with reasonably close end points can be combined to one object with **Graphics > Join**. Drawing new elements close to existing ones snaps the new element to the existing one.

Modify shapes



Depending on the selected graphic the function **Graphics > Reshape** does:

⁵⁾ With Shalom Perets' Express Customisation Kit installed you get this function on the context-menu (right click).



- Convert an arc from 1/4 circle or 1/4 ellipse to any angle. Use **Graphics > Object Properties** to set the value numerically.
- Activate the handles of a polyline, polygon or spline to be able to:
 - reshape the polyline or spline by dragging a handle (square).
 - reshape the curvature by dragging a control point (round).
 - add a handle point by control-clicking on the line.
 - remove a handle by control-clicking on it.
- Change the number of sides for regular polygons.

Regular polygons

To create regular polygons (3 ... n), start with a circle, ellipse, square or rectangle and reshape it to an arbitrary number of sides with **Graphics > Set # Sides**. You may also set the angle of the base line.

Freehand lines

Use the polygon tool from the tools palette to set up the skeleton of a line (polyline).



With **Graphic > Smooth** convert it to a smooth line. For adjusting the shape it may be useful to get the polygon again with **Graphic > Unsmooth**.

Watch the different positions of the handle points in polygon mode and smooth mode (see figure above).

Move objects by small amounts

To move selected objects use **ALT+arrow** or the buttons depicting helicopters. The amount moved depends on the zoom factor. At 100% you move by 1 DTP-point⁶ (with **ALT+SHIFT+arrow**⁷ 6 DTP-points). Set the zoom factor to 353 to move 0.1mm per nudge with **ALT-arrow**.

Rotate objects



With the buttons you rotate the object by the amount defined in **View > Options > Snap: Rotate** (e.g. 15°). Using **Graphics > Rotate** allows you to define any angle. Cells in a table are rotated by 90° increments.

With the mouse you can rotate an object also: use **ALT** while you move a handle (the cursor arrow gets an additional small double arrow to indicate the function). Watch the rotation angle in the status bar.

Flip upside-down and right-left



Use **Graphics > Flip Up/Down** or **Flip Left/Right ()** for this action.

Mirror objects

To mirror an object create a duplicate and flip this duplicate to your needs.

6 1 DTP point = 1/72 inch = 0.3528 mm

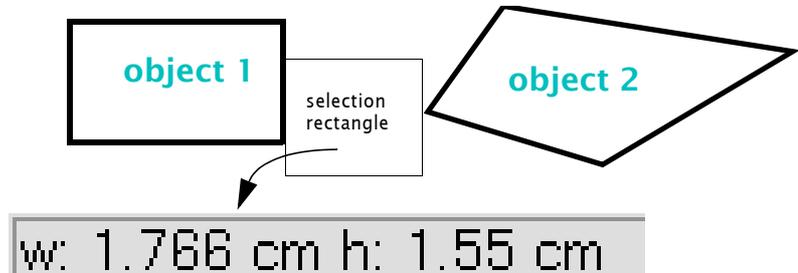
7 Since the left **ALT+SHIFT** is the toggle between input locales in Windows you may end up with a different keyboard setting, for example typing z inserts a y. Check **Control Panel > Regional Options > Input Locales**. If there is more than one entry, you may encounter this problem ...

Measuring things

Measure any object or any distance on the page by drawing a selection rectangle either around the object(s) or around the space you want to measure.

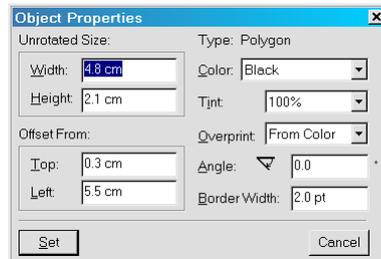
Hold down **CTRL+SHIFT** at the beginning to assure nothing is selected.

You see the width and heights in the units of the document of the selection rectangle to bottom left of the status area:



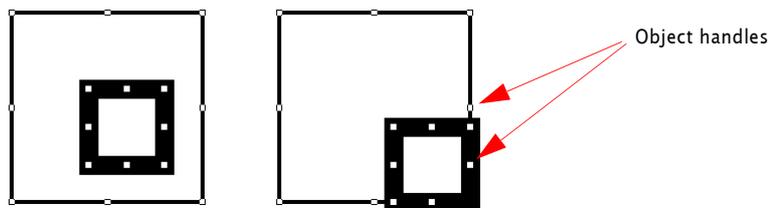
Measuring objects

To measure an object, simply select it and get the properties with **Graphics > Object Properties**. For example for object 2 in the diagram above you get:



Alignment and snap details

The properties width and height of graphic object are measured in the middle of the contour line. Hence alignment and snap appear on this virtual line:



Special objects

Rectangles with rounded corners

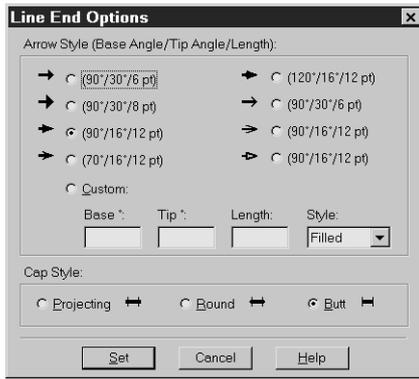


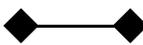
To change the radius of the corner with **Graphics > Object Properties** or the button.

Special arrow tips

To point to elements in photographs etc. you might want to have some blob at the end of a line - not an arrow pointing to the element.

To define a blob line tip



- Open the graphic tools palette
- Click on the **Arrow** tool and select Set...
- In the dialogue **Line End Options**
 - Activate the **Custom** option
 - Enter the values 135, 45 and 8pt into the value fields.
 - Set!
- From now on your arrows will be rhomboid blobs as displayed here  for a line with double arrows.

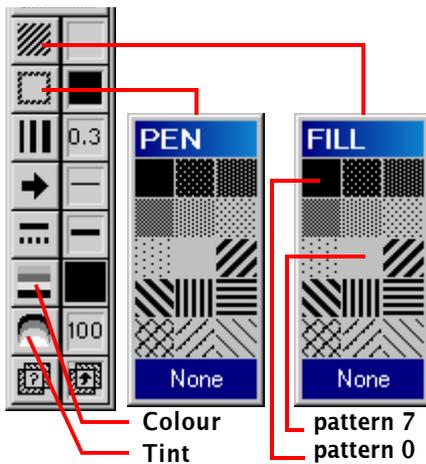
Note: *These special arrow settings disappear at the end of your FrameMaker session, they can not be saved.*

Iconic images within text

In line icons (e.g. ) are placed in an anchored frame **At Insertion Point** with some negative «Distance above Base-line». To get the frame just around the image (with no margin), use the function **Shrink Wrap Equation** (ESC, m, p).

You select the frame by clicking on the border and select the image by clicking in the middle of this 'icon'.

Border and Fill patterns

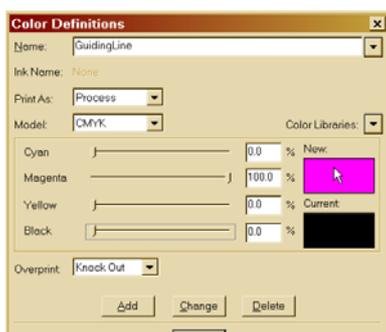


The colour (or pen pattern) of the border and the colour (or fill pattern) of the interior area of an object can only be the same.

The fill patterns and pen patterns are a reminiscence from the early FrameMaker times, whereas colour and tint are newer concepts.

- To apply real colour (and tint) you need to select the fill pattern black (left topmost pattern)
- To leave the object transparent, select the fill pattern None.
- **Table > Shading > Fill** uses these patterns: 100% is pattern 0, 10% is pattern 5, White is pattern 7. For real shading (tint) use 100% fill in the table and a defined colour (e.g. 40% black).

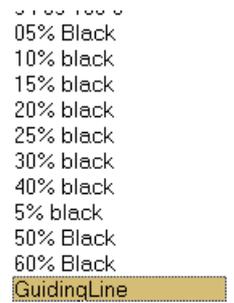
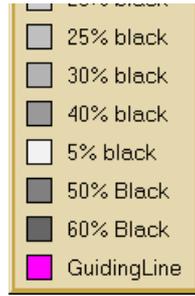
Colours



Initially FrameMaker provides only basic colours (black, white, cyan, yellow, magenta, red, green blue). More colours and special gray levels are defined with **View > Colour > Definitions...** A number of colour libraries (e.g. Pantone) are available.

For example, to define a colour needed for guiding lines, specify a strangely looking colour and name it *GuidingLine*.

This colour will be listed in the **Table Designer > Shading** and in the Graphic Tools palette:



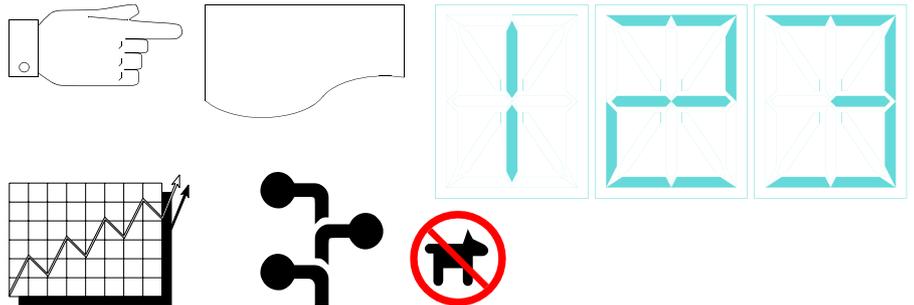
Shading

Shading is the process of applying tint to a colour. Be aware of the fact, that a tint of 10% applied to a color which is defined as 40% black results in 4% black! In Tables only a limited set of tints is available, hence appropriate colours (such as 40% black) must be defined.

Clip art

FrameMaker comes with a set of clip art, which may be useful. These drawings are all done with FrameMaker tools. Hence you can modify them within FrameMaker.

Example clips



FrameMaker 6.0 and above

In FrameMaker > 6.0 there is no mention of the clip art files in Help or in the manual ⁸⁾. The files, however, are still there:

The names of the clip art files in \$FMHOME/clipart give a hint about their contents:

arrows.fm	flowchart.fm	people.fm
balloons.fm	hardware.fm	symbols.fm
clipart.book	icons.fm	transport.fm
dingbats.fm	maps.fm	
electronic.fm	officelayout.fm	

Own clip art

It may be a good idea to collect arbitrary shapes for your projects also in the clip-art library. Just set up appropriate FrameMaker documents (carefully select the name of the file) and put it into the clip art directory.

⁸ With Microtype's customisation kit you get access back in the **Help** menu.

Importing from other applications

Origin

The export function of Origin creates unreliable PostScript (eps). To fix the problem,

- Export eps from Origin (or less favourable emf)
- Import this eps to Adobe Illustrator (or probably Macromedia Freehand)
- Export from Adobe Illustrator a conforming eps.

Excel

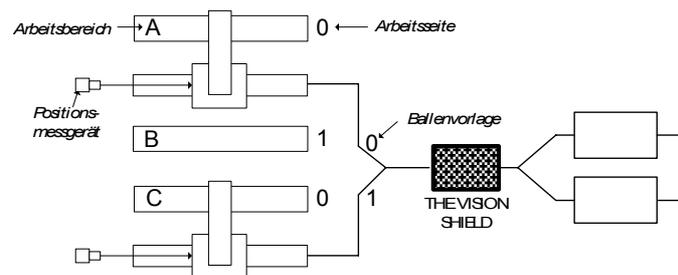
To import a graphic from Excel into FrameMaker:

- 1 In Excel select the graphic (chart)
- 2 **SHIFT-Edit > Copy picture...**
- 3 In the **Copy Picture** (CTRL+Copy) dialogue select as shown when printed to get best results
- 4 In FrameMaker use **Edit > Paste Special...** and select **wmf**.

Graphic objects

When just copying and pasting a graphic from another application, you get an embedded object (OLE). If you double-click on the graphic, the creating application is opened.

Do not use this method for documents you distribute.



For more details see *Importing methods* on page C-2.

Graphic elements on reference pages

Graphic elements on the reference pages can be used for

- Frame above or below a paragraph
- Copy and paste to any location in the document on the body pages.

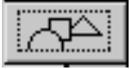
Note: *Although the source of the graphic is a **reference page**, the placed graphics are real copies, not referenced graphics.*

General elements

The following elements are always present in a FrameMaker (original) template:

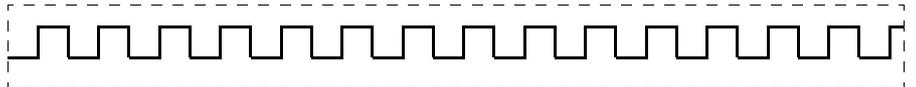
- Footnote (defining the separator line and space)
- Table Footnote (defining the separator line and space)
- Single Line (for use in frame above/below)
- Double Line (for use in frame above/below)

To create a graphic element for a paragraph



- Switch to the Reference Pages (**View > Reference Pages**)
- Create a graphic frame with the corresponding graphic tool.
- You are requested to enter a name into the dialogue **Frame Name**. Provide a name describing the graphic you want to place into the frame.
- Set the same name atop the frame with the graphic tool **Draw a Text Line**. For FrameMaker the text is irrelevant, but for the human reader it should be equal to the name of the frame.
- Place the desired graphics into the frame:

meandered line



Note: *The size of the graphic frame defines the white space around the graphic when it is used above or below a paragraph. If you will use it for both purposes, centre the graphic vertically.*

Defining defaults for the environment

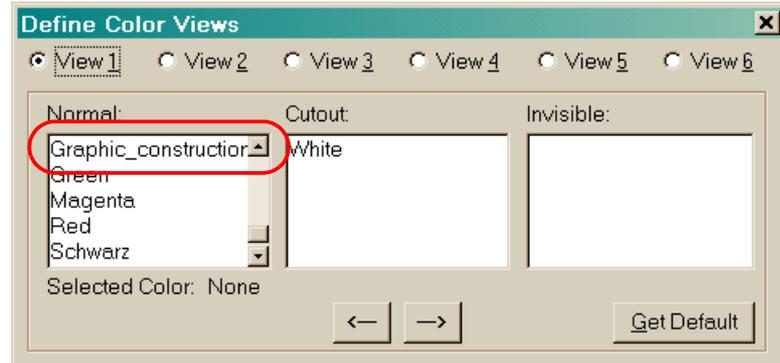
In the file maker.ini a number of defaults can be defined. Unfortunately arrow tips can not be defined there. Hence any special definitions are lost at close of the FrameMaker session.

Settings are located in various sections (windows parlance). See *Set reasonable default for your work* on page A-36.

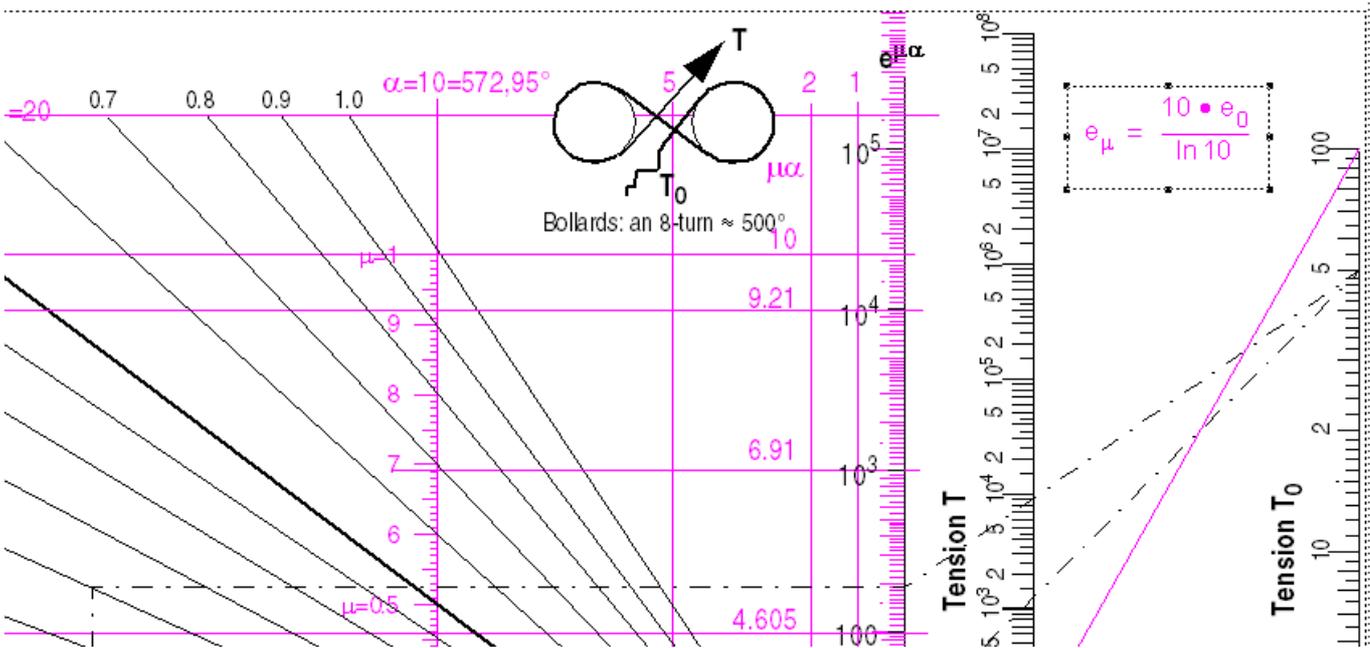
Arbitrary guiding lines

For some work both the **Snap** (to virtual grid) and the **Gravity** (snap to adjacent object) is not sufficient. You need arbitrary guidelines to snap on or to find the desired position.

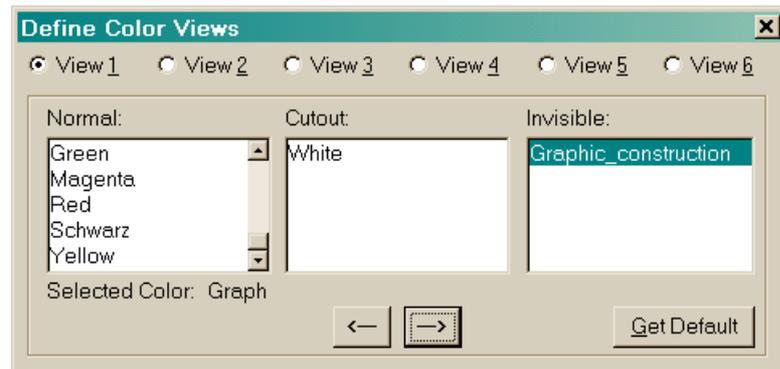
- 1 In **View > Color > Define...** specify a special colour for your guidelines, for example `Graphic_construction`. Use a colour such as magenta or pink which clearly separates from the real colours of your drawing.
- 2 In **View > Color > Views...** make the colour visible:



- 3 All your construction and guide lines shall use this colour:



- 4 For printing and saving as PDF hide the guide lines with **View > Color > Views...**



7

References

Overview

FrameMaker provides a rich set of reference mechanisms: variables, cross-references, footnotes and markers.

Bibliography is not directly handled by FrameMaker, but with Endnote the special notions can be generated and integrated into the FrameMaker document.

Hypertext is not handled in this chapter.

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Variables	2
Cross-references	6
Update references	9
Footnotes	10
Hyperlinks	14
Bibliographies	16
Bibliography with EndNote	20

Variables

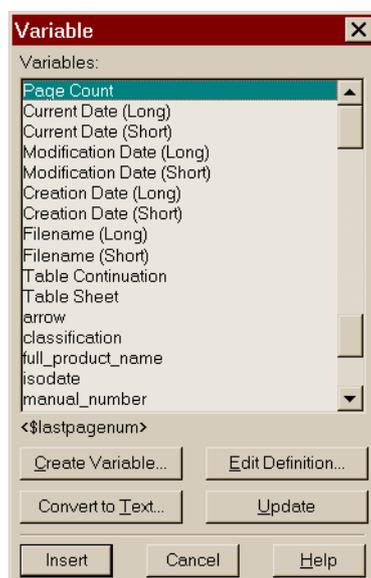
- Variables can be set up from building blocks.
- Emphasis can only be introduced with character formats, not with direct formatting.

Note: *Because the names of the building blocks of system variables are localised, you may get problems when changing the UI language during the development of a document (the Running Heading / Footing definitions in layout are also variables). This warning applies also to the building blocks of cross-references*

User variables

- User variables can only contain ordinary text and references to character formats. User variables do not have access to the building blocks of system variables.

Insert a variable



It is, for example, not possible to define a user variable *ISO-date* with the format `<$year>-<$monthnum01>-<$daynum01>`. If you need such variable contents, you must sacrifice a system variable (for example, a short date).

- Availability of system variables depends on context (body page, master page). For example, Current Page Number is available only on master pages.
- Depending on the system variable itself the set of building blocks differ (you can not set up a file name with date).

To insert a variable:

- Place the cursor at the desired location
- Select **Special > Variable...**
- Select the variable from the given list in the dialogue.
- Press **Insert!**

Convert a variable to ordinary text

If you need to abandon a variable in the text and convert it to ordinary, editable text

- Double click on the variable in the text. This opens the dialogue **Variable**.
- Convert to Text!** You are prompted whether you really want to...

Import variable definitions from another document

Follow the instructions to *Import formats from another document* on page 3-13. Check only the 'Variables' box in the import dialogue.

Specifying variable contents

Set up the contents of your variables to be used as flexible as possible:

- Avoid plural or inflections.
- Avoid punctuation (this may vary depending on usage)
- Avoid prefixes or suffixes which may narrow the scope.

2007-06-22

E:\FM-course\handout_70\references.fm

D D D

Character formats and Building blocks

Since you can not nest variables, you may need to set up variable building blocks, which are combined with ordinary text in the document. For example, in the text «The Precision Dosing Pump GP-98ML» there could be two variables:

Product-short Precision Dosing Pump
 Product-type GP-98ML

Character formats can be used in system- and user variables and cross-references. The special format <Default ¶ Font> can be replaced by </>.

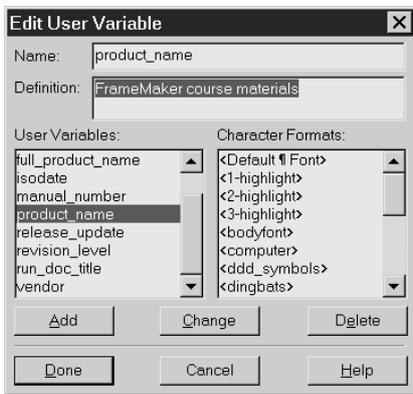
Note: *Character formats are active only until the end of the variable. Hence <Default ¶ font> is implicit at the end of the variable.*

Line break in variable

The sequence \r inserts a line break (hard return).

Real building blocks (see page 4) are only available in system variables.

Create / edit user variable



To create a new variable:

- Select **Special > Variable...**
- Create Variable!** You will notice that you get the dialogue for user variables. You can not create additional system variables.
- Define the name of the variable. This may contain blanks.
- Set up the contents of the variable from text and emphasis notations. You do not have access to the building blocks of system variables.
- Add!** You may wish to define another variable.
- Done!** to go back to the Insert Variable dialogue.
- Done! or Insert!**

Note: *If you need access to the building blocks of the system variables, you must edit an existing system variable to serve your needs.*

Edit system variable



You will need to edit system variables for

- Variables which need access to the building blocks of system variables (see ISO date above).
- Running headers and footers
- Adapt the format of system variables to company standards (for example, the file name in the page footers).

You edit system variables in the same manner as user variables. You just have more choices for the building blocks.

Building blocks for system variables

The variables are grouped by purpose. You can not use any of the building blocks in any system-variable.

Purpose	English FrameMaker	German FrameMaker
Current page number	<\$curpagenum>	<\$AktSeiteNum>
Page count	<\$lastpagenum>	<\$LetzteSeiteNum>
Volume Number	<\$volnum>	<\$BandNum>
Chapter Number	<\$chapnum>	<\$KapNum>
File name with full path	<\$fullfilename>	<\$DateinameLang>
File name	<\$filename>	<\$Dateiname>
Current table-page	<\$tbsheetnum>	<\$TabSeiteNr>
Number of table pages	<\$tblsheetcount>	<\$TabSeiteZählen>
	<\$marker1>	<\$Marke1>
	<\$marker2>	<\$Marke2>
	<\$paratext[<i>paratype</i>]> ^a	<\$AbsText[AbsTyp]
Number of the paragraph <i>paratype</i>	<\$paranum[<i>paratype</i>]> ^a	<\$AbsNum[AbsatzTyp]>
Counter value of paragraph <i>paratype</i>	<\$paranumonly[<i>paratype</i>]>	<\$AbsNumExkl[AbsatzTyp]>
Tagname of paragraph	<\$paratag[<i>paratype</i>]> ^b	<\$AbsTyp[AbsatzTyp]>
Name of condition type on page.	<\$condtag[<i>hitag</i> ,..., <i>lowtag</i> , <i>nomatch</i>]>	<\$BedTyp[<i>Typ1</i> ,..., <i>Typn</i> , <i>Sonst</i>]>
Seconds	<\$second>	<\$Sekunde>
Seconds with leading zeros	<\$second00>	<\$Sekunde00>
Minutes	<\$minute>	<\$Minute>
Minutes with leading zeros	<\$minute00>	<\$Minute00>
Hours from 1 to 12	<\$hour>	<\$Stunde>
Hours 1 - 12 with leading zeros	<\$hour01>	<\$Stunde00>
Hours 1 -24	<\$hour24>	<\$Stunde24>
am or pm	<\$ampm>	<\$ampm>
AM or PM	<\$AMPM>	<\$AMPM>
Day number	<\$daynum>	<\$TagNum>
Day number with leading zeros	<\$daynum01>	<\$TagNum01>
Day name (full length)	<\$dayname>	<\$TagName>
Day name abbreviated	<\$shortdayname>	<\$TagNameKurz>
Month number	<\$monthnum>	<\$MonatNum>
Month number with leading zeros	<\$monthnum01>	<\$MonatNum01>
Month name (full length)	<\$monthname>	<\$MonatName>
Month name abbreviated	<\$shortmonthname>	<\$MonatNameKurz>
Year with 4 figures	<\$year>	<\$Jahr>
Year with 2 figures	<\$shortyear>	<\$JahrKurz>
Character format of the paragraph	<\$Default Para Font> or </>	<Absatz Standardschrift>
Character format <i>name</i>	< <i>name</i> >	< <i>name</i> >

a. To refer for the last (rather than first) occurrence of a tag name on a page, place +, in front of the tag name. For example <\$paratext(+,lg-glossary)> . This lets you build dictionary-style headers or footers etc.

b. Nobody knows what this is good for.

Scope of system variables

All system- and user variables are available on master pages. On body pages and reference pages all user variables are available, but not all system variables:

System variable	Body/ Reference	Default definition (english FM)
Current Page #	no	<\$curpagenum>
Page Count	yes	<\$lastpagenum>
Current Date (Long)	yes	<\$daynum> <\$monthname> <\$year>
Current Date (Short)	yes	<\$daynum>/<\$monthnum>/<\$shortyear>
Creation Date (Long)	yes	<\$daynum> <\$monthname> <\$year> <\$hour>:<\$minute00> <\$ampm>
Creation Date (Short)	yes	<\$daynum>/<\$monthnum>/<\$shortyear>
Filename (Long)	yes	<\$daynum> <\$monthname> <\$year>
Filename (Short)	yes	<\$daynum>/<\$monthnum>/<\$shortyear>
Table Continuation	yes	<\$fullfilename>
Table Sheet	yes	<\$filename>
Volume Number	yes	(Continued)
Chapter Number	yes	(Sheet <\$tblsheetnum> of <\$tblsheetcount>)
Running H/F 1	no	<\$paratext[Title]>
Running H/F 2	no	<\$paratext[Heading1]>
Running H/F 3	no	<\$marker1>
Running H/F 4	no	<\$marker2>
Running H/F 5 ... 12	no	<\$paratext[paratag]>
User variable	yes	

Building blocks \$paranum and \$paranumonly

\$paranum

This building block delivers the complete numbering, that is both constant text and counters.

\$paranumonly

This building block delivers the text from the first counter to the last counter, which may include constant text.

Numbering scheme	\$paranum	\$paranumonly
H: <n> . <n> . <n+>< >:	11.9.3:	11.9.3
H:Table <n> . < >< ><n+>:	Table 5.3:	5.3
C: (<n+>< =0>)	(17)	17
C: (<n+>)< =0>	(17)	17)

Cross-references

Cross reference restriction

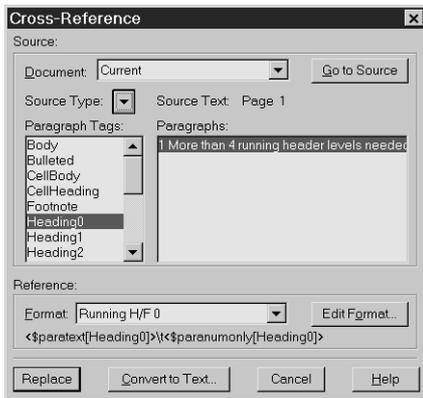
Cross references from one text flow to another are not possible. You can not have a text flow C on the title page with a nice chapter number and have it referenced from the layout pages or the text in flow A.

Target of a reference

- Any paragraph may be the target of a cross-reference.
- In addition, special markers can be set to define a target.

Note: *Cross references to another file contain the file path. Hence the reference will be broken, if you move the file to another directory. If you need this move, save the file in the book dialogue to the new location.*

Cross-reference to any paragraph



- 1 Place the cursor where you want to insert the cross-reference. and select **Special > Cross-Reference ...**
- 2 For a cross-reference to another file select that file from the list of documents.
- 3 In **Source type** select **Paragraphs**
- 4 Select the desired paragraph type in the left hand list.
- 5 Select the desired paragraph in the right hand list.
- 6 Select the proper format for the cross-reference from the **Format** list. You might need to create a proper format with **Edit Format!**
- 7 **Insert!** will insert the cross-reference.

Cross-reference to marker

Insert a cross-reference marker

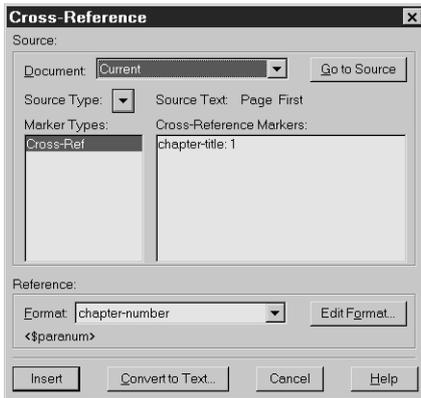


- 1 Place the cursor where you want to define the target (marker)
- 2 Insert the marker with **Special > Marker...**
Marker type= *Cross-Reference*
- 3 Define the name (text) of the marker. Be aware that in long document you will need some logic to find the correct markers later.
- 4 **New Marker!**
- 5 The Marker dialogue stays open, so you can go to the next location in the document...

Hint To use existing text to appear in the marker text: select the text while the marker dialogue is open or will be opened.

Note: *The marker text can not be referenced. There is no such building block as <\$markertext>! You can only refer to the page where the marker is located, or to the <\$paratext> where the marker is (but this can be done without placing a marker first). See Crossreference to marker text on page 7-7 for an alternative.*

Define a reference to a cross-reference marker



- The source file (where to point to) must be open.
- Place the cursor where you want to insert the cross-reference.
- Special > Cross-Reference ...**
- For a cross-reference to another file select that file from the list of documents.
- Source type = Cross-reference Markers
- Select the desired marker in the right hand list.
- Select the proper format for the cross-reference from the **Format** list. You might need to create a proper format with **Edit Format!**
- Insert!** will insert the cross-reference.

Marker type Header/ Footer

The content of markers of type Header/footer \$1 and Header/Footer \$2 is available on master pages only. The system variables <\$marker1> and <\$marker2> insert the marker contents.

Crossreference to marker text

A cross reference can not display the contents of a marker. However, a hyperlink can serve this purpose:

- 1 At the target location specify a named destination. The target may be highlighted by any means to recognise it.
- 2 At the 'reference location' insert a Jump to named destination. The reference can be formatted to look like a cross reference.

For details of these constructs see *Types of hyperlinks* on page 7-15.

Cross-reference to other file

The source of a reference may be outside the current file. In such cases you may wish to include the chapter number in the references format, for example «see *Cross-references* on page 7-6».

With FrameMaker 6.0 this became very simple thanks the system variable Chapter Number. Of course you need files with the chapter number defined (**Format > Document > Numbering > Chapter** or via the book set up) or you get the default number (1).

Reference format

```
<1-highlight><$paratext></> on page\ <$chapnum>-<$pagenum>
```

Editing cross-references

- To edit the appearance (format) of a cross-reference, double click on it to enter the dialogue **Cross-Reference**. Click on **Edit ...**
- To change the target of the cross-reference, delete the cross-reference and insert a new one.

Format of cross-references

Set up the format of cross-references to be used as flexible as possible:

- Try to avoid plural or inflections.
- Avoid punctuation
- Avoid introductions which may vary
- Try to avoid language dependent parts

Example formats:

```
<1-highlight><$paratext></> on page\ <$chapnum>-<$pagenum>
```

Producing, for example: *Format of cross-references* on page 7-8:

```
<1-highlight><$paranum><$paratext></> on page<$pagenum>
```

Producing, for example: *Format of cross-references* on page 8:

```
<1-highlight><$paranum><$paratext></> (<$pagenum>)
```

Producing, for example: *Table 1: Building blocks for system variables* on page 4

The last example includes a language dependent part, which is part of the automatic numbering of the table. To avoid this,

- either abbreviate the word Table to Tab. in the autonumber (which fits at least English, French, German and Italian).
- or abandon this prefix word completely. Then start the reference in the text with the appropriate language:
See *Building blocks for system variables* on page 4.

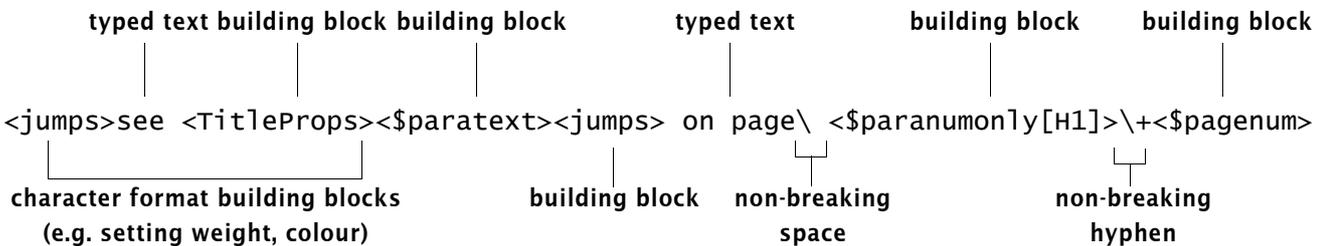
The format for the second solution is:

```
<1-highlight><$paranumonly> <$paratext></> on page\<$pagenum>
```

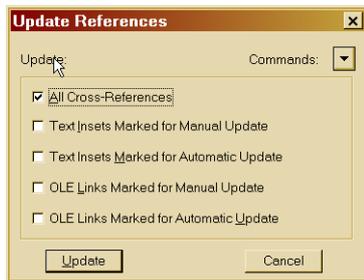
Note: *Character styles may not completely be transferred to the cross reference. See Character styles in building blocks on page 3-12.*

Example of complex cross reference format

The following example shows a cross-reference format with various building blocks:



Update references



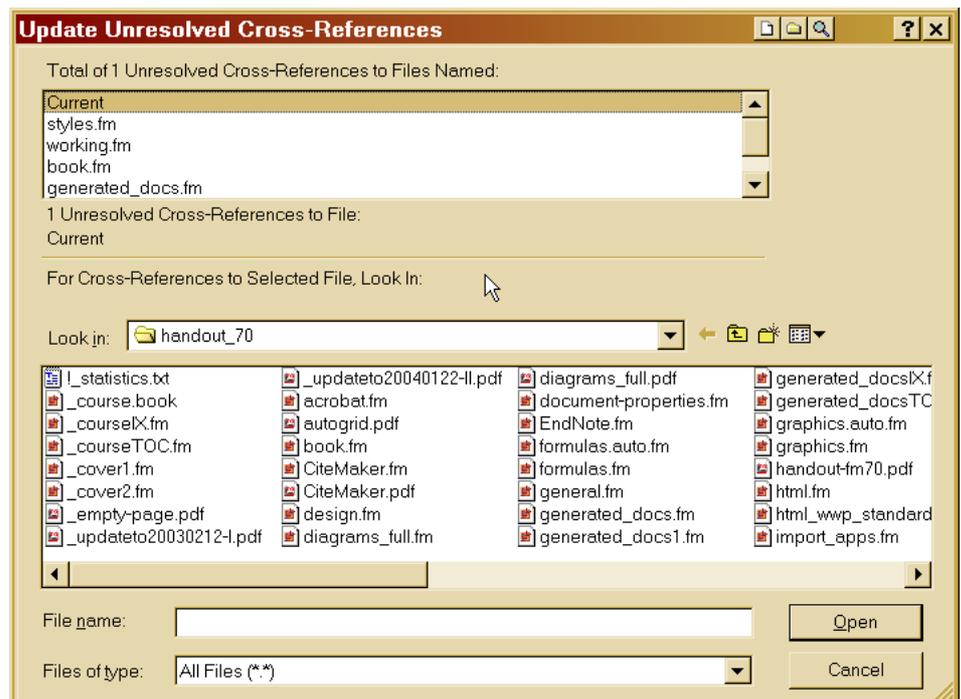
To update references in the current file, open **Edit > Update References** and activate the appropriate check boxes and then click **Update**.

You may automate certain function by selecting from Commands:

- **Suppress automatic updating:** Specify which references shall not be automatically updated when the file is opened or the book containing the current file is updated.
- **Update unresolved Cross-References:** A dialogue appears, which allows to fix unresolved cross-references in all open files.

Update unresolved cross-references

All open files are scanned for unresolved cross-references and listed in the *Numbering elements* on page 3-6upper area.



- 1 In the upper scroll list, select the file that used to contain the target of the unresolved cross-reference. The text below the list indicates the number of unresolved references.
- 2 In the lower scroll list, select the file that (now should) contains the target, and click **Open**. If FrameMaker can't perform the update, select a different file and try again.
- 3 If FrameMaker fails in any of the files, correct manually:
 - **Edit > Find/Change**, select **Unresolved Cross-Reference**
 - If found, delete the reference and set up a correct one.
 - Repeat Find/correct/file select, until all has been corrected

Footnotes

Footnotes consist of three elements:

- 1 The footnote reference which is placed in the running text: ⁹⁾
- 2 The footnote text formatted according to a specific ¶ format (default: `Footnote` and `TableFootnote`).
- 3 A placeholder frame between the text area and the topmost footnote of that page (or under a table).

Footnotes in text

Footnotes in text can be numbered in various ways. The numbering may start on each page anew or continue within a chapter or book.

For text footnotes the place holder frame normally contains a line (see bottom of this page).

Footnotes in tables

The same rules apply as for the footnotes in text. The default style name, however is `TableFootnote`, and hence there is another graphic frame on the reference pages with this name.

For table footnotes the place holder frame normally is empty, but may also contain a line for unruled tables.

End notes

Endnotes are footnotes which are collected at the end of a chapter or document. FrameMaker can not handle these. However, ordinary footnotes may be converted to end notes by appropriate API's or plug-ins as well as FrameScripts.

Insert a footnote

To place a footnote,

- 1 Place the cursor at the text location where the footnote reference shall appear.
- 2 Select **Special > Footnote** and write the footnote text into the new footnote paragraph.

Text footnotes are always placed at the bottom of the current page (if space allows). Table footnotes are collected after the table.

Note: *You can not arrange the footnotes of a chapter at the end of a chapter (or file). For this you need to install an appropriate API (see *Extensions by API clients on page 1-15*).*

Note: *If a text footnote is referenced close to the end of a page (for example, in the last paragraph) then the footnote may be placed on the next page.*

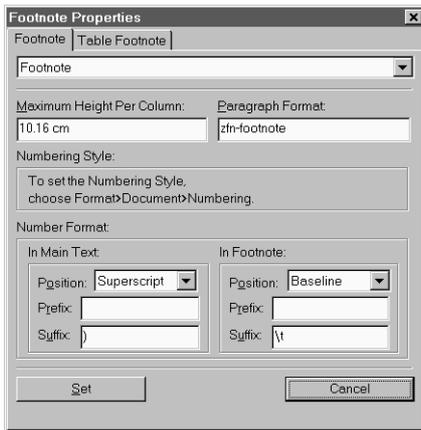
⁹ Sample footnote to demonstrate the elements comprising this construct and to display the appearance: ¶ format is `zfn-footnote`; numbering is arabic, continuing in each chapter. The separator is the green line above.

Appearance of footnotes

2007-06-22

Paragraph format for footnotes

Format of the footnote reference



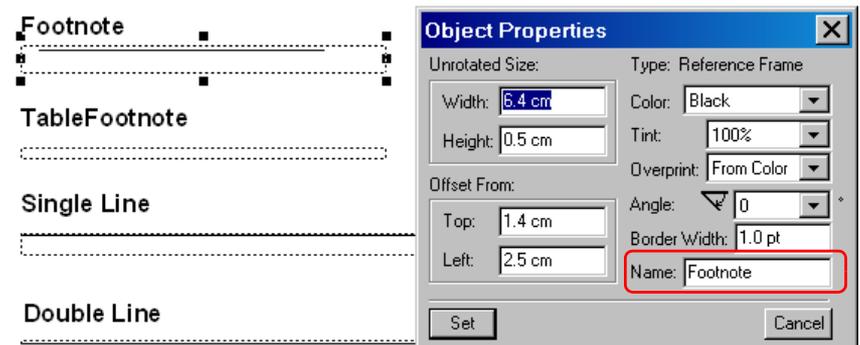
E:\FM-course\handout_70\references.fm

The following items must have the same name:

- The style name in the **Footnote Properties** dialogue
 - The style name in the paragraph catalogue
 - The name of the graphic frame on the reference page.
- Do not specify automatic numbering in these styles! It will interfere with the special numbering process of footnotes.
 - Specify TAB postions if you define TABs (\t) in the Prefix or Suffix elements prepended or appended to the footnote text. Also a hanging indent may be needed.
 - The separation line is *not* defined by the 'Frame above' property of the paragraph style (see *Separation line or space* on page 11).
- The format name and the number format of the reference and the note is defined in **Format > Document > Footnote Properties...**
 - You can only define constant text for the prefix and suffix in the footnote format (e.g. opening and closing brackets); *you can not*:
 - Use system variables or user defined variables in the prefix or suffix field
 - Use character formats in the prefix or suffix field.
 - You may wish to define the maximum height of space for text footnotes (per column). The default is 4" (10cm).
 - The style of the footnote numbering (arabic, ...) and whether text footnotes shall start numbering on each page or continue numbering again is defined on **Format > Document > Numbering > Footnote** and **> Table Footnote**.
 - The numbering may consist of a series of symbols (**Format: Custom**). The default symbols are * † ‡ . They must be in the text font. No character format or other font can be assigned for these symbols. You can not define groups of symbols such as *, **, ***.

Separation line or space

The separation line (or just space) is defined on the reference page named Reference by a graphic frame named Footnote respectively TableFootnote:



The text lines are just for the human reader.

D + D D

Additional reference to a footnote

To refer to an already existing footnote you must place an ordinary cross-reference.

The reference should indicate the page number where the footnote can be found (see the next section).

Reference to footnotes in other chapters

Jahre debattierten die beteiligten Wissenschaftler ohne eine Übereinstimmung zu erzielen. ¹ und ⁵ on page 8. Eine Bewertung der grundlegenden Daten, die über eine Versuchsanlage für Ölschieferabbau gesammelt wurden, hat gezeigt, daß genauere Datenreihen benötigt werden um sicherzustellen, daß

1.) Diese Diskussionen werden dokumentiert durch Studien des OSC Komitees des Innenministeriums. §

To reference a footnote in another (than the current) chapter or file, you need a special cross-reference format providing both the page number (and/or the chapter number) and the footnote number.

To be able to format it similar as a footnote reference (superscripting) you need an appropriate character format (e.g. super). The complete cross-reference format may look like one of these:

```
<super><$paranumonly[Footnote]> on page \_<$pagenum></>
```

```
<super><$paranumonly[Footnote]> on page \_<$chapnum>-<$pagenum></>
```

Footnotes in book files

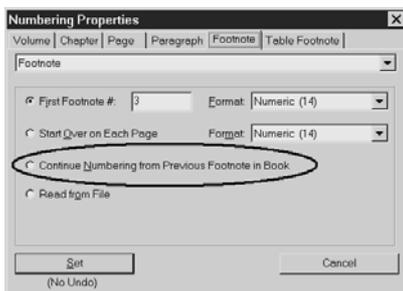
Footnotes at the end of a book

Solution

There is no feature in FrameMaker to collect footnotes from various files and present them at the end of a FrameMaker book in a particular chapter (or at the end of the last chapter).

Collect all notes in a file (use a paragraph format, such as x-note), and refer to them with an ordinary cross-reference of an appropriate format (e.g. `<super><$paranumonly[x-note]></>`)

Footnotes across books



To number the footnotes across the all (or certain) chapters of a book:

If you already have a book file, see *Footnote number* on page 8-7. Otherwise do the following:

- 1 In the first file of the sequence set the numbering properties in **Format > Document > Footnote Properties > Numbering: The First Footnote #** gets the initial number (normally 1). Set also the desired number format of the footnote (e.g. arabic).
- 2 Check whether the footnote format is correct in **Format > Document > Footnote Properties...**
- 3 In all other files of the sequence, set the numbering properties in **Format > Document > Footnote Properties > Numbering** set **First Footnote Number** to **Continue Numbering from Previous Footnote in Book**. Check whether the footnote format is correct in **Format > Document > Footnote Properties...**

Note: *The numbering will be correct only after you have set up a book from the files you have prepared.*

Footnotes and text columns

There is only *one* ¶ format for text footnotes available. Hence you must decide between the appearance.

In the first example the footnotes are «In column». The footnote from the title becomes the last one and its text extends across all columns as the title does.

This title is across all columns ¹	
<p>This is just text in the column and uses a footnote reference in this left column².</p> <hr style="width: 50%; margin-left: 0;"/> <p>2. This footnote is referenced in the left column</p> <hr style="width: 50%; margin-left: 0;"/>	<p>This footnote reference is in the right column³.</p> <hr style="width: 50%; margin-left: 0;"/> <p>3. Footnote referenced in the right column</p>
<p>1. This footnote is referenced in the title</p>	

In the second example the footnotes are «Across all columns». The footnote from the title becomes the first one.

This title is across all columns ¹	
<p>This is just text in the column and uses a footnote reference in this left column².</p> <hr style="width: 50%; margin-left: 0;"/>	<p>This footnote reference is in the right column³.</p>
<p>1. This footnote is referenced in the title</p> <p>2. This footnote is referenced in the left column</p> <p>3. Footnote referenced in the right column</p>	

Editing footnotes

- To move a footnote reference, select it, then cut it to the clipboard buffer and insert it (paste) it at the new location.
- To change the reference appearance (e.g. from numbered to symbol), **Format > Document > Footnote Properties** and modify the number format (prefix and suffix) to your needs.

Note: *Modifications of the format of footnotes applies to all footnotes in the document!*

- To change the appearance of the footnote, modify its paragraph format.

Hyperlinks

Milestones on the way to hypertext as we know it from the worldwide web are:

- [Vannevar Bush](#) and his "Memex" (1945)
- [Douglas C. Engelbart](#) with "Augment" (starting 1963)
- [Ted Nelson](#) with project "Xanadu" (starting 1965)
- [Arno Schmid's](#) novel "Zettels Traum" (1970)
- Find a good German summary [here](#).

Hypertext in FrameMaker

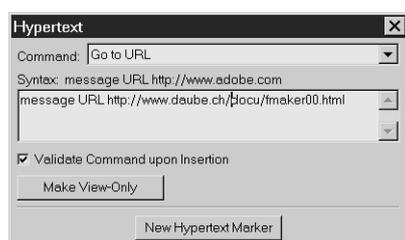
Since version 3 FrameMaker supports hypertext in various forms:

- Cross references provide live links during creation of documents. These are converted to hyperlinks in HTML and PDF.
- Any generated file (such as the Table Of Contents, or Index) can automatically get cross references to their target information. See *Hypertext links* on page 9-2
- Hyperlinks are active if the document is converted to HTML (see *Generate HTML* on page 12-1).
- Hyperlinks are active if the document is converted to PDF (see *Refining the PDF output* on page 10-10)
- Specific hypertext markers can refer to other documents or URLs on the web.

Active area

The active area (where you can click on) is defined by the text until the character format changes. You may also define sensitive images or areas. See the manual for this technique.

Insert hyperlink



- Select the hot spot text and highlight it with a character format
- In **Special > Hypertext** select the appropriate type of link. For a web-links this is «Go to URL».
- The URL must be typed completely:

```
message URL http://www.daube.ch/docu/fmaker00.html
```

Note: *Case of command and blank after command is relevant. If backslashes are used (e.g. in Windows paths), they must be doubled when preceding certain characters (f, i, n, o, s).*

Format hyperlink

It is good practice to highlight the hyperlink with a special character format such as hyperlink. Please avoid underscoring in documents - its really looks bad:

This is a link to my [FrameMaker stuff](#). Text outside hot spot.

Types of hyperlinks

FrameMaker supports a number hyperlink types. For example, the Equations palette is a FrameMaker document with lots of hyperlinks. The following table is just an excerpt:

Note: *In file paths or URLs the backslash is not valid. The solidus (normal slash) must be used*

Command (drop down list) ^a	Syntax	Example ^b	PDF
Alert ^c	<code>alert <i>text</i></code>	It Time for lunch now!	Y
Alert with title	<code>alerttitle <i>title: text</i></code>	Hello - I'm the title:This is in the first line and this ...	Y
Open document (same type as source- fm or pdf)	<code>openlink <i>path</i></code>	openlink D:/System_ddd/ Documentation/Syshw.fm	Y
Open document with associated applica- tion	<code>message openfile <i>path</i></code>	openfile D:/System_ddd/ DDDcontrol.ini	Y
Go to URL	<code>message URL <i>url</i></code>	message URL http:// www.daube.ch/docu/ fmaker00.html	Y
Specify named destination	<code>newlink <i>name</i></code>	newlink here_we_go	Y
Jump to named destination	<code>gotolink <i>name</i></code>	gotolink ref_crossrefs	Y
Popup menu (works only in FrameMakerView mode)	<code>popup textflow_on_refpage</code>	popup popup1	N

a. For restrictions in conversion to PDF see *Refining the PDF output* on page 10-10

b. Not all examples may work in your environment...

c. In PDF this will be a text note, the title will not be presented as such, but stay within the text.

Links to documents and applications

With links to documents the associated program (in Windows) will be started to view the document:

Open file in text editor	<code>message openfile D:/System_ddd/Documentation/data/FM6- ini-mods.txt</code>
Display directory with explorer	<code>message openfile C:/WINNT/Fonts/ATMFolder/</code>
Play sound	<code>message openfile D:/System_ddd/sounds/5tones_up.wav</code>
Path relative to current document	sub-folder: <code>message URL folder/file.ext</code> same folder <code>message URL file.ext</code> parallel folder <code>message URL ../folder/file.ext</code> 1 level above <code>message URL ../../folder/file.ext</code>
Start a (Windows) application	An application can be started directly (on Windows): <code>message system H:/Utilities/SearchReplace/SR32.EXE</code>

Bibliographies

Bibliographies are an essential element in scientific publications. The format of the bibliographic data as well as the form of references varies. Each institution may have its own habits and publishers add to the variations.

While everything can be set up in plain text, this section aims at formats which provide hypertext links from the reference to the bibliographic data. This goal may limit the formats.

Hypertext links are preserved in the document if transformed to PDF or HTML. In this section these links are highlighted with character format [hypertext](#).

Numbered bibliography

A simple form of references use only the numbers of the bibliographic data, which basically are numbered lists.

References

A reference uses the cross reference format `<$paranum>` to get the number including the brackets and `<$paranumonly>` to get just the numeric part for multiple entries.

The second form is more universal, but requires you to enter the brackets manually: single [3] or multiple [1, 2].

Bibliographic data

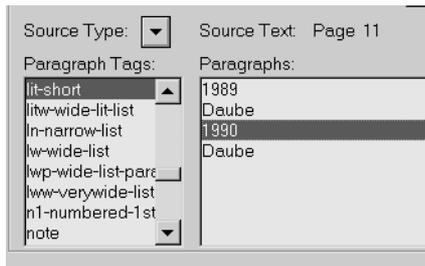
- [1] Daube, K., *Aufbau des OBRZ Runtime Systems*, in *Technisch-wissenschaftliches Rechnen am MVS System*. 1989, OBRZ AG: Zürich. Handbuch 400.50.10.
- [2] LaBonté, A. *A New Data Type for National Language?* in *SEAS Anniversary Meeting*. 1989. Amsterdam, The Netherlands: SHARE European Association.
- [3] Garneau, D., ed. *National Language Support Reference Manual*. January 10, 1990 ed. National language Information Design Guide, ed. IBM. Vol. 2. 1990, IBM National Language Technical Centre: Toronto, CDN.

Essential properties of paragraph format

The paragraph format for the bibliographic data in this example is `lit-ref-numbered` with the main properties: Auto numbering sequence: `«L:[<n+>]\t»`.

You may rearrange the paragraphs to get a sorted list and then update the references with **Edit > Update References: all Cross References**.

Name and year in references



If you need independent access to the names and publication years to combine references, you need to set up paragraphs for each element. To stack the (logical) paragraphs in one physical paragraph you define the stacked ones as Run-in Headings. (format `lit-short` in this example).

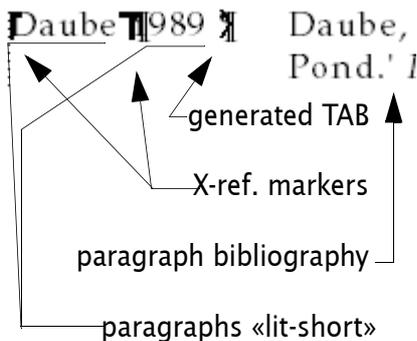
This method provides a sequential list of data items (name, year, name, year, ...) in the cross-reference dialogue. Strangely enough the first entry in the list is the second paragraph of the specified format...

References

The cross reference format in the following examples is `<hypertext><$paratext></>` and refers to paragraphs of format `lit-short`.

The issue of character coding in electronic data processing was addressed quite aggressively by [Daube](#) in [1989](#) and again in [1990](#).

Bibliographic data



Daube 1989 Daube, Klaus, 'Text and Code - A Dragons Pond.' *Proceedings of the 30. G.U.I.D.E. conference in Basel*. G.U.I.D.E. Headquarters, 1989.

Comparing the human habits of gesture and miming with codes in data processing shows a severe gap in understanding coding mechanisms. This is the source of many problems related to national language support in data processing applications. This text also is available in French, kindly translated by Ministère des Communications du Québec, St. Foy, Canada,

Daube 1990 Daube, Klaus, *National Language Support in SUSI*, OBRZ AG, Handbuch 410 (Dokumentverarbeitung mit SUSI), Kapitel 410.20.35. Zürich 1990.

The text formatter SUSI supports code page switching (also within a file. A piece of text also may have the attribute language, to which hyphenation is bound. National keyboards can be used. The code page used internally is based on code page 037, the character set supports most Western and Eastern European languages.

Essential properties of paragraph formats

lit-short

Pagination: Run-in Head with default punctuation « «.

bibliography

Pagination: anywhere; auto numbering sequence: «\t»; Left indent: 3 cm; tab position: 3 cm.

Sorting the bibliographic data

To sort the bibliographic data in lists (paragraphs), either

- move the paragraphs by cut and paste, or
- use the plug-in Enhance from www.sandybrook.com which allows you to sort paragraphs (not table rows).

Reference and bibliographic entry

Thomas M. Reuter (tomreuter@compuserve.com) communicated the following method: Use two paragraph formats for the bibliographic data (e.g. B1 for the part to be referenced and B2 for the full bibliographic data).

Paragraphs B1 (reference texts) must not print, hence they use a special colour which is defined 'not to print' (**View > Color > Views...**). In the example below this colour is named *Bibliographie*.

References

Set up a cross reference to use it with the specially prepared coloured entries (paragraph format B1). Some examples are:

```
<$paratext>
<$aranum> <$paratext> (page <$pagenum>)
```

With these definitions you can create references in line, such as the mentioning of [Marty et al](#) without any fuss. You can also refer to the completely numbered item as in this example: [2] *Th. Reuter, FrameMaker* (page 18).

You can extend this method to use more than one concealable short entry (variants of B1 paragraphs). Be aware of identification problems in the cross reference dialogue.

Bibliographic data

- [1] [Marty et al](#)
 [1] Marty Ch., R. Philipona and C. Frohlich, 1999: Probleme mit Bibliographien in Framemaker, Journal of FrameMaker, Nr. 43, 256-268.
 [2] [Th. Reuter, FrameMaker](#)
 [2] Reuter, Thomas M., 1999: Das Buch zu FrameMaker. SmartBooks Kilchberg. ISBN 3-908488-28-1

Essential properties of paragraph formats

- B1 Next paragraph: B2; colour: Bibliographie; Keep with next; auto numbering sequence: «B: [<n+>]\t».
 B2 Next paragraph: B1; no keep; auto numbering sequence: «B: [<n>]\t».

Colour views

The file with the bibliographic data needs special settings for the colour views (**View > Color > Views...**):

- When working with the bibliography you need to see the text and use view 1.
- For printing you must hide the coloured entries using view 2.

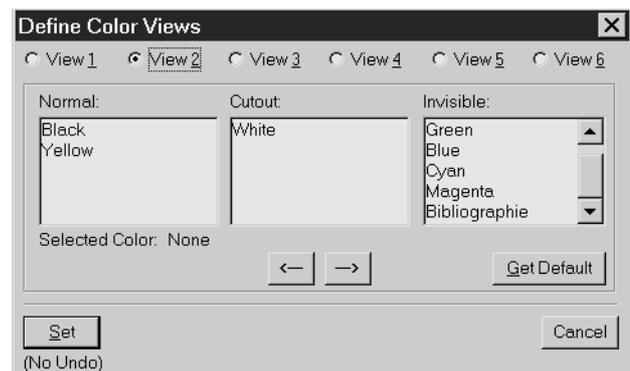
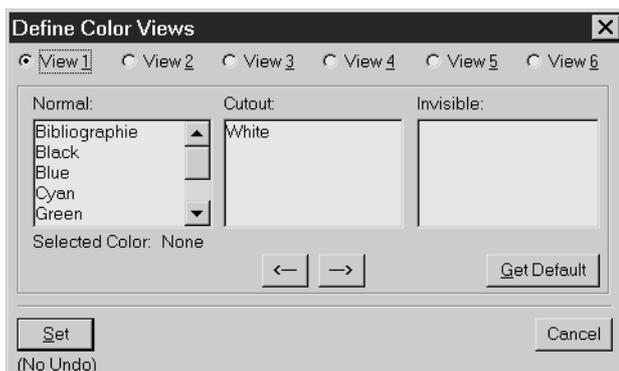


Table of bibliographic data

Since tables can be sorted, it would be nice to use them for bibliographies in place of the above mentioned lists.

However, sort destroys any markers in tables. This bug exists since we can sort tables (FM 5.5). Hence a special procedure is required:

Bug needs special procedure

- Set up the table with the bibliographic data. Use a distinct ¶-format for the reference data (e.g. lit-short2).
- Sort the table before you set up any cross references.
- Insert the cross references at the desired places. To ease this, use a special notation in the running text to find the places where you want to insert the cross references (e.g. «[[engelbrecht 88"]).
- If you need to update the table, insert new items at the alphabetic location and *do not sort the table any more!*

Example running text

While [[Blum 2000 and [[Engelbrecht clearly describe the problem, [[Helm 1990 just tinkers around and does not provide any reasonable discussion of the problem.

After inserting the references

While [Blum et al, 2000](#) and [Engelbrecht, E.G., 1998](#) clearly describe the problem, [Helm, J. L.,1990](#) just tinkers around and does not provide any reasonable discussion of the Thin Tree Syndrome.

Blum et al, 2000	Blum, L., Bajaj, P., Gass, J., Poulidakos, D., 2000, «Pollutant Formation of a 20 kW Domestic Gas Burner Operated at Partial Premixing Mode», Proceedings of Second European Conference on Small Burner Technology and Heating Equipment (ECSBT 2), Germany.
Engelbrecht, E.G., 1998	Engelbrecht, E.G., 1998, «Modelling of Premixed Combustion in a Gas Turbine», PhD Thesis, Cranfield University, England.
Helm, J. L.,1990	Helm, J. L.,1990, Energy Production, Consumption and Consequences, National Academy Press, Washington, USA.
N. N., 1998	N. N., 1998, ELCO Energiesysteme AG, Betriebsanleitung Gasbrenner Low-NOx, Vilters.
N. N., 2000	N. N., 2000, Japanese Advanced Environmental Equipment, Global Environment Centre Foundation, Japan, http://nett21.unep.or.jp/JSIM_DATA/JSIM13.html .

Bibliography with EndNote

EndNote (www.endnote.com) is one of the most used applications to maintain bibliographic data bases and generate bibliographies in scientific works.

The product is widely used for dissertations, theses and scientific publications of all kinds. EndNote is available for Windows and Mac OS. It is well integrated with MS Word by means of macros and DDE (Dynamic Data Exchange).

Cooperation with FrameMaker

Advantages using EndNote

Although bibliographies can easily be created in FrameMaker by means of cross reference, EndNote provides the following advantages:

- Maintenance of a bibliographic database for several works.
- The database can be filled with data from various sources including the Internet.
- Generated references and citations can adhere to a large number of output formats (most publications require special formatting).

Drawbacks of EndNote

Over the time the various EndNote releases have changed their behaviour significantly, in particular with relation to FrameMaker:

EndNote Version	Handling non-Word files	Cooperation	
		Word	FM
5 (2001-09)	Scans MIF and RTF, handles non-ASCII characters not correctly	+++	++
6 (2002-06)	No scan of RTF or MIF possible - purely a Word thing	+++	0
7 (2003)	Scan of RTF possible, but not MIF	+++	+
8 (2004)	New data base format to support UNICODE; only working with Word, No MIF support	++++	+

Only EndNote versions 1 ... 5 provided the function **Scan Document** in mif. Version 6 does not support any scan and starting with version 7 scanning RTF is back which allows to work with most text processors and provides some possibilities for FrameMaker.

From version 8 on the Unicode support in EndNote hinders direct handling of the temporary references in FrameMaker, because FrameMaker is not Unicode compliant.

Using EndNote's RTF scan facility

It may seem reasonable to export the FrameMaker document as RTF, then scan and modify it by EndNote and finally import the RTF again into FrameMaker. *Some* problems are:

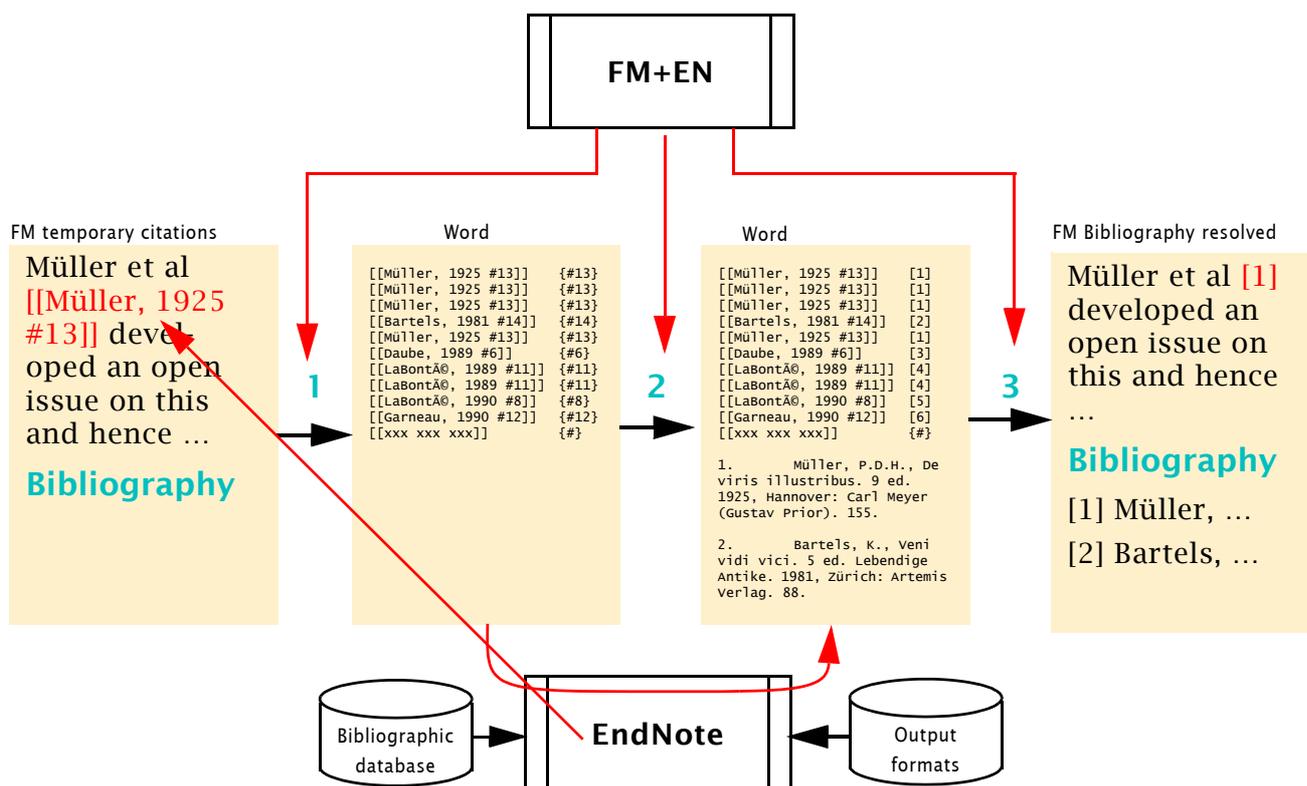
- Anchored frames get new attributes (at insertion) with all previous content as one image.
- Layout and formats must be re-applied.
- Cross references become useless, must be rebuilt.

Solution with D+DD utility

D+DD has developed the utility **FM+EN** which controls the collaboration between FrameMaker, Word and EndNote. Manipulations in the paste buffer overcome the code difference between EndNote (Unicode) and FrameMaker (Mac Roman).

Process overview

The utility **FM+EN** controls the data flow between the three involved programs:



Process details

Temporary citations are copied from EndNote and pasted into the FrameMaker document. However, not **CTRL+v** is used for pasting, but the new command **CTRL+y** provided by **FM+EN**. This command transforms the Unicode references to FrameMaker-digestible references.

- Step 1 The temporary citations are collected in FrameMaker and written into an MS Word file. Two forms are written to avoid problems during resolving the references in EndNote:
- The long form which is present in FrameMaker, for example `[[Müller, 1925 #13]]`
 - The short form containing only the necessary information for EndNote to resolve the reference, for example `{#13}`.
- `[[Müller, 1925 #13]]` `{#13}`
- Step 2 **EndNote** scans this Word file (in `rtf` = Rich Text Format) based on the current bibliographic database and the selected output format. The result is a new `rtf` file containing both the formatted references and the generated bibliography:
- Step 3 The first part of the `rtf` file from step 3 now contains formatted references to the right:

```
[[Müller, 1925 #13]]           [1]
[[Bartels, 1981 #14]]        [2]
[[xxx xxx xxx]]             {#}
```

With this data the temporary references in the FrameMaker file are searched and replaced by the formatted form.

The second part of the new file contains the generated bibliography:

1. Müller, P.D.H., *De viris illustribus*. 9 ed. 1925...
2. Bartels, K., *Veni vidi vici*. 5 ed. Lebendige...

The user must copy this bibliography to an appropriate place in the FrameMaker document or book and format it.

Note: *You must use **Paste Special** and select **RTF** to maintain the local character formatting from Word.*

Utility FM+EN

Note: *The following is an excerpt from the separate documentation about the utility **FM+EN**. See the [D+DD website](#) for details.*



After start of the utility **FM+EN** you will get an icon in the system tray. For the insertion of the temporary citations the utility provides the «hot key» **CTRL+y** for the special paste operation.

Inserting a citation

- 1 In EndNote select the Citation in the Database view and copy it to the clipboard (**CTRL+c**).

Daube	1989	Aufbau des OBRZ Runtime Systems
LaBonté	1989	A New Data Type for National Language?
Reinsch	1989	Is there still an Alphabet in 2002?

- 2 Switch to FrameMaker and place the cursor in the document where you want to place the citation.
- 3 Paste the temporary citation from the clipboard (**CTRL+y**). The inserted temporary citation has the format `[[LaBonté, 1989 #11]]`.

Note: *For pasting the same temporary citation a second (or more) time use **CTRL+SHIFT+y** or **CTRL +v**.*

You will run the process steps only after all (or most) of the temporary citations are inserted in the document or the documents of a book.

Operating the utility

Right clicking on the utility icon in the system tray opens the following menu:

About	Provides a panel with program information and a disclaimer.
Program Setup	It is essential to define the UI languages of the involved programs before you execute the process steps. Other settings – such as working slowly or create footnotes from bibliographic references – are optional.
Change References and build Bibliography	The three steps of the process are run in sequence. Follow the instructions provided by popup-messages.
Documentation	Display the PDF with the full documentation.
Suspend Hotkeys	If for any reason you need in an application the key CTRL+y you can suspend the key function from FM+EN and later reactivate it.

Exit Close the utility. You may use the **PAUSE** key for this.

Final Work

The completion of the process is displayed by a dialogue which reminds you to copy the generated bibliography into the FrameMaker document.

Note: **EndNote** uses local formatting in the text (not Character formats) and puts the numbering in the text. For different formatting (e.g. automatic numbering by FrameMaker) you need to edit the text.

1. Müller, P.D.H., *De viris illustribus*. 9 ed. 1925, Hannover: Carl Meyer (Gustav Prior). 155.
2. Bartels, K., *Veni vidi vici*. 5 ed. Lebendige Antike. 1981, Zürich: Artemis Verlag. 88.
3. Daube, K. *Text and Code - A Dragons Pond*. in G.U.I.D.E. Conference. 1989. Basel, Switzerland: GUIDE.

Bibliography in a FrameMaker book

If the utility is started in a FrameMaker book, it automatically collects and changes the citations in all files of the book.

- 1 Open all files of the book and handle messages concerning «missing fonts» or «missing graphics» accordingly.
- 2 Go to the book window and start **FM+EN**. The document windows will be maximised to get correct window titles.
- 3 Place the generated bibliography in a separate chapter or at a place of your desire.

Bibliography in footnotes

A special form of bibliography places the bibliographic references in footnotes. The citation in the text is just the footnote reference. For example:

Hecate est Iovis et Latonae filia ¹⁰⁾, soror Apollinis. Est tricopor et triceps, magicarum artium magistra ac fascinationum praeses, cincta latrantium canum ¹¹⁾; noctu stans in triviis vel prope sepulcra et ubi loca sunt.

To achieve this, you create a footnote and insert the temporary citation in the footnotes. **FM+EN** will replace the temporary citation with the bibliographic reference. You need to specify this in the setup.

- 10 LaBonté, A. *A New Data Type for National Language?* in *SEAS Anniversary Meeting*. 1989. Amsterdam, The Netherlands: SHARE European Association.
- 11 Garneau, D., ed. *National Language Support Reference Manual*. January 10, 1990 ed. National language Information Design Guide, ed. IBM. Vol. 2. 1990, IBM National Language Technical Centre: Toronto, CDN.

8

FrameMaker books

Overview

A FrameMaker book merely is a logical concept to handle a set of files. The main purpose of books is to automate the generation of Table of Contents, Index and the pagination process as well as the cross references.

Chapters in a book can consist of more than one file.

All files in a book can receive formats (style elements) from any document at once. This is a great feature of FrameMaker.

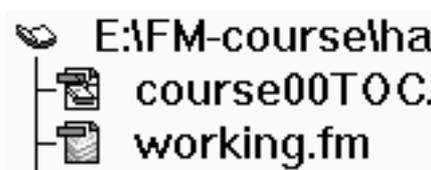
Contents

Handling book items	2
Numbering documents	5
Master books	9
Combining Two Books	10
Book error log	11
Migration from FrameMaker 5.x	14

Handling book items

- Either you start a new book without having any clue which files you want to put in.
- Or you start from an already existing file.
- The sequence of files in the book determines the chapter numbers (and other numbering).
- Generated files get the name from the current book, for example, *bookname*TOC.fm.

Icons in book window

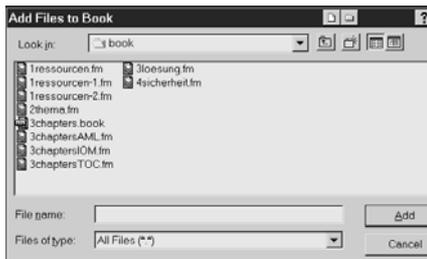


The files in the book window use different icons:

- Book
- Generated file
- Standard file

Functions in the book window

Toggle the display of file name or heading text with the  button. The displayed text is the content of the first paragraph. Be aware that this may be a paragraph number only.



Add a file to the book with the  button. You get a full Open dialogue to select from any directory. The book window displays the relative path of the file to the book. As long as the book is not saved, the absolute paths of the files are displayed (see page 4).

Update all files in the book with the  button. This updates the numbering, cross references and (re-)generates TOC, Index, etc.

Open a file in the book, double click on its name or title display.

Activate an already open file by clicking on its name or title display.

Page numbers

In the lower left corner of the book window the page range of the selected file(s) is indicated. An asterisk indicates changes in the file since last save.

Rename file

Note: Do not rename a file with the file manager, if this file is used in a book. You will need to set up the book again.

To rename a file, select it and change its name (similar to the Windows File Manager). For this operation it may be necessary to switch the display to **Display File Names**.

Before renaming a file FM saves the file with the old name and then updates all references of the renamed file.

Delete file

To delete a file from the book, select it and press the  button or use the **DEL** key. Update the book to reflect changes in TOC etc.

Note: *You do not get a chance to confirm the deletion, but you can undo the deletion. Not the file itself is deleted, just the notion in the book file.*

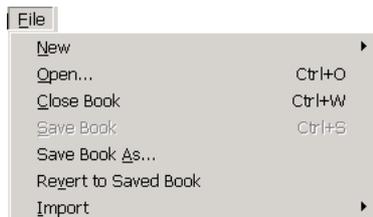
Change location of file in book

Select the file and move it with the mouse (Drag and Drop) to the desired location. There is no possibility to move the files with the keyboard.

You may need to adjust the numbering and/or pagination properties of the book files after rearranging the file order.

Menu items related to the book window

File menu:



For the book window some menu items change (see figure).

You get access to *all files in the book* (for open, close or save), if you hold the **SHIFT** key while selecting menu **File**.

When in a document file (x.fm) holding the **SHIFT** key while selecting the menu **File** lets you close or save *all open files*.

Edit menu



If a book window exists in the current FrameMaker session, the following dialogues get an additional option button **Book** to allow processing in all files of the book. The

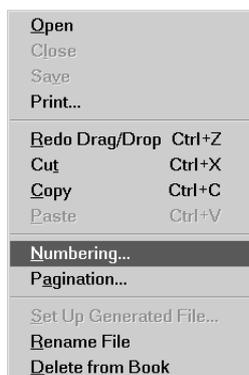
Edit > Spelling checker... gets the **Book** radio button enabled and selected.

Find/Change... gets the **Look in Book** radio button enabled and selected.

Rename File, Delete File from Book and **Update Book...** are only present for an active book window.

Additional items in Edit menu

Context menu (right mouse button)



When you have selected a file in the book window, the context menu (press the right mouse button to get it) provides the following functions (ignoring obvious ones here):

Undo Drag/Drop You have changed the order of the files with drag and drop. This will be undone.

Redo Drag/Drop The previous drag and drop is redone.

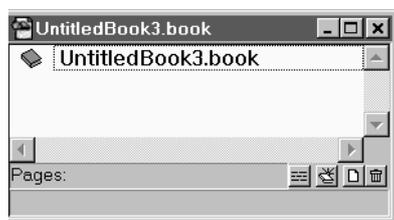
Numbering... Provides the numbering properties for the file (see *Set up numbering of chapter files* on page 6).

Pagination... Provides the pagination properties for the file (similar to **Format > Page Layout > Pagination**)

Set up xxx xxx is the type of a generated file (Table of Contents, Index, etc.). Use this to define the properties of the currently selected file.

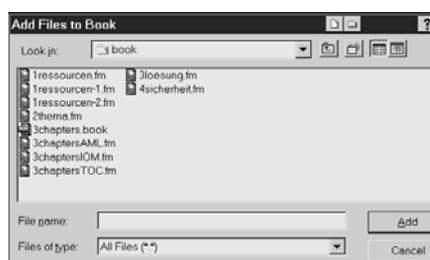
Add files to the book

Start a book



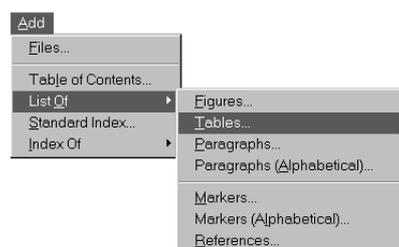
- **File > New > Book** starts a new book. If an FM-file is open, you are asked whether you want this file to be in the book. In this case the book gets the name from this file (e.g. maintenance.book)
- You may now add files to the book (see later). They may be in any directory.
- In the **Save as...** provide a reasonable name for the book, for example, microkeratome.book.

Add a chapter (file) to the book



- 1 In the book window use **Add > File...** to get a standard file list.
- 2 Select the desired file from the file list and **Add!** The file will be placed below the currently selected file in the book.
- 3 You may wish to move the file to another location in the book. Just move it with the mouse up or down (no keyboard function available).

Add a generated file to the book



FrameMaker can generate table of contents, indexes, lists of markers or paragraphs etc. This information is used in appendices or prefaces of real books or long documents.

Use the **Add** menu to add generated files to the book. This menu is only visible if the book file is active. Select the desired type of file:

Table of Contents... In the next dialogue specify the properties of the Table of Contents (see *Table of contents* on page 9-3).

List of The sub menu gives you a list of list types. These lists are based on marker types or paragraph styles (see *Arbitrary lists* on page 9-15).

Standard Index... In the next dialogue specify the properties of the Index (see *Index creation* on page 9-9).

Index of Gives you the choice of predefined indexes in a sub menu.

To add a generated file to the book,

- 1 Select the type of file from the **Add** menu (and probably using a sub menu)
- 2 If a detail dialogue pops up, either use the presented defaults (may be changed later) or set the properties now.
- 3 Back in the book window you may wish to change the location of the file in the book.

Numbering documents

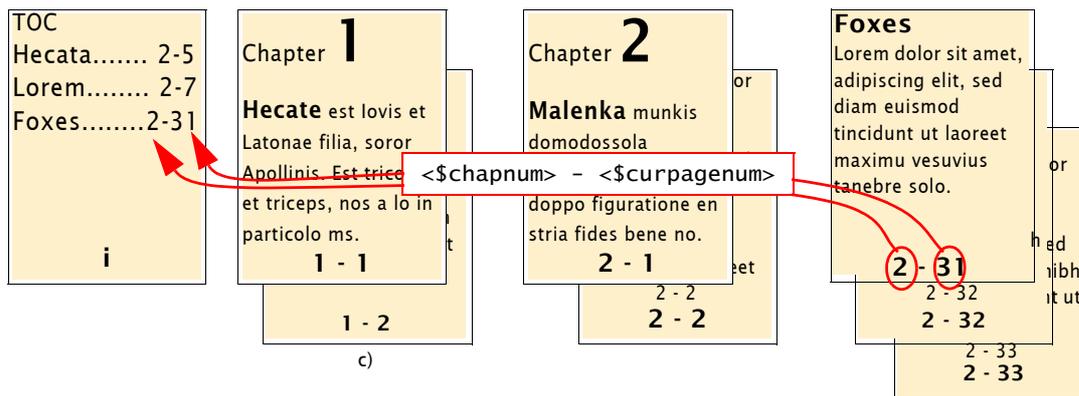
Overview

The following example demonstrates the numbering capabilities with FrameMaker. Normally the numbering properties of the various files are set from within the book window.

The settings are transferred into the individual files.

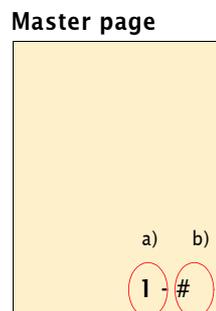
These properties are set in the book window for each file with **Format > Document > Numbering**

booknameTOC	introduction	main stuff-1	main stuff-2	file name (example.)
0	continue numbering (→ 1)	continue numbering (→ 2)	same as previous file (→ 2)	Chapter numbering
restart format= roman	restart format= numeric	continue	continue	Page numbering
restart	restart	continue	continue	Paragraph numb.



Page numbering on Master page

- a) System variable *Chapter Number* ($\langle \$chapnum \rangle$)
- b) System variable *Current Page #* ($\langle \$curpagenum \rangle$)
- c) Format of page number is set in **Format > Document > Numbering** (page # style) in the document or from the book.



Set up numbering of chapter files

A FrameMaker document holds a set of numbering properties:

- Paragraph numbering (see details in *Hierarchical numbering* on page 3-10).
- Page number (used in layout)
- Chapter number (new in FM 6)
- Volume number (new in FM 6)
- Numbering of the standard footnotes
- Numbering of the table footnotes

These properties apply to text files as well as to generated files.

Set up a numbering scheme

If your book has more than just a few files it is useful to set up a table of the properties:

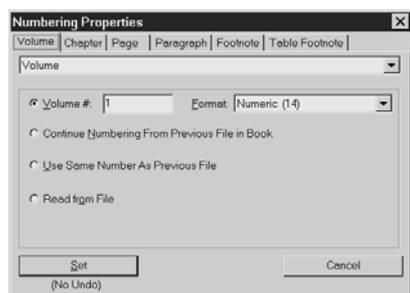
	File	Vol.	Chapter	Page number		Paragraph	Footnotes
preliminary.	title	1	0	1	roman	restart	1
	booknameTOC	same	same	continue	roman	restart1	continue
	introduction	same	same	continue	roman	restart.	continue
content	planning-1	same	next	1	arabic	restart.	continue
	planning-2	same	same	continue	arabic	continue	continue
	planning-3	same	same	continue	arabic	continue	continue
	working-1	same	next.	continue	arabic	continue	continue
	working-2	same	same	continue	arabic	continue	continue
	working-3	same	same	continue	arabic	continue	continue
appendix	diagrams	next	next	1	A	restart.	continue
	drawings	same	same	continue	next	continue	continue

Apply the numbering properties

For the files in the book apply the properties book by file:

- 1 Select the file
- 2 Either use the context menu and select **Numbering** or use menu **Format > Document > Numbering**.

Volume number



Set the volume number according to your file structure:

In 1st file of vol. 1 Set the **Volume #** to 1 and select an appropriate format (I, II, III or A, B, C etc.)

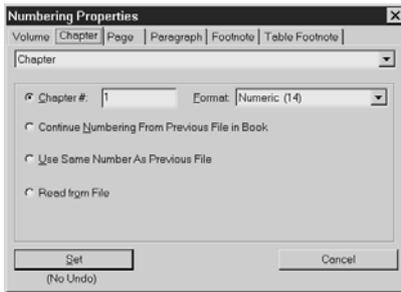
In next file of vol. Set **Use Same Number as Previous File**.

In 1st file of vol. x Set **Continue Numbering from Previous File in Book**.

Read from File

This takes the number as specified in the document file with **Format > Document > Numbering**.

Chapter number



Set the chapter number according to your book structure:

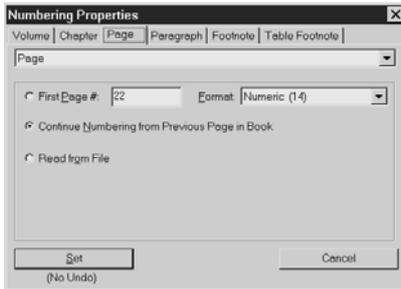
In 1st file of ch. 1 Set the **Chapter #** to 1 and select an appropriate format (1, 2, 3 or i, ii, iii etc.)

In 1st file of ch. x Set **Continue Numbering from Previous File in Book**.

In next file of ch. x Set **Use Same Number as Previous File**.

Read from File This takes the number as specified in the document file with **Format > Document > Numbering**.

Page number



Set the page number according to your book structure:

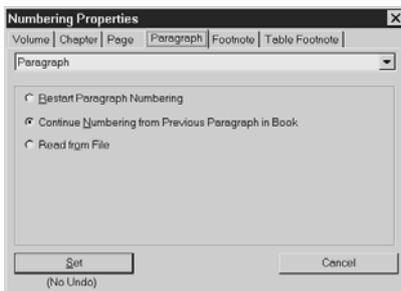
In 1st file of ch. 1 Set **First Page #** to 1 and select an appropriate format (1, 2, 3 or i, ii, iii etc.)

In 1st file of ch. x For continuous page numbers set **Continue Numbering from Previous File in Book**
For numbering scheme x-p set the number to 1.

In cont. files Set **Continue Numbering from Previous File in Book**.

Read from File This takes the number as specified in the document file with **Format > Document > Numbering**.

Paragraph number



Set the paragraph numbering according to your book structure:

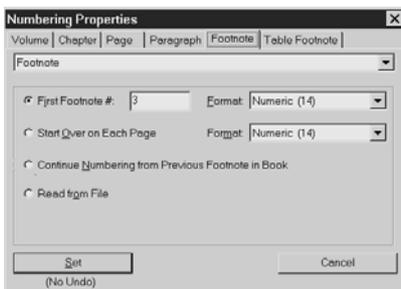
In 1st file of ch. 1 Set **Restart Paragraph Numbering**.

In 1st file of ch. x For continuous page numbers set **Continue Numbering from Previous File in Book**
For numbering scheme x-p set the number to 1.

In cont. files Set **Continue Numbering from Previous File in Book**.

Read from File This takes the number as specified in the document file with **Format > Document > Numbering**.

Footnote number



Set the footnote numbering according to your desire:

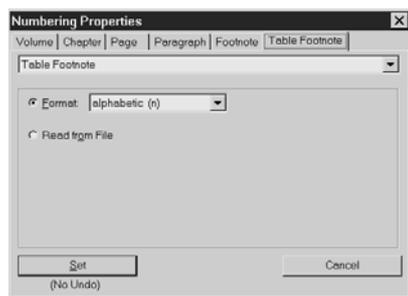
In 1st file of ch. 1 Set **First Footnote #** to 1 and select an appropriate format (1, 2, 3 or i, ii, iii etc.)

In other files For continuous footnote numbering across the book set **Continue Numbering from Previous File in Book**.

To start with 1 on each page, set **Start Over on Each Page**.

Read from File This takes the number as specified in the document file with **Format > Document > Numbering**.

Table footnote



Set the numbering properties for footnotes in tables according to your desire:

- | | |
|----------------|---|
| Format | Select an appropriate format (1, 2, 3 or i, ii, iii etc.) |
| Read from File | This takes the number format as specified in the document file with Format > Document > Footnote Properties... |

Book wide functions

Selection of files

- To select all files in the book use **CTRL+A**.
- To select a contiguous group of files, select the first file and then SHIFT+click on the last file of the group.
- To select arbitrary files, select the first file and then add more files by CTRL-clicking on the additional files.

Note: *Just selecting the book (the first line in the list) does not select anything!*

Search / Replace

When issuing an **Edit > Search/Replace** from the book window, the search starts in the file which is selected in the book window. The search automatically continues to the next file in the book and wraps to the first file etc.

If you change anything in a file, the search/replace loops in this file until you did not change anything in the file.

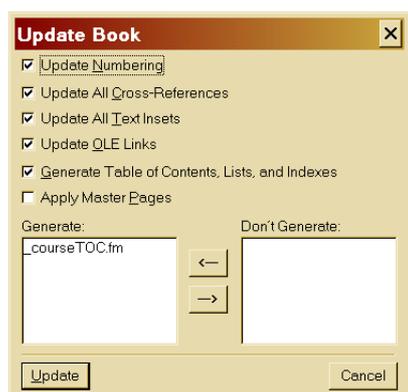
Spell checking

When issuing an **Edit > Check spelling...** from the book window, the check starts in the file which is selected in the book window. The check automatically continues to the next file in the book and wraps to the first file etc.

Update cross references and numbering

Neither the chapter numbers (or other paragraph numbering) nor cross-chapter references are current, until the chapter files are connected by a book.

To update the numbering and the references



- 1 Open the book file
- 2 Select the files to be updated.
- 3 Press the update button () or use **Edit > Update Book...**
- 4 In the dialogue **Update Book** move all files which you want to re-generate (TOC, index etc.) into the left pane. Move everything else to the right. You may have nothing in the left pane - Then only the numbering and cross references will be updated.
- 5 Press the **Update** button. All cross references, paragraph numbers and (if applicable) generated files are updated now.

Master books

Since FrameMaker version 6 it is possible to create master books. Keep in mind that a FrameMaker book is just a logical collection of files, in the case of a master book the collection of FrameMaker book files.

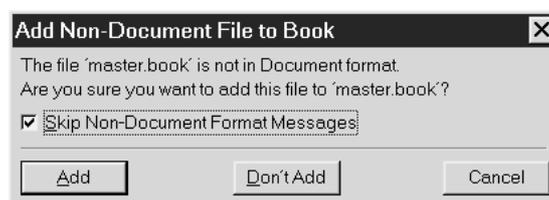
In a master book, only the following actions are possible:

- Add a book file to the master book
- Remove a book file from the master book
- Open a book file

Create a master book

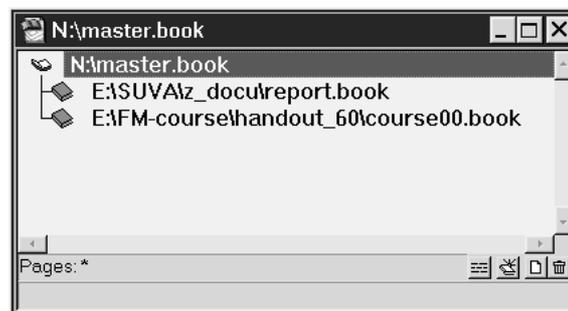
To create a master book, just create a book file with **File > New > Book** and save it with an appropriate name, e.g. `master.book`.

When adding files to the book with the icon  or with menu **Add > Files** you get a message about non-document files:



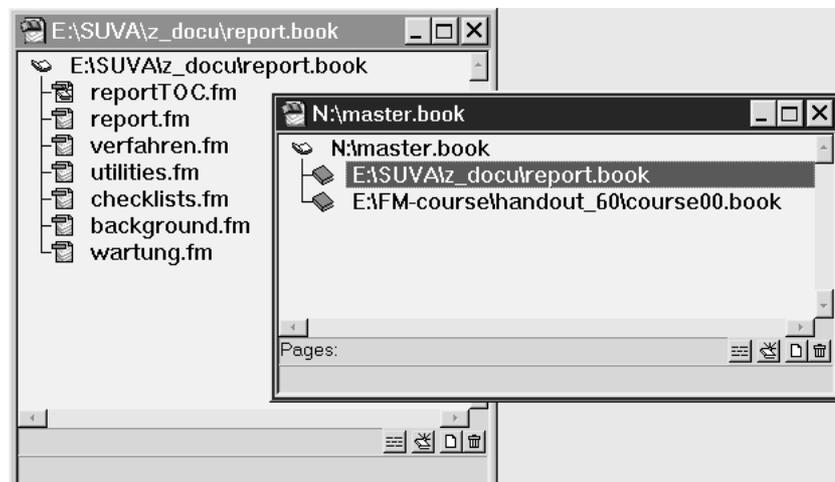
Activate *Skip Non Document Format Messages* to avoid this dialogue for future imports of book files.

The book files within the master book are represented with a book icon:



Access to document files

Use this master book to open the individual book files and get access to the document files in these book files:



Source Dick Gaskill <dgaski11@bluepumpkin.com>

Combining Two Books

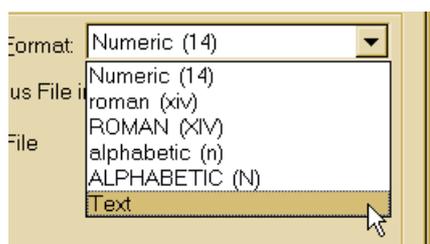
By Bright Path Solutions [www.travelthepath.com]

Bright Path Solutions use this technique when making custom training books, as it allows them to easily pull topics from different classes without browsing for them.

- 1 Open your first book and - if desired - save it as a new name (such as, xyzcustomclass.book).
- 2 Then, open the second book and «tile» or resize the open books so you can see them side-by-side.
- 3 In the second book, highlight the range of files you wish to move into the first, custom book. (To highlight, click to select the first file desired and shift-click to select the last file desired.)
- 4 Click down on the highlighted range and hold down the mouse button. Drag the files from the second book into the first book and drop them where desired by releasing the mouse button. (A small horizontal line appears to show you the drop location and moves as you move.)
- 5 Close the second book without saving.
- 6 Save the first, custom book. Adjust the file settings if desired and **Update** to adjust your table of contents and page numbering.

You now have a custom book with topics/chapters combined from two book files.

Numbering chapters with text



Volumes and chapters in a book may be numbered not only arabic or roman, but also as text. This comes in handy to specify part titles and the like:

- 1 In the Numbering Properties dialogue in the book, set the **Volume # Format** for the file in question to **Text** and put the *entire* part title (number and text) in the Volume # field. So, for instance, the Volume # field in your Part 1 file would contain:

Part 1: Part Title

- 2 Then, define the autonumber of your part title paragraphs as <\$volnum>. Your part title paragraphs can then be empty paragraphs, with the title text as part of the autonumber.

[richard.combs@polycom.com]

Book error log

When updating a book, errors are collected in a file called Book Error log - *bokname.book*. This file...

- can not be saved - it exists only during the current FrameMaker session. If you want to proceed tomorrow with the clean-up, select all items (**CTRL+A**) and copy them to a text editor window (or into a frame maker document).
- contains hyperlinks as you know them from the Web (blue text with underline).
- is cumulated during a FrameMaker session, if you do not delete (close) it between book functions.

It is good practice to work off all problems which are reported in this log, then delete (close) the log and update the book again.

Some of the errors reported would need your intervention or decision. Hence the book update will not be complete until you have handled these situations (e.g. missing fonts).

Sample report

Book Error Report

E:\FM-course\handout_60\course00.book

October 21, 2000 6:46:36 pm

E:\FM-course\handout_60\design.fm

Print setting for color Black is inconsistent.

Print setting for color Cyan is inconsistent.

E:\FM-course\handout_60\graphics.fm

[Unresolved Cross-Reference to import_apps.fm](#)

E:\FM-course\handout_60\references.fm

[Unresolved Cross-Reference to book.fm](#)

Update of file xxx is not possible

When updating the files in a book, FrameMaker can not react on the error messages such as

- Font xxx missing and hence substituted by yyy for this session. See *Font issues* on page A-33.
- Language abc missing (dictionary not installed).

To handle this problem

- 1 Open all files in the book with **SHIFT+File > Open All Files in Book**.
- 2 Respond to the error messages.
- 3 Perform the desired book operation, such as import format.
- 4 Close all files in the book with **SHIFT+File > Close all files in book**.

Inconsistent settings

Inconsistent colour settings

For handling inconsistent colours see *Inconsistent colour* on page A-32

Inconsistent conditional text settings

A particular condition tag is set to be shown in one file and to be not shown (hidden) in another. This is an informal message and need not to be cleared – if the settings are what you want.

To get rid of this error at the update of a book,

- Select all files in the book
- In **View > Show/Hide Conditional Text** set the settings you need
- You may wish to eliminate any conditions by **Show All**.

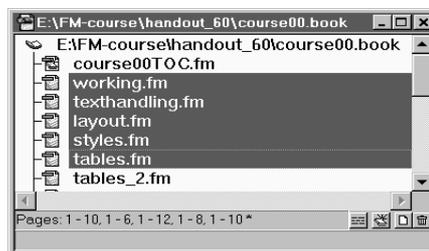
Inconsistent numbering properties

This indicates that the numbering set within a file differs to the settings in the book file. To correct this:

- Check the numbering for each file in the book

Import and distribute document properties

Import formats and distribute to all files of book



- 1 Open the book file
- 2 Select the files to be updated (see image).
- 3 Continue with the procedure described at *Import formats into book files* on page 3-15.

Import and distribute only part of a format category

To import just some of the needed formats (e.g. paragraph formats for headers only) you need an intermediate document.

The procedure is described at *Import only part of a format category* on page 3-15.

Printing books

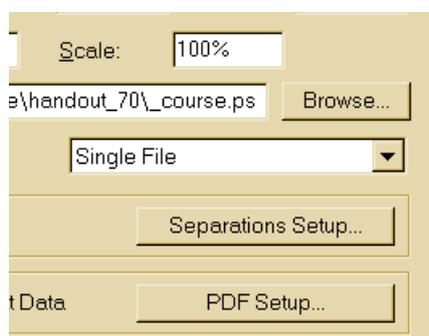
You may print all files (**File > Print Book...**) or only a selection from the book window (**File > Print Selected Files...**)

When printing a book to file (for example, a PostScript file for later distilling to a PDF), you have the choice to

- Create a single file for the whole book.
- Create a separate file for each document file.

You need to select **Single File** for creation of a PDF of the whole book. Only in this mode correct bookmarks and hyperjumps can be created.

For other ingredients to create a PDF see *Standard process with Distiller* on page 10-4.



2007-06-22

E:\FM-course\handout_70\book.fm

Migration from FrameMaker 5.x

FrameMaker 6 introduces additional system variables \$chapnum and \$volnum as well as additional Running H/F x variables for master pages. Until then crossreferences were needed to get the desired layouts.

Due to these changes FM > 5

Open the old book in FrameMaker 6 or higher updates master pages (if it can). FrameMaker will convert the book and all files to the new level. FM saves the old files with a .backup extension and tries to convert file internals. You may end up with a large error log.

Of course you will need to adjust the layouts etc. yourself.

No more prefixes

Use <\$chapnum> in the generating pattern for the page number in TOC etc.

Old	<\$paratext>	<\$pagenum>
-----	---------------------------	--------------------------

```
<$paratext> ..... <$pagenum>
  <$paratext> ..... <$pagenum>
    <$paratext> ..... <$pagenum>
```

In addition specification of prefixes in the set up for generated files is necessary to carry over chapter numbers etc.

New	<\$paratext>	<\$chapnum>
-----	---------------------------	--------------------------

```
<$paratext> .....<$chapnum> - <$pagenum>
  <$paratext> .....<$chapnum> - <$pagenum>
    <$paratext> .....<$chapnum> - <$pagenum>
```

9

Generated documents

Overview

The Table of Contents (or TOC) is generated from a file or files of a book (or a set of).

An index can be generated from a file or files of a book (or a set of) by collecting the information from the index markers.

Lists of tables, graphics, formulas etc. can also be built from the paragraph properties. Such lists can help during the production process or be part of the final book.

Once the content of such documents is generated, the format can be adapted and the generation pattern can be changed.

The mechanism of index generation can also be used to generate parts lists and the like.

Contents

Hypertext links	2
Table of contents	3
Index creation	9
Arbitrary lists	15
Building blocks on reference pages	20
Adding text to generated document	21

Hypertext links

In all generated files (Table of Contents, Index, List of authors and the like) FrameMaker can automatically insert hypertext links to the source location. These hypertext links

- ease the development of the document with the various revision cycles, homogenisation headings, correction of index entries etc.
- are automatically transformed into hyperjumps in PDF and links in HTML

To get the hypertext links

Check the box **Generate Hypertext Links** in the Setup for the TOC or index etc.

Use the hypertext links in FrameMaker

Holding **CTRL+ALT** while moving over the TOC or index lines (or other places with the links) changes the cursor into a pointing hand to indicate a hyperjump.

To jump just click now.

Note: *Cross references act also as hypertext links.*

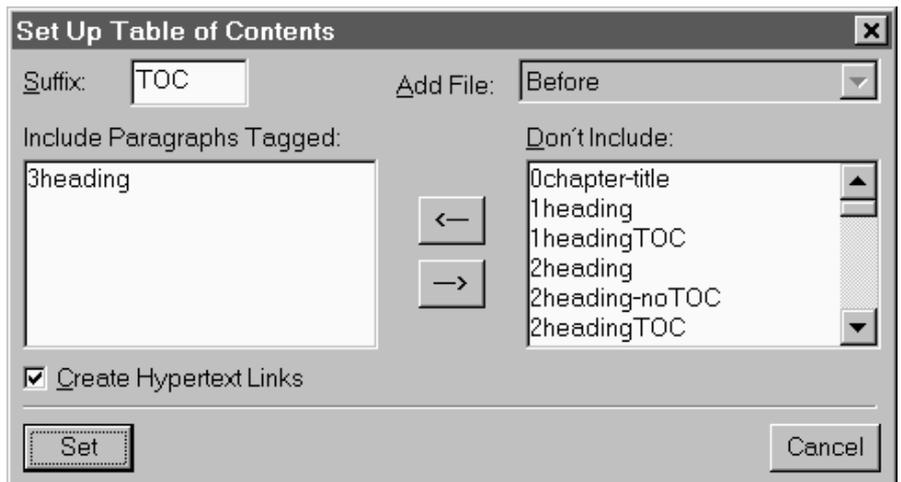
Note: *In generated files imported «by reference» into another document the hyperjumps do not work, because there is no text which can be accessed directly. For working hyperjumps the generated document must be imported «by copy» - this requires a new copy after each update.*

Table of contents

- The table of contents (TOC) must be started as a generated file (do not set up a file and then try to generate the TOC into it).
- Document comprising a book may be closed to generate the TOC from them. The book file, however must be open.
- You can generate a TOC from a single chapter file also.
- The format of the generated file can be influenced by setting up proper paragraph styles and master pages in the template for the chapter files.

Generate TOC from a file

- 1 Enter the document from which you want to generate the TOC and select **Special > Table of Contents...**
- 2 You are prompted whether to set up a TOC as part of a new book or as an independent file. Press the **Yes** button.
- 3 In the dialogue **Set Up Table of Contents** move the paragraph styles, which should appear in the TOC, to the left.



Note: You can move all items from one side to the other by holding **SHIFT** while clicking on the arrow button.

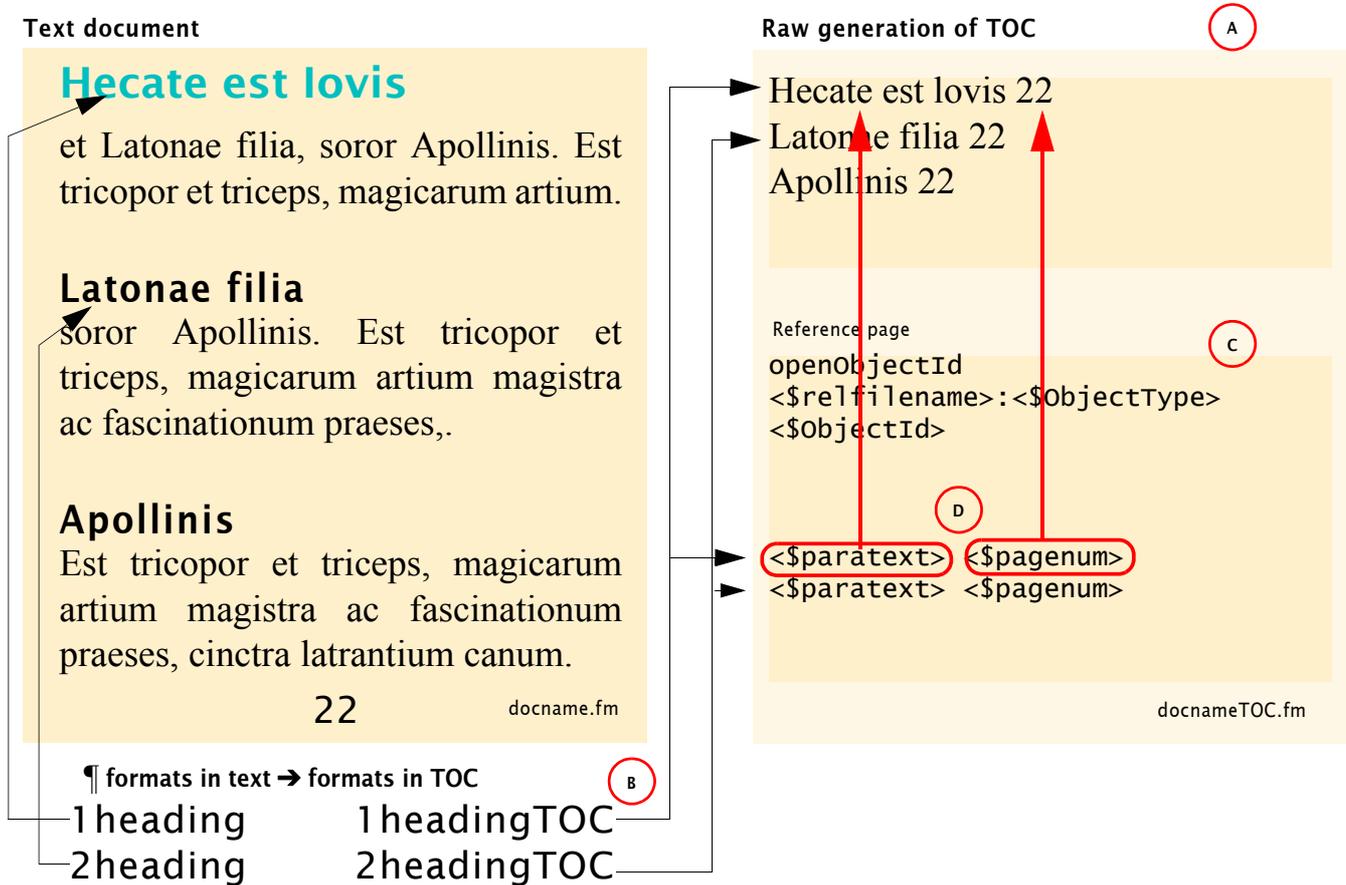
- 4 You may wish to generate hypertext links: click the selection box.
- 5 Press the **Set** button. A new file named *documentname-TOC.fm* is created with default presentation of the TOC.

2	Table of contents 1¶
3	Generate TOC from a file 1¶
3	Format the generated TOC 2¶
3	Standard formatting for the TOC entries 2¶
4	Table of contents within a text document 3¶
4	TOC imported to the current flow 3¶
5	TOC Imported to nested text frame 4¶

If your document file contains definitions for xxxTOC paragraphs, these will be used and the generated TOC may look already quite well. See *Format of the generated TOC* on page 6 for further refinement of the TOC.

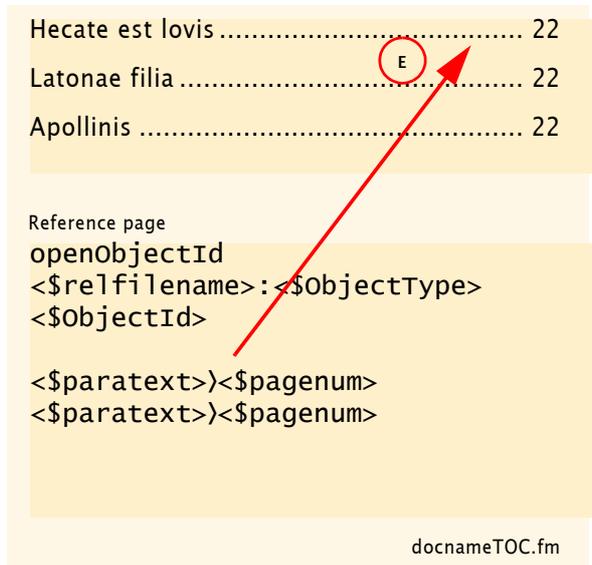
- 6 Save the file. **Do not change the name of this file!**
- 7 You must update this TOC file after changes in the original document file: in the document file follow steps 1 to 6 from above. Since you already have a TOC file from step 6, this will be used for the re-generation.

Generation process

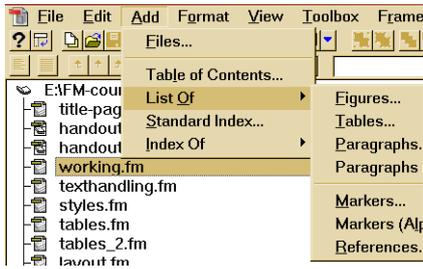


- 1 For the TOC file [A] ¶-formats and layout pages are copied from the book or current document file.
- 2 For each ¶-format defined in the TOC setup a ¶-format named xxxTOC with default properties is created in the TOC file [B].
- 3 A TOC reference page [C] is created (or copied also) which contains the (default) definitions [D]. These also get the ¶-formats xxxTOC.
- 4 For each ¶-format defined in the TOC setup a line for the TOC is generated based on the pattern defined by [D].
- 5 To refine the layout of the TOC, you modify the ¶-formats xxxTOC in the TOC file [E] and/or the generating pattern, for example, set a TAB between the text and the page number [F]
- 6 Changes in the generation patterns require an **Update Book** cycle to create the new contents.

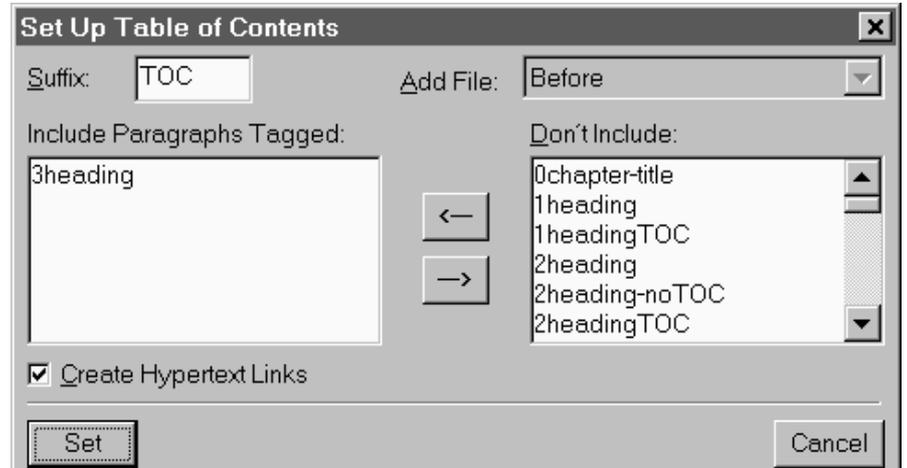
Format of TOC adapted



Generate TOC for a book



- 1 Enter the book file for which you want to generate the TOC
- 2 **File > Add > Table Of Contents.**
- 3 Define where you want to add the generated file into the book (only currently open files are in the drop down list).
- 4 In the dialogue **Set Up Table of Contents** move the paragraph styles, which should appear in the TOC, to the left.



Note: You can move all items from one side to the other by holding **SHIFT** while clicking on the arrow button.

- 5 You may wish to generate hypertext links: click the selection box.
- 6 Press the **Set** button. A new file named name *documentname*-eTOC.fm is created with default presentation of the TOC.

```

1 | .....
2 | Table of contents 1¶
  | Generate TOC from a file 1¶
  | Format the generated TOC 2¶
3 | Standard formatting for the TOC entries 2¶
  | Table of contents within a text document 3¶
4 | TOC imported to the current flow 3¶
  | TOC Imported to nested text frame 4¶
5 | .....

```

If your book file contains definitions for xxxTOC paragraphs, these will be used and the generated TOC may look already quite well. The book gets these definitions at the time the book is set up from a document file.

For further refinement of the TOC see *Format of the generated TOC* on page 6.

- 7 Save the file. **Do not change the name of this file!**

Format of the generated TOC

- 1 Open the TOC file
 - The layout you see is the same as the document from which the TOC was generated.
 - The names of the paragraph formats for the TOC entries are built from the original paragraph style names (e.g. 1heading, 2heading) with the appendix TOC: 1headingTOC, 2headingTOC.
 - On the reference page named TOC you will find the following lines. These are the generating patterns for the TOC entries (the first line is needed for the hypertext links).

```
openObjectId <$relfilename>:<$ObjectType> <$ObjectId>
<$paratext> <$pagenum>
<$paratext> <$pagenum>
```

- Although second to last lines have the same content, these lines are formatted differently using the style names 1headingTOC and 2headingTOC (as an example).
- 2 Format these xxxTOC lines according to your needs (tabulation, leaders for the tabs, font size etc. and update the paragraph catalogue with the settings).

Note: *Whether an underline character in Custom Leader creates a solid line or not depends on the font.*

Adapt the formatting of the TOC entries

We use the line with style 1headingTOC as an example here.

- 1 Insert a tab between the two elements:

```
<$paratext><$pagenum>
```

- 2 In the paragraph designer set a right aligned tab as far as possible and apply a dot leader. You may also wish to indent the paragraph depending on the level of entry.
- 3 If you wish to include the paragraph number in the TOC entry, add the element <\$paranumonly> to the start of the line:

```
<$paranumonly>.<$paratext><$pagenum>
```

This paragraph number is available, even if in the text document the paragraph number is invisible (colour white).

- 4 Save the changed document

The next time you generate the TOC, the new formatting will be used

Example of properly formatted entries on reference page TOC

```
<$paratext> <$chapnum>
<$paratext> .....<$chapnum> - <$pagenum>
<$paratext> .....<$chapnum> - <$pagenum>
<$paratext>.....<$chapnum> - <$pagenum>
```

Prepare for entries which are longer than a line in the TOC

The text of the TOC entry will extend beyond the right tab position, and the TAB will not be performed. Hence you need to restrict the width of the text frame to the same width as the TAB position.

This text frame is wider than the position of the right tab:

```
Long entry in the table of
contents ..... 17
Another entry..... 23
```

This text frame is as wide as the position of the right tab:

```
Long entry in the table of
contents.....17
Another entry .....23
```

Note: *Rounding errors may require a slightly smaller (-0.05mm) TAB position than the width of the text frame.*

Tabbing in long lines

Long TOC (or Index or ...) entries *may* not create the correct tabbing in the second (or last) line of an entry. One TAB character is used to reach the TAB position in the first line. A second TAB is needed to reach the TAB position in the second line.

Only one TAB char in the REF page:

```
<$paratext><$pagenum>
Long entry in the table of
content 17
Another entry..... 23
```

Two TAB chars in the REF page:

```
<$paratext>><$pagenum>
Long entry in the table of
content .....17
Another entry .....23
```

Include table of contents in document

The TOC file generated from a text document (also that of a complete book) can be referenced from any file including the one it was generated from.

Generate the TOC

- 1 Generate the TOC according to the method described earlier.
- 2 You may move the generated file to a different location (to another directory, for example: E:\FrameMaker\Course\sample\foi1stoc.fm. **Do this only as the last stage!**

Note: *FrameMaker always generates a file into the same directory as the source file, hence you will get a new file at the old place, which does not use your fancy formatting. Even importing the formatting from the 'old' file will not help, as the properties from the reference pages are needed during the generation.*

- 3 At the desired place in the main document import the TOC document by reference with the settings *Body Text flow*, *Retain Source's formatting* and *Update automatically*.
- 4 As demonstrated in *TOC Imported to nested text frame* on page 8, the TOC may be imported also into text flows inside an anchored frame to get special appearance.

Update the TOC

- 1 Double click on the TOC
- 2 Press the **Update Now** button

TOC imported to the current flow

Table of contents 1
 Generate TOC from a file 1
 Format the generated TOC 3
 Standard formatting for the TOC entries 3
 Table of contents within a text document 4
 TOC imported to the current flow 4
 TOC Imported to nested text frame..... 5

TOC Imported to nested text frame

Be aware that tabulation needs room - A two column text frame within the anchored frame will be too narrow in the case here.

Table of contents 1	Text frame	
Generate TOC from a file 1		
Format the generated TOC 3		
Standard formatting for the TOC entries 3		
Table of contents within a text document..... 4		
TOC imported to the current flow..... 4		
TOC Imported to nested text frame 5		
XXX		
		Anchored frame

TOC and current document have different layout

When importing form a file with different layout characteristics of the imported text flow, either

- use the formatting of the target flow. You may need to create new paragraph formats in the target document.
- or use the formatting of the source document. In this case you may need to adapt the paragraph formats in the source document.

Example

The source document is a TOC using no side head area in the layout. The target document (such as this handout) uses a layout with side head area. If you want the imported TOC to use the full the line length (as it is in the source document), you must define the paragraph formats xxxTOC (either in the source or the target document) with the pagination property: «across all columns and side heads».

Without this setting the source document will use only the column width (as this paragraph does) and the tabulation may not be honoured.

Index creation

For a good index you need ...

Experience

You need a lot of experience to create a good index for a general document. FrameMaker can only provide the mechanics, not the intellectual capacity...

Be prepared to accept 'holes' in your index: the fantasy of the reader only rarely matches that of the author.

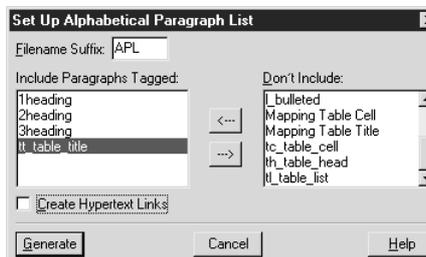
Time

- A good index can only be created by many iterations.
- Rules about generating the index must be adapted regularly according to the nature of the document and the readership.
- FrameMaker APIs allow to speed the creation of an index, but also these can not provide intelligence.

Quick and dirty index

A quick and dirty index can be constructed from an alphabetical list of paragraphs. Use heading paragraphs (including table headings, table titles, figure titles).

Create an alphabetic list



- From the current document **File > Generate / Update...**
- In the dialogue **Generate Book** select the option **List** and select **Alphabetical Paragraph List** from the drop down list.
- In the dialogue **Set up Alphabetical Paragraph List** move the desired paragraph types from the right pane to the left pane.
- Generate!** creates a new document named *documentAPL*.
- You may not have two alphabetical lists with different paragraph types listed, because there is only one name-appendix (APL).
- For the intended purpose - just list the stuff - you will not need to format the list similar to what you will do with a TOC.

Rules for keywords

- Choose keywords carefully. Include words which do not appear in the document, but describe the concepts behind existing words (so that readers can find 'grouping words'. In most cases you will need two types of keywords: objects and actions which are applied to these objects.
- Keywords are always singular, nominative.
- Provide additional information to the keyword in parentheses, for example «contents (logically)» rather than logical content. This continues the hierarchy of terms.

- Use highlighting in keywords only for specific purposes. For example for subroutine names, program parameters.
- Do not forget to specify synonyms and antonyms.
- To define abbreviations you may use a form such as «KGB = ...». The colon has a specific meaning in Frame-Maker index entries.
- Do *not abbreviate* the main keyword in subentries. Keep the audience in mind: technical documentation is often read by non-native speakers (Greeks read English ...). The following is a bad example:

```
break
    bicycle ~ (hydraulic)
    truck ~ (pneumatic)
```

Both comprehension and translation fo this stuff is cumbersome.

Define index entries

Index entries are markers of the type index.

To insert an index entry



- Place the cursor at the desired point. If your index entry can be formed from existing text, select that text.
- Special > Marker** opens the dialogue **Marker**. The marker type Index might be selected already. If not, select this type from the drop down list.
- If you have selected text, or do so while the Marker dialogue is open (it stays open), the selected text appears in the box as **Marker Text**.
- Change the marker text to your desire and place the marker with **New Marker!**

Types of index entries

Blanks in index entries

Blanks may be arranged around the colon and the semicolon which have syntactic meaning in the entries. These blanks do not appear in the index display. Required blanks (e.g. to keep words together) must be inserted as _.

Multi level entries

Multi level entries are separated by a colon (:). The following example will create a main entry *abrasion* and a sub entry *glacial*.

```
abrasion:glacial
```

It is good practice to define the possible words for the top level in advance.

Multiple entries in one marker

Multiple entries within one marker are separated by a semicolon. This is for example useful to place all permutations of multi level entries in one marker:

```
character:delete;delete:character
```

Index entry spanning a range of pages

If an index entry should span a range of pages, the entry must be placed both on the start-page and on the end-page of the range:

```
<$startrange>text of index entry
<$endrange>text of index entry
```

Page ranges are created automatically, if the same marker text appears in index markers on successive pages.

Synonyms with no page reference

Synonyms should not display a page number in the index. To suppress the page number, add `<$nopage>` to the index entry:

```
<$nopage>Erosion. See Abrasion
```

If these entries are not placed at the end of the Index marker, you need the following instruction to regain page numbering:

```
<$singlepage>Abrasion
```

Highlighting of index entries

To apply highlighting, such as font changes, to an index entry, only character formats can be applied. It is not possible to use 'local' formatting with **Format > Font** etc.

```
<1highlight>special<Default Para Font> marker text
```

Note: *The term <Default Para Font> can be abbreviated to </>.*

Special characters in index entries

Since colon, semicolon etc. are syntactic characters in Index Marker entries, these characters must be 'escaped' for literal use:

```
<1highlight>Income</> \> 100 millions
fruit\; vitamins for all
cucumbers\; beans\; cauliflower
```

You may use standard escaped symbols (see *Special characters in dialogue boxes* on page A-3) and symbols from special fonts by means of character formats:

```
\F = character (format)
including <ddd_symbols>8</> importing<$nopage>
```

These definitions create the following index entries:

```
f = character (format) .....17-2
including → importing
```

Force sort order

To force a word (e.g. with umlauts) or an entry with punctuation so sort similar to another, use this syntax:

```
Ägerter[aegerter]
0900 233 455[nine hundred]
\F = character (format)[*]<$nopage>
```

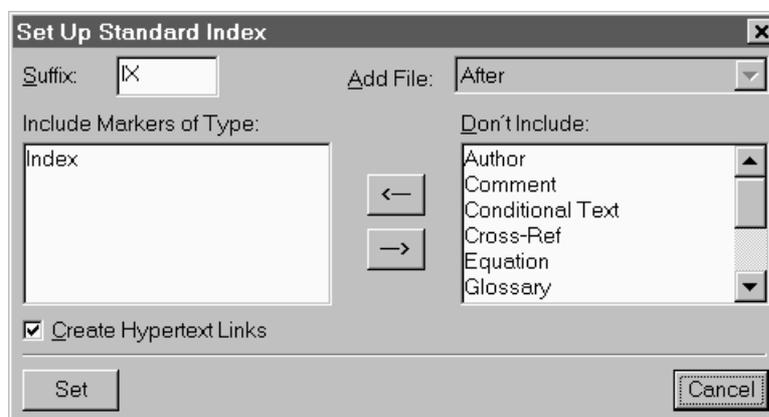
These definitions create the following order of index entries:

```
f = character (format)
Ägerter .....13-5
Affeltranger .....13-4
Cost History, screen .....12-5
0900 233 455 .....13-5
North pole .....17-2
```

Generating an index

Generate index from current document

- 1 **Special > Standard Index** You are prompted whether to set up an index as part of a new book or as an independent file. Press the **Yes** button.
- 2 In the dialogue **Set Up Standard Index** the appropriate marker type is already selected.



- 3 Hypertext links are a great help and should be ON.
- 4 Press the **Set** button. A new file named *document-nameIX.fm* is created with default presentation of the Index.

If your document file contains definitions for xxxIX paragraphs, these will be used and the generated index may look already quite well. See *Format the generated index* on page 13 for further refinement of the index.
- 5 Save the file. **Do not change the name of this file!**
- 6 You must update this index file after changes in the original document file: in the document file follow steps 1 to 6 from above. Since you already have a index file from step 6, this will be used for the re-generation.

Generate index from book

Use **Add > Standard Index**. You are not prompted and continue with step 2 as above.

Format the generated index

- 1 The layout of the abcIX file is the same as the document from which the index was generated (in case you generated the index from a book, the formatting comes from the document with which the book was created).

You may wish to change the layout in the master pages (for example, set up two columns).

- 2 The names of the paragraph formats for the index entries are built from the levels of the entries: `Level1IX`, `Level2IX`. `GroupTitlesIX` defines the 'character headings'.
- 3 On the reference page named IX you will find the following lines. The purpose of these lines can be determined from their format names (here indicated to the left):

SeparatorsIX	1, 2-3	Add any spacing between index text and page-numbering
Level1IX	Level1IX	Replace separating character with ... for cc-pp numbers
Level2IX	Level2IX	Define the <i>position</i> of the TAB (for the page number) in the lines <code>Level#IX</code> . The TAB character to be generated must be placed on the line with ¶-format <code>IndexIX</code>
GroupTitlesIX	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	
SortOrderIX	<\$symbols><\$numerics><\$alphabetic>	
IgnoreCharsIX	----	
ActiveIX	openObjectId <\$relfilename>:<\$ObjectType> <\$ObjectId>	
IndexIX	<\$pagenum>	

Add `<$autorange>` to automatically combine entries.

Enter any 'prefixes' to the page-number here (not in the `Level#IX` lines), if you need one. In particular, insert the leading **TAB** here. For example you may set up this line (format `IndexIX`) as:

```
><$chapnum>\+<$pagenum>
```

- 4 The basic formatting concerns the index entries with the paragraph formats `LevelxIX`. Format them according to your needs (**Paragraph Designer, Update All!**)
- 5 You may also wish to change the appearance of the Group Titles, in particular the Font and the Size, Space above, Space below and probably apply a line before the paragraph.
- 6 You can combine entries under one group title with these definitions in the `GroupTitlesIX` paragraph:


```
A-D[A];E-H[E];I-L[I];M-P[M];Q-T[Q];U-Z[X]
```

The symbols in brackets, such as `[A]` or `[0]` specify the sort order for symbols and numbers. The same method is used for the alphabetic character groups.
- 7 You may also wish to change the appearance of the page number (insert a tab character in front of `<$pagenum>`). The tab position, however, must be defined in the paragraph format of the `LevelxIX` lines.

Note: *Changes in the formatting become visible immediately in the reference pages and in the body pages. Changes of the generation template (e.g. the insertion of the TAB character in front of the page number) become visible only after you have re-generated the index.*

Sort order

Sort order is defined by the building blocks `<$symbols>` `<$numerics>` `<$alphabetics>`. They are defined as follows. Note the grouping by blanks!

```
<$numerics>      0 1 2 3 4 5 6 7 8 9
<$alphabetics>  AÁÀÃÄÅÄäåääääª Bb ÇçÇç Dd EÉÊËÈèéèèè
Fff Gg Hh IÍÎÏİi ìîîî Jj Kk Ll Mm NÑnñ
OÓÔÕÖØøóòðõöøª Pp Qq Rr Ss Tt
UÚÛÜúüùûüü Vv Ww Xx Yÿ yÿ Zz
<$symbols>      All other characters in ASCII order
```

Change sort order

You can exchange the order of the building block, e.g. to sort symbols before the alphabetic characters.

To change the order within a building blocks, you must completely redefine the block.

- When replacing `<$alphabetics>` with individual characters, separate the letter groups with a space.

Letter groups - for example, `F f f` - 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 (`\<` and `\>`).
- To indicate that a letter pair should be sorted as a single character, specify the letter pair between angle brackets (`<>`) - for example, `Ççç<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.

Example definition for SortOrderIX

Although things are displayed in lines in this script, there must be only one paragraph of type `SortOrderIX`. No line breaks are allowed.

```
<$symbols><$numerics>AÁÀÃÄÅÄäåääª Bb ÇçÇç Dd
EÉÊËÈèéèèè Fff Gg Hh IÍÎÏİi ìîîî Jj Kk Ll Mm NÑnñ
OÓÔÕÖØøóòðõöøª Pp Qq Rr Ss Tt UÚÛÜúüùûüü Vv Ww Xx Yÿ yÿ
Zz Åå Øø
```

Include index in document

Follow the rules defined for *Include table of contents in document* on page 7.

Index entry does not show up in index

When working on the index and searching for markers with Find/Change you may come across non-index markers. These will change the marker type in the Marker dialogue.

Hence: before entering marker text for an index entry always check, whether you are really creating an index marker. You may change the marker type and then press **Edit Marker** at any time.

Arbitrary lists

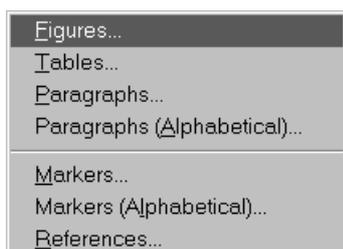
Especially in scientific publications various lists are required, for example, lists of:

- Authors
- Formulae
- Figures
- Tables
- Diagrams
- Bibliographic references (see *Bibliography with EndNote 5* on page 20 in chapter 7).

Lists Some of these lists can be generated without further work, others need the insertion of markers into the text.

When FrameMaker generates these lists, it produces a file, which later can be formatted to the desired needs and also be imported to another document.

These files can either be produced from the current document or from a FrameMaker book.



Indices In an index you can specify the sorting order, the grouping of index characters etc. (in the appropriate reference page).



Note: *Lists do not allow to group similar entries into one with a list of page numbers. If you want to avoid multiple entries of same kind (e.g. three times the same author name with different page numbers) you must use an index.*

List of tables

Tables may bear a title, which is associated with paragraph style (in this document: `ttn-table-title-numbered`). Hence a list of all tables is a list of all paragraphs of the format(s) used for the table titles.

To generate the list of tables,

- 1 Open the book file (or the file from which you want to generate the list)
- 1 **Special > Standard Index** You are prompted whether to set up an index as part of a new book or as an independent file. Press the **Yes** button.

- In the dialogue **Set Up List of Tables** move the appropriate paragraph format(s) to the left. FrameMaker automatically recognises a format TableTitle.



- You may wish to generate hypertext links: click the selection box.
- Press the **Set** button. A new file named *document-name*LOT.fm is created with default presentation of the List.
If your document file contains definitions for xxxLOT paragraphs, these will be used and the generated index may look already quite well. See *Format of the generated TOC* on page 6 for further refinement of the index.
- Save the file. **Do not change the name of this file!**
- You must update this list file after changes in the original document file: in the document file follow steps 1 to 6 from above. Since you already have a index file from step 6, this will be used for the re-generation.
- You may wish to adapt both the formatting in the generating pattern (on a reference page named LOT). See *Format of the generated TOC* on page 6 or *Format the generated index* on page 13 for details.

You can import the generated file (referenced or copy) into the document:

Table 1: Control characters in the text	1 - 3
Table 2: Hierarchical numbering.....	4 - 6
Table 3: Snapshot from log of PC DDD-KLD	5 - 8
Table 4:	5 - 10
Table 5: The title can only be set in unrotated mode of the table	5 - 10
Table 6: Table with straddled cells	5 - 13
Table 7: Building blocks for system variables	7 - 4
Table 1: Keyboard shortcuts (english and german FrameMaker).....	A - 2
Table 2: Special characters in dialogues	A - 3
Table 3: Wildcard characters in Find dialogues	A - 3
Table 4: Insert special characters with CTRL+q.....	A - 4
Table 7: Comparison between FrameMaker and Word for Windows	C - 3
Table 9: Imported from Excel and manually adapted.....	D - 8

Specials with these lists

Paragraph numbering may restart at 1. In this document (book) the appendices start again with 1 (A) to allow for easy insertion of additional chapters.

You may have empty paragraphs (see line with Table 4 above). To fix this, go to that table and either fill in the title or remove the title (it may have no significance).

List of figures

Since FrameMaker does not provide a native method to display figures with titles, tables are used for this purpose.

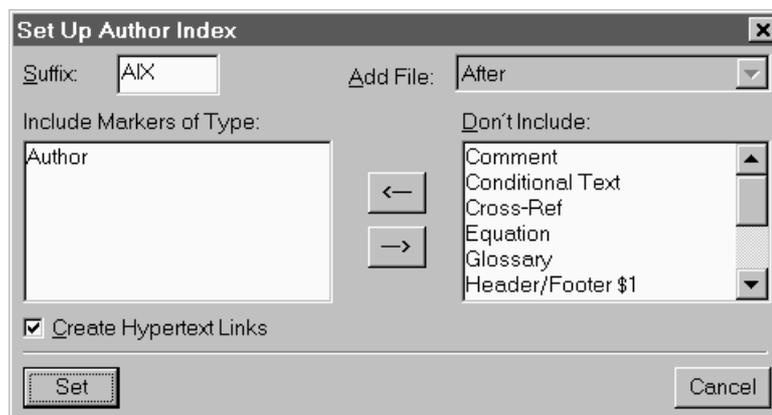
Hence a list of figures is a list of tables of a specific paragraph format (e.g. `ftn-fig-title-numbered`).

With **Special > List of > Figures** you specify the paragraph format(s) to be included. See *Figures in FrameMaker* on page 6-6 for details how to set up and use such tables.

Index of authors

An index of authors in an index of markers of type Author. To create this index:

- 1 Insert markers of type Author (**Special > Marker**) in the documents at an author name (selected text will be copied to the Marker dialogue).
- 2 In the document or the book file add the generated index with **Special > Index of > Authors...**



- 3 In dialogue **Set up Author Index** you move the type(s) of markers to be included from the right pane to the left pane (Author is already selected).
- 4 Press the **Set** button. A new file named name *document-nameAIX.fm* is created with default presentation of the Index.

If your document file contains definitions for xxxAIX paragraphs, these will be used and the generated index may look already quite well. See *Format the generated index* on page 13 for further refinement of the index.

- 5 Save the file. **Do not change the name of this file!**
- 6 You must update this index file after changes in the original document file: in the document file follow steps 1 to 6 from above. Since you already have a index file from step 6, this will be used for the re-generation.

- 7 You may wish to adapt both the formatting in the generating pattern (on a reference page named AIX). See *Format of the generated TOC* on page 6 or *Format the generated index* on page 9-13 for details.

You can import the generated file (referenced or copy) into the document:

Gulbins	4
Obermayr	4
.ries GmbH	5
Sandybrook Software	5
Thomas Glombik	5
Systemc.....	5

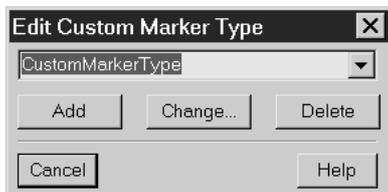
Document specific lists

Assume you are describing a large archeological site. You may wish to provide the reader special lists:

- Strati (layers of findings, thus epochs)
- Artefacts found (pottery, fibulae, weaponry etc.)
- Locations (house, place, garden, cemetery etc.)
- and so on.

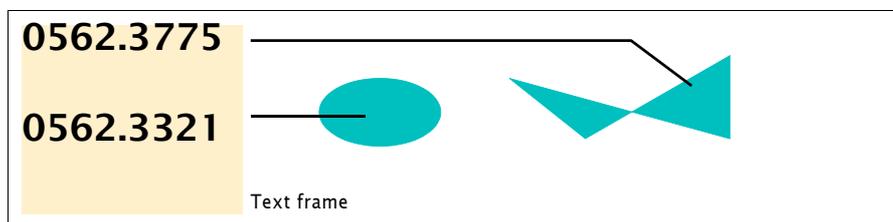
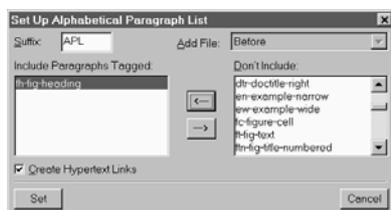
To create these lists you need markers of appropriate type (stratus, artefact, location) and insert them at the proper place.

- 1 Define a new marker type with **Special > Marker...** and select **Edit...** from the list of Markers.
- 2 In the dialogue **Edit Custom Marker Type** specify the name of the new marker type (e.g. artefacts) and **Add!** it to the list of markers.
- 3 Now you can use this marker type similar to the marker types defined by FrameMaker.



Parts list

For parts lists and similar applications the following method can be applied:



- 1 Place the numbers in text frames outside of the graphic or photograph.
- 2 Use a special paragraph format for the part-numbers in the graphics, for example *part-number*. This must be in the paragraph catalog.
- 3 Create an alphabetic list of these numbers with **Special > List Of > Paragraphs**
- 4 In the dialogue **Set Up Alphabetical Paragraph List** specify the paragraph format, which you want to be listed (in our example: *part-number*). *Set!*
- 5 A file with the name *documentAPL* is created:

0562.3321 80

0562.3775 80

In the first part of this list (in this example it is just the first line) all pages are listed on which the paragraph type could be found. You may wish to remove these lines after generation (if you remove the generating element - `Level1APL` - from the reference page, it will be recreated at the next generation).

To format this file to your needs apply the same techniques as described for formatting an index. The elements on the reference page APL indicate their meaning by their format names.

Support your work with lists

To support your document development you may use the following lists:

- List of References: imported graphics to clean out all unused stuff from the directories before you distribute.
- Alphabetic list of paragraphs (only headings) to get a starting point for an index.

Building blocks on reference pages

[www.microtype.com]

When setting up the generating template for an automatically generated document, some restrictions apply to the building blocks which can be used. It is, for example, not possible to get the contents of a specific paragraph type with the building block `<$paratext[paraname]>`. Nothing will be generated.

Generally the building blocks which control index setup or hypertext are not listed in this table:

Generated file	Default suffix	Source	Order	Supported building blocks	
				specific to file	valid in all files
Lists					
Table of contents	TOC	paragraphs	collected		<code><\$pagenum></code> <code><\$chapnum></code> <code><\$volnum></code> <code><\$relfilename></code> <code><\$fullfilename></code> <code><characterformat></code> <code></></code>
List of figures	LOF	paragraphs	collected	<code><\$paratext></code>	
List of tables	LOT	paragraphs	collected	<code><\$paranum></code>	
List of paragraphs	LOP	paragraphs	collected	<code><\$paranumonly></code>	
Alphabetical list of ¶	APL	paragraphs	sorted	<code><\$paratag></code>	
List of markers	LOM	markers	collected	<code><\$markertext></code>	
Alphabetic list of markers	AML	markers	sorted		
List of references	LOR	references	collected	<code><\$referencename></code> <code><\$paratext></code>	
Indexes					
Standard index	IX	markers	sorted		
Author index	AIX	markers	sorted	<code><\$autorange></code>	
Subject index	SIX	markers	sorted	<code><\$nopage></code>	
Index of markers	IOM	markers	sorted		
Index of references	IOR	references	sorted	<code><\$paratext></code> <code><\$autorange></code>	
Document reports					
Composite document	CMP	documents	merged		not applicable
Summary (summary.fm)	-	changes	collected		

Special remarks

`<$paratext>`

This retains forced line breaks (`\n`) and all character formatting if these were applied with character tags. Other character properties are not kept.

`<$markertext>`

The complete marker text is reproduced. This includes special characters and index-specific building blocks.

references

These include condition tags, external cross-references, unresolved cross-references, imported graphics and text insets (also unresolved). From font properties only the first unique item on the page is taken.

`</>`

short for `<Default ¶ Font>`

Adding text to generated document

Sometimes short introductory text is required in generated documents, such as:

- Scope of table of contents
- Explanation of syntactical constructs in an index

Note: *You can not start with text and then 'add' a generated list to a document. You always must first generate the list into a new document and then add the introductory text.*

The procedure is as follows:

- 1 Generate the list or index
- 2 Locate the cursor at the very beginning
- 3 Enter text and format it accordingly

Note: *Do not touch the first generated line, you may destroy the 'critical flag'*

Introduction to TOC

You may wish to introduce the Table of Contents with some remarks:

Please note: Neither the course *Introduction to FrameMaker* nor the course *FrameMaker for Scientific Publications* covers all topics from this handout. Some of the topics are presented only on special occasions.

This is the first generated paragraph - do not touch it

Conventions used in this manual	0 - 2
PDF version	0 - 2

Introduction to index

You may wish to precede the generated text with some explanations:

- = used to explain abbreviations.
- at beginning of line: *see also*.
- Else: points to synonym.
- ... repeats main keyword

This is the first generated paragraph - do not touch it

A

Headings in generated documents

Normally you can not use the standard heading formats in a generated list, because they will be used to generate the list ...

To format a heading with the appearance of, for example, 2heading, create a new paragraph format with the same properties, but name it 2heading-notoc and do not include this name into the generation of (for example) the Table of Contents.

Note: *Do not name it -noTOC. This will confuse FrameMaker and the heading will be removed each time you regenerate the file. This is because all generated ¶-formats in a Table of Contents end with the suffix TOC (with upper case characters). Instead use a format name something-notoc.*

2007-06-22

E:\FM-course\handout_70\generated_docs.fm

D+D

10

Generate Acrobat (PDF)

Overview

This chapter aims at Acrobat 7. However most of the features described are also available in older versions.

FrameMaker is well integrated with Acrobat. Bookmarks are automatically generated from specified headings and you can set some document properties.

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Introduction	2
Generate PDF from a FrameMaker document	4
Acrobat Reader	9
Refining the PDF output	10
Modify the PDF file with Acrobat	12
Some problems with PDF files	13

Introduction

PDF (Portable Document Format) is considered as the universal format for exchange of formatted documents.

- PDF preserves the exact layout, including the fonts and images.
- PDF can be printed to any device for which the user has a printer driver.
- PDF allows security against unwanted modifications or even printing.
- With the full Acrobat product, a PDF can be modified (text lines, cropping pages, sticky notes, generation of thumbnail images of the pages, replacing pages, extracting pages, exchanging images etc.).

PDF versus Postscript

PostScript is a procedural programming language which is interpreted by a RIP (raster image processor) to generate the contents of pages (lines, images, etc.). A PostScript file may contain device specific commands, such as 'select papertray'.

A PostScript file always must be handled (interpreted) sequentially. There is no means to just get page 17 out of 29 pages, because the needed resources (e.g. a font) may be specified previously in the file.

PDF is an object oriented data format which provides direct access to the pages. Pages are completely independent. Resources are referenced and may be defined anywhere in the file.

PDF depends on a target

The above is the principle and told you by Adobe marketing. However, real life knows trouble and pitfalls:

- A PDF file is targeted to specific output channels (display screen, web, office laser printer (B/W), high quality colour laser printer, plate making process for offset printer etc.)
- Due to the immense number of possible combinations, well tested sets are named (e.g. Jaeggi Digiprint). Acrobat comes along with some names. But even these well tested sets are not universal at all.
- Properties of printers (HW) and processes differ very much. Hence it is common practice to stick to one print shop, get his well proven PDF parameters and create the PDF with these. Also with this method test prints are recommended.
- PDF is created using a number of parameters when setting up the job options in the Acrobat Distiller. There are many choices in each category (General, Compression, Fonts, Colour, Advanced) of options. For example:

Option category	Parameter	Internet (Jäggi)	Digital printing (Jäggi)
General:	Compatibility	Acrobat 4.0 (PDF 1.3)	Acrobat 4.0 (PDF 1.3)
	Format	Optimise for fast Web view	-
	Resolution	2400 dpi (will only be used in printing)	2400 dpi
Compression	Colour images	Bicubic downsampling to 72 dpi, automatic compression, low quality	Bicubic downsampling to 150 dpi, automatic compression, medium quality
	Monochrome	Bicubic downsampling to 150 dpi, CCITT group 4 compression	Bicubic downsampling to 600 dpi, CCITT group 4 compression
Fonts		embed all fonts; subset embedded fonts below 35%	embed all fonts
Colour	Conversion	convert all to RGB	leave colours unchanged
Advanced	Options	Convert gradients to smooth shades. Preserve overprint settings. Allow PS file to override job options; process DSC comments ...	Convert gradients to smooth shades. Preserve overprint settings. Allow PS file to override job options. Save original JPEG images in PDF if possible. process DSC comments ...

References

www.publisher.ch/ publisher is the Swiss journal for electronic publishing and the publication of the Swiss User Group of Adobe products.

www.microtype.com/ Shlomo Perets is a worldwide recognised expert in Frame-Maker & PDF.

www.prepress.ch/ Mr. Jäggi is an EU wide recognised expert in PDF and provides a good set of JobOptions for the Acrobat Distiller on his web site.

[Adobe Acrobat tips](http://www.adobe.com/products/tips/acrobat.html) <http://www.adobe.com/products/tips/acrobat.html>

[Jaeggi Distiller settings](http://www.prepress.ch/d/pdf/web/settings.html) <http://www.prepress.ch/d/pdf/web/settings.html>

Create user friendly PDF

Read in www.microtype.com/Hmmms.html about common mistakes and omissions when generating PDF. Even files from reputed companies lack usability.

Enjoy the reader with a complete PDF – not just a garbage file.!

Generate PDF from a FrameMaker document

In order to be able to create PDF from FrameMaker,

- you need to have a PostScript printer driver installed – and be aware of the printer setup (2-up will yield only even pages...).
- have Adobe Acrobat (at least the distiller) installed. It is good practice to use the *Distiller Printer driver* to generate the PostScript file to be distilled. This driver is the most elaborate and safe one.

Save as PDF

With FrameMaker 7 a reliable procedure to save PDF directly is introduced. The standard process (generate PostScript file, distil) is performed in the background invisible to the user.

Note: *Saving as PDF shall be Your standard method to create PDF output from FrameMaker. Use the other method only as fall back methods.*

To create a PDF,

- 1 use **File > Save As...** and specify PDF as file format.
- 2 in dialogue **PDF Setup** specify the Acrobat job options and all other necessary items according to *Set up PDF properties in FrameMaker* on page 10-5.
- 3 Start the process with Set!

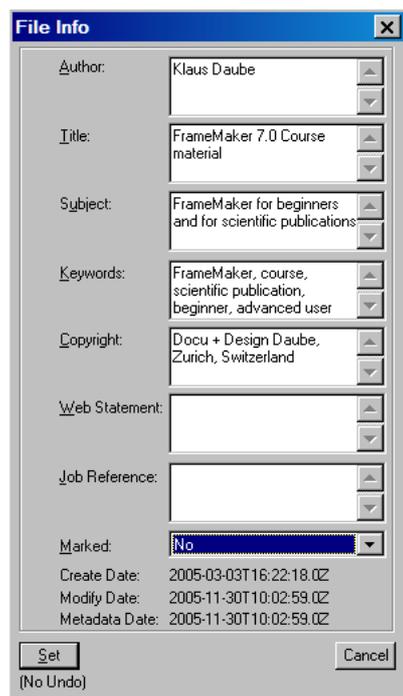
Note: *Do not Save as PDF to a diskette or small USB stick. The intermediate tps file will not fit onto it - and this intermediate file can not be placed at another place as the final PDF file.*

Standard process with Distiller

The overall process to generate a PDF consists of these steps:

- 1 Set up the PDF properties in the FrameMaker document or via the book for all files in the book.
- 2 Produce a PostScript file either from a single document or from the complete FrameMaker book.
- 3 Start the Acrobat Distiller and select the appropriate set of job options (or specify your own).
- 4 Open the PS file in Distiller. The distiller starts the process.

Document Information



In the Acrobat Reader you display this information with **File > File Info**.

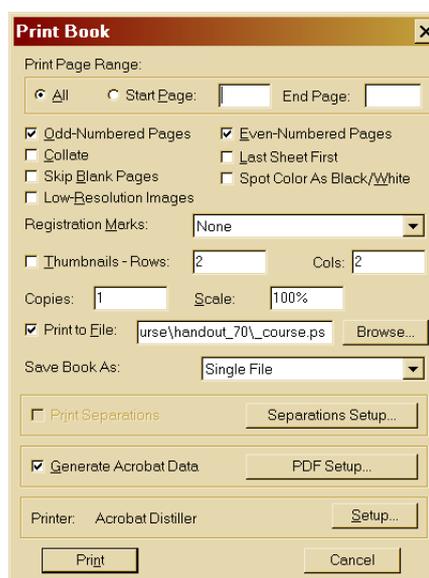
You may set file information for the book file or any document file. This information can be accessed by an XMP conforming application.

This information is saved within the FrameMaker file, but in a standardised format. You can see it, for example, when opening the FrameMaker file in a text editor.

To define this information, select **File > File Information...** in the book file (you need to select the top book file listed explicitly) or any other file in the book or you are already within a document file.

Author	Author(s) of document, including company
Title	Title of document
Subject	You may wish to add data here
Keywords	These become relevant if the PDF is combined with others on a CD for example.
Copyright	Place a copyright statement here.
Web Statement	A notice pertaining to the use of the document on the web, e.g. a disclaimer
Job Reference	Author's affiliation
Marked	Select Yes for copyrighted document

Generate the PostScript file



In **File > Print** or **File > Print Book** you specify standard items, such as Page Range, and whether you want to print all or just the even (odd) pages. Pay attention to the following parameters:

Registration Marks Select **None**.

Thumbnail Rows Do not check this (only useful on paper).

Copies Set to 1 (or you get a mangled PDF).

Scale Set to 100%.

Print to File **Check!** You may change the proposed file name and path.

Save Book As Select **Single File** for generation of PostScript for distilling with Acrobat. Only in this mode correct bookmarks and hyper-jumps can be created.

Gen. Acrobat Data Check this. If not yet done, you may set the properties with PDF Setup!

Printer Select a PostScript printer, at best use the Acrobat Distiller Printer (Adobe PDF).

Note: *PostScript files may become very large (the 300 pages of this handout produce about 50 MB due to many screen shots. Hence you may wish to print to your TEMP folder. The final PDF to be printable on a desktop laser printer (600 dpi) is only about 7.0 MB.*

Distil the PostScript file

Acrobat Distiller «converts» the PS input to the PDF. The various parameters controlling the process are combined into sets, which are (in Windows) plain ASCII files residing in the Acrobat Distiller directory (e.g. in H:\adobe\Acrobat\Distillr\Settings).

Distiller setting

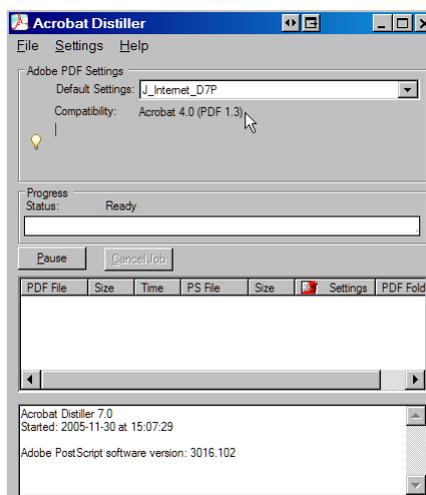
Acrobat installs the following setting:

```
High Quality Print.joboptions
High Quality Print.joboptions
Press Quality.joboptions
Standard.joboptions
PDF/A DRAFT.joboptions
PDFX1a 2001.joboptions
PDFX1a 2003.joboptions
PDFX3 2002.joboptions
PDFX3 2003.joboptions
Press Quality.joboptions
Smallest File Size.joboptions
```

The Swiss PDF guru Jaeggi (see *Jaeggi Distiller settings* on page 3) has developed another set of options, which are highly recommended:

```
CD-ROM_D7P.joboptions
DigiPrint_D7P.joboptions
HighQuality_D7P.joboptions
Internet_D7P.joboptions
Offset_D7P.joboptions
OPI_D7P.joboptions
PDF16_D7P.joboptions
PDFX3-2002_Newspaper_D7P.joboptions
PDFX3-2002_Office_D7P.joboptions
PDFX3-2002_Offset_D7P.joboptions
Present_D7P.joboptions
Sep_D7P.joboptions
```

Distil the PostScript file



Open Acrobat Distiller (you will have this on your system only if you have installed the Acrobat application, not just the Acrobat Reader - which is free).

- 1 Select the proper set of job options, e.g. Jaeggi-Digitaldruck depending on your target (DigiPrint is also good for desktop printing).
- 2 You may check the settings in **Settings > Joboptions**, especially to set security options, which can not be saved in joboptions.
- 3 Select the PostScript file with **File > Open** and specify where to save the PDF file.
- 4 As soon as you press **Open** the distilling process starts. The PDF is generated into a temporary location and then moved to the save directory. A log file is displayed and also saved in the same directory:

```
Start Time: 2005-11-30 at 15:17:32
Source: acrobat.ps
Destination: G:\Filetype_examples\acrobat.pdf
Adobe PDF Settings: C:\Documents and Settings\All
```

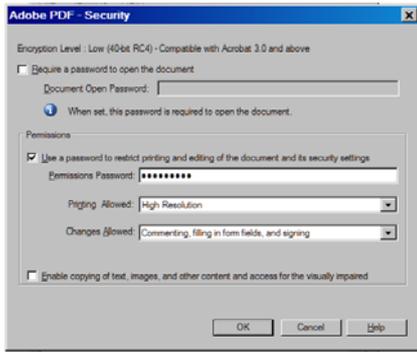
```

Users\Documents\Adobe
PDF\Settings\J_Internet_D7P.joboptions
%%[ ProductName: Distiller ]%%
%%[Page: 1]%%
%%[LastPage]%%
Distill Time: 3 seconds (00:00:03)
**** End of Job ****

```

Note: *Be aware of the Distiller habit to keep its dialogue contents between sessions! Always check the save location!*

Set security options



Password Write it down and store the note in a safe place if you set a password!

Permissions ... These check boxes can be set to prevent printing of the file, changing content or adding / changing notes using the Acrobat application.

The encryption level is low for compatibility with Acrobat 3.

Errors reported in the Acrobat log file

At the end of the log you may see error messages such as:

```

% [ warning: The following Names in Name Tree Dests were
not defined ] %
    G14.1026542
    G15.1006357
    G16.1005762
    M9.17866.chaptertitle.1

```

Event hough you have no undefined cross references in your document(s) you may get these errors.

MIF helps in most cases

Normally you can get rid of these problems by

- 1 Save the file creating the error as MIF, close file without saving.
- 2 Open the MIF file and save it as ordinary FrameMaker file.

Severe problems need fixes in the MIF files

Severe problems not disappearing with the method mentioned before need removal of items in the MIF file (expert only!)

```

<ParaLine
  <TextRectID 32>
  <Marker
    <MType 9>
    <MTypeName `Cross-Ref'>
    <MText `17866: chapter-title: 1'>      <<<-----
    <MCurrPage `First'>
    <Unique 1010926>
  > # end of Marker
> # end of ParaLine

```

The highlighted part (a dubious marker) must be removed.

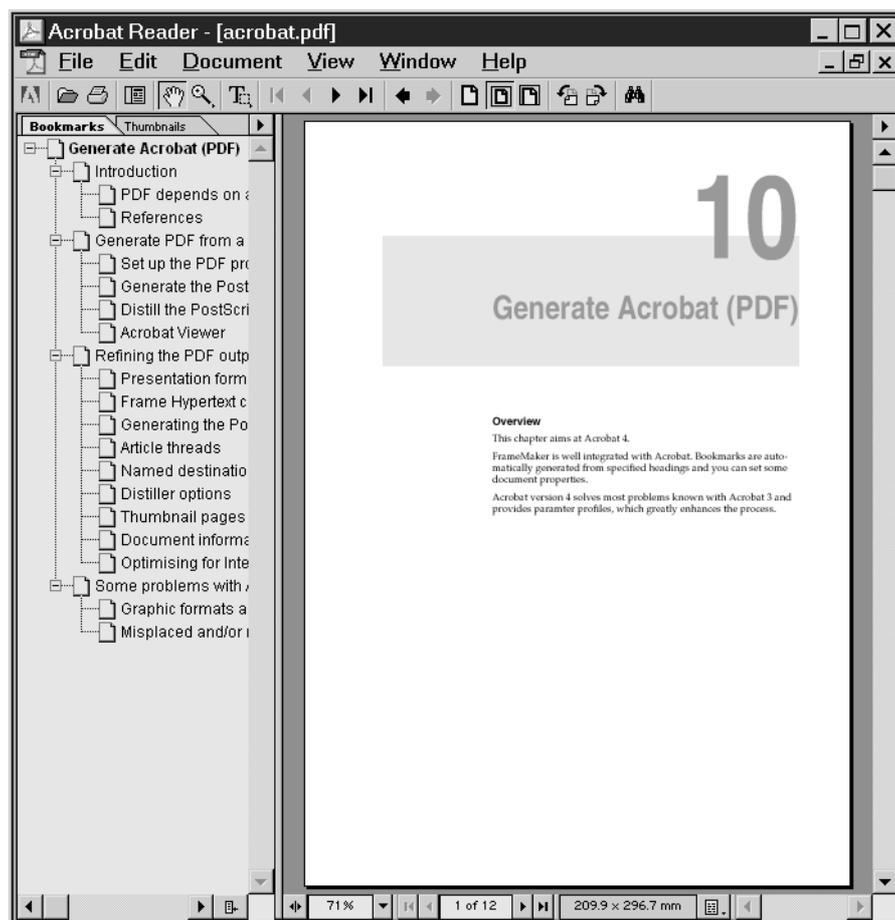
Acrobat Reader

Acrobat reader (which is free at the Adobe Web site) displays PDF files. The reader can be set up to integrate as plug-in into a web-browser.

PDFs exist in levels 1.0 (Acrobat 1) to 1.6 (Acrobat 7). Your reader should be capable to read the highest level.

Acrobat Reader window

- In the left pane Bookmarks (table of contents) or Thumbnails (small page images) can be displayed.
- The right pane contains the document to be viewed.



Bookmarks

If you have set up the PDF properties in FrameMaker, you get a complete structure of the headings similar to the tree in file explorer.

Cross references

If you have cross-references in the document (X-ref markers in FrameMaker), these are active (PDF is a hypermedia-format). FrameMaker generated files (Table of Contents, Index etc.) can contain live links, if you have specified so.

Web links

Web links (see *Web links* on page 10) are active in PDF, if you set up the browser in **File > Preference > Weblink...** in Acrobat Reader.

Refining the PDF output

Presentation formats

It may be desirable to set up a different layout for the on-line distribution (landscape orientation, A5)

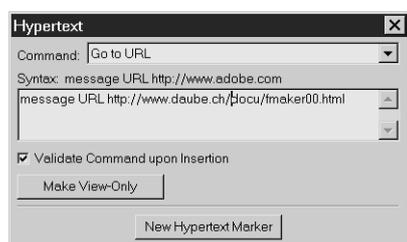
Cross reference formats should not contain page numbers.

Hypertext commands in FrameMaker

Not all FrameMaker hypertext commands have an adequate Acrobat function:

Frame Hypertext commands	PDF equivalent	Remarks (menus refer to the Acrobat Reader)
alert, alerttitle	Note	The note is closed initially
exit	-	Use menu File > Exit
gotolink, gotolink firstpage, gotolinkfitwin, gotopage, nextpage, openlink, openlinkfitwin, openpage, previouspage	Reference	File name suffix FM will be changed to PDF
matrix (of buttons)	-	Replace with multiple references
message	-	Works only with Frame API clients
message system, message winexe	-	Replace with program launch
message URL	Weblink	May refer to any file type the browser can handle
newlink	named destination	OK since Acrobat 5
opennew	-	Acrobat can not create a new document
popup	-	Not possible in Acrobat 5
previouslink, previouslinkfitwin	-	Use menu View > Go Back
quit	-	Use menu File > Exit
quitall	-	Use menu Window > Close All

Web links



To create a link to a web-page, use the FrameMaker hypertext command **Go to URL**:

- 1 Select the text which should become the hotspot in the PDF file. You may wish to specify a character format for this.
- 2 In **Special > Hypertext** select the command **Open URL**
- 3 At the cursor position (after a blank in the dialogue) type the complete URL (including the protocol), e.g. `http://www.daube.ch/docu/fmaker00.html`
- 4 Press **New Hypertext Marker**.

Article threads

Do *not* check this option in **Format > Document > Acrobat setup**. Checking this option generates Acrobat articles in the same sequence as the text frames. A text flow creates an Acrobat article.

Named destinations

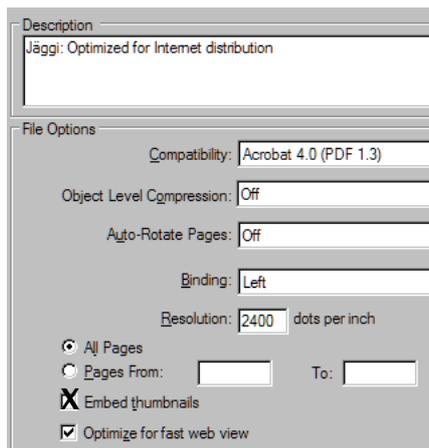
- For all cross references in FrameMaker (also those automatically generated in TOC or index) named destinations are created in the Acrobat file.
- Use the Frame hypertext command **newlink** for special destinations (e.g. go to page 5)

Thumbnail pages

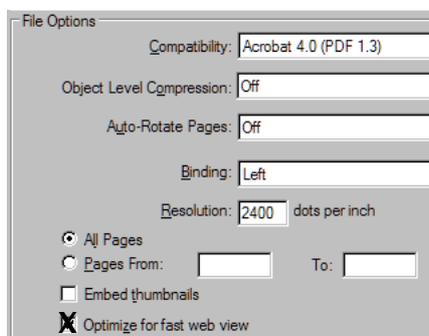
For the newer (> 5) PDF Readers it is not necessary to embed the thumbnail pages in the PDF. These readers can generate the thumbnails on the fly.

To generate thumbnail pages as a navigational aid:

- 1 In the Distiller **Settings > Edit Adobe PDF Settings > General** activate the option **Embed Thumbnails**.
- 2 You may wish to save the special settings with a name (e.g. Digiprint-thumbs.joboptions) in **Save as...**



Optimising for Internet distribution



In the Distiller **Settings > Edit Adobe PDF Settings > General** activate the option **Optimise for fast Web view**.

For distribution via the Internet, the server should be 'byte serving enabled' and the browsers should also be able to handle served bytes (this is standard since IE 5.0).

Byte serving allows the server to send pages of the document out of order, according to the requests from the browser. The user can click into the Table Of Contents as soon as it is visible and jump to any page.

Predefined Job Options

Print shops may require you to use their job option if you want your PDF to be printed on their equipment.

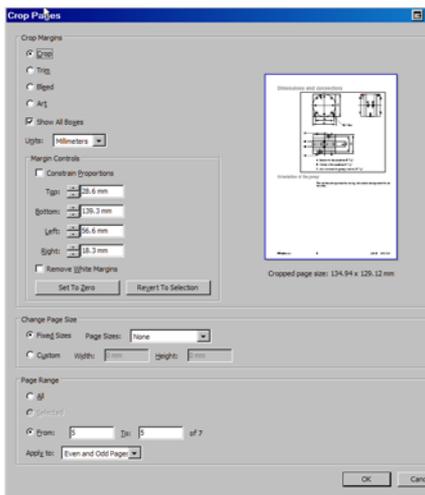
It is also a good idea to use in other cases job options prepared by experts, for example those at www.prepress.ch

Modify the PDF file with Acrobat

For more sophisticated features, such as linking between various PDF documents, link to HTML files etc. you need deep knowledge of the pdfmark statements which can be embedded into the PostScript file by FrameMaker.

Note: *Functions described in this section require the Acrobat tool, not just the Acrobat Reader.*

Crop pages

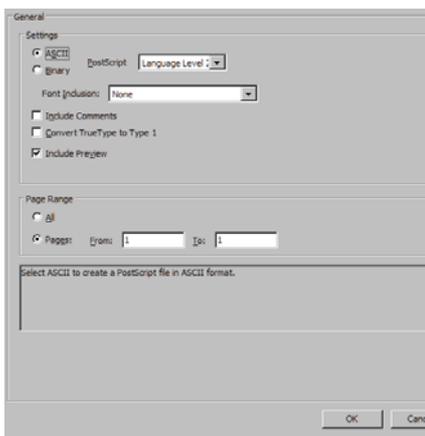


Sometimes it is necessary to produce the FrameMaker document on A4 paper with large margins. This does not look nice in PDF.

To crop the pages to the desired presentation size,

- 1 Open the PDF file in Acrobat (not Acrobat Reader)
- 2 Got to the desired page if you want to crop only one page.
- 3 Touch the crop tool  and open a rectangle on the page by dragging the mouse.
- 4 Click the crop tool again and adjust the values in the crop dialogue to your needs.
To crop all pages, select **All** in the **Page Range**.
- 5 Press **OK** to see the cropped page.

Export image as eps



Acrobat may be your last resort to cope with image problems. To extract an image from a PDF file,

- 1 Open the PDF in Acrobat and go to the desired page.
- 2 Crop the page to the image size (see Crop pages).
- 3 In **File > Save As ...** select EPS as file format and save the file. Only the current page will become the eps. It may be necessary to set Options in **Settings ...** (this button exists only for certain file formats, in particular for eps):
 - General: include Preview
 - General: No font inclusion
 - PostScript Options: Send font at start only

Note: *The eps you get is PostScript. But in many cases the image source was a TIFF or other bitmap and the eps can not provide vectors!*

Some problems with PDF files

Colours in FrameMaker and PDF don't match

To make the online PDF files have the same colour shown in FrameMaker, follow the advice *Match colours in FrameMaker and PDF* on page A-37.

Long ovals etc. warped

Shapes with round corners etc. look like drawn with a wide-nib pen and you'd changed the nib wangle halfway down the side.

Reason The problem is related to a new setting in Acrobat Distiller 7, intended to reduce the file size of PDFs created from CAD drawings.

Remedy In your Distiller 7.0 joboptions in the Advanced TAB turn OFF *Convert smooth lines to curves*

ON is default in «Standard» and «Smallest file size» - and in most job options from Stefan Jaeggi.

[Schlomo Perets, 2005-03-20]

Thin lines disappear in PDF

When creating a PDF for a high resolution printer thin lines disappear in the output.

Reason In PostScript it is possible to define hairlines. Hairline is simply the smallest line an output device is able to resolve. What may look fine on a 300 dpi laser printer will likely disappear at 2400 dpi.

Remedy Make your thinnest lines at least 0.3 points (0.1 mm) and your thinnest dotted rules at least 0.6 points (0.2 mm).

In various graphic programs (Illustrator, CAD applications) there is no minimum default setting. Hence the graphic artist must obey this rule.

If you can not re-create the graphic with appropriate line widths, the program PStill may help: <http://www.wizards.de/~frank/pstill.html> (2005: CHF 30).

Preparing files for printing

The following source gives useful advice:

<http://millettheprinter.com/dtptips.htm>

11

Formulas (equations)

Overview

The FrameMaker formula (or equations) editor is a powerful instrument. It does not create just a graphic appearance of a formula but displays a mathematical structure. Hence the handling differs to most other formula editors .

Contents

Formulas (equations)	2
Special formatting of formulas	6
Common problems with formulas	10
Evaluation	11
Keyboard input for formula elements	12
Display comparison	23

Formulas (equations)

A formula (or equation in FrameMaker terms) is a mathematical construct, not just a graphic (as for example, in MS Word). Hence you must follow the inner logic of a formula to develop it.

This script can not provide all the information from the manual. For extensive work with formulas please read the manual!

Selecting formulas and their elements

A formula is automatically placed into an anchored frame (anchored at insertion point). The formula hereafter is placed in an anchored frame of different properties to display some features of a formula:



$$a = \left(\frac{\sqrt{5} - 1}{2} \right) \cdot b$$

- The framed rectangle is the anchored frame (anchored in the preceding paragraph, alignment left)
- The light shaded area denotes the formula. Select the complete formula with **CTRL-click**. Then the formula can be moved around within the anchored frame.
- Select an element of the formula (e.g. the square root symbol) with these methods:
 - Double click on the element.
 - Place the cursor in front of the element and press the **space-bar** once.
 - Sweep the cursor over the element. The amount and direction of movement while sweeping expands the selection of the current formula construct.
- Expand the selection to the higher level construct with the **up-arrow** or the **space-bar**.
- Narrow the selection to an inner element with the **down-arrow**.
- To replace a construct, select it, press backspace to get the question mark (which is selected). Now you enter the new term (or paste a selection).

In-line formulas

An in-line formula is inserted in an ordinary paragraph, rather than in a paragraph of its own. Most time you will need to specify «no fixed line spacing» to give room to the formula.

Stand alone formulas (display formulas)

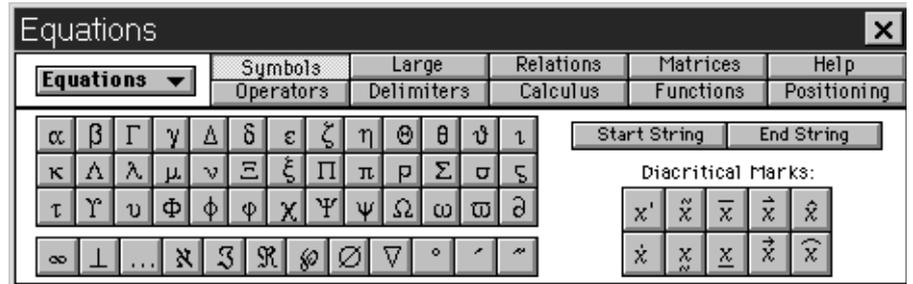
Example formula:
proportion of the
golden rectangle

A rectangle with proportions that from classical Greek times has been thought optically pleasing. The relationship between the larger side a and the shorter side b of the rectangle is as follows:

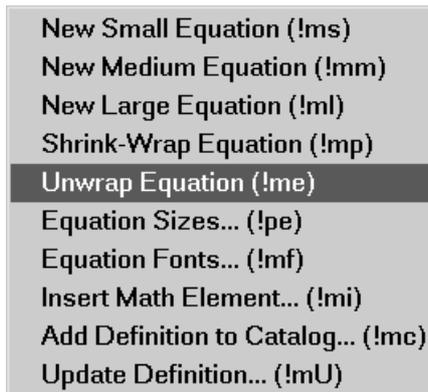
$$a = \left(\frac{\sqrt{5} - 1}{2} \right) \cdot b$$

Insert a formula

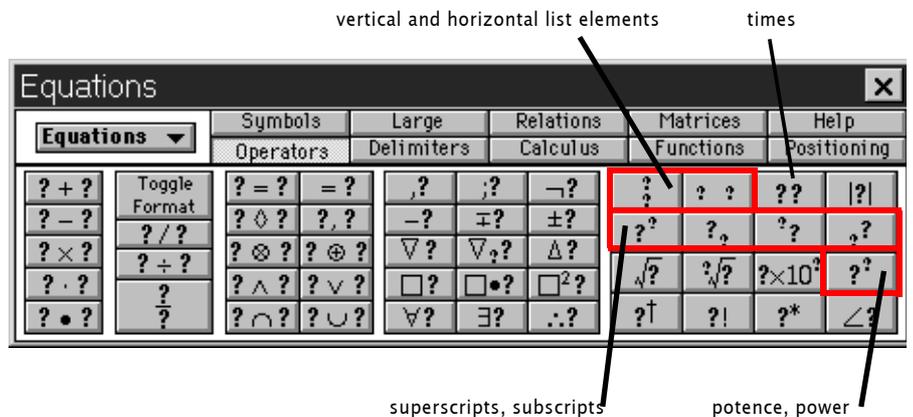
- 1 Place the cursor in an empty paragraph with the basic property «variable line spacing».
- 2 Open the Equation palette ()



- 3 With the button **Equations** select the appropriate size for the new equation (for example, **New Medium Equation**).
- 4 Select **Operators** in the Equations palette and start the formula with operator $? = ?$ (the first $?$ will be highlighted, so that you can change it to «a»).



In the keyboard short cuts the exclamation mark denotes the **ESC** character. To unwrap a formula you enter ESC, m, e.



- 5 Select the second $?$ and replace it by operator square-root; replace the $?$ under the root by «5».
- 6 Select the square root and apply operator « $? - ?$ »; replace the new $?$ by «1».
- 7 etc. - by now you should know how to work with this editor ...
- 8 Finally **shrink wrap** the equation (select from the drop down list **Equations**).

Keyboard input vs «mousing»

See *Keyboard input for formula elements* on page 12 for a complete list of keyboard short-cuts. The keyboard input for the sample formula is ($_$ denotes a blank, $!$ denotes a **Return**, \rightarrow is **Right Arrow**):

ESCm\a=\sqrt{5_ - 1}2_ bESCmp

Numbered formulas

Set up a numbered paragraph format with the number appearing at the end of the paragraph.

$$a = \frac{\sqrt{5}-1}{2} b \quad (1)$$

Format name	For example fon-formula-numbered.
Basic properties	Line spacing must be variable (<i>fixed</i> not checked). Space above and below becomes the space above and below the formula frame, not just around the paragraph text.
Numbering property	F:Formula [$n+$] Position «End of Paragraph».

Reference to a numbered formula

If you wish to reference a numbered formula, use a cross-reference style «paranum & page», which might look like this:

`<1-highlight><$paranum><$paratext></>` on page
`<$pagenum>`

Example reference As you can see in (1) on page 4, ...

Create formula in anchored frame

Formulas can be placed directly into an anchored frame:

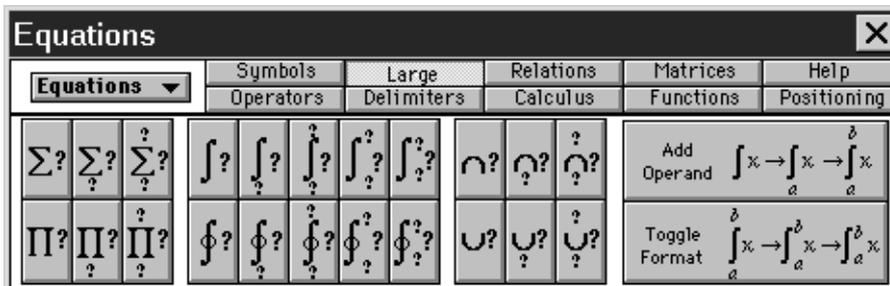
$$\sin x = 4 \sqrt{\frac{\operatorname{asech} \sqrt{5}}{x}} \quad \sum_{\min}^{\max} \sin x = 4 \sqrt{\operatorname{asech} \sqrt{5} x}$$

- 1 Select the frame
- 2 Select formula size from the Equations palette
- 3 Build the equation
- 4 CTRL-click on the formula to select it and move it around
- 5 Add any other elements to the anchored frame (for example, graphics). These may also be in the frame at first.
- 6 Alignment of complete formulas with **Graphics > Align...** acts on the base line of the formula text (the base line of the word «sin» above), not the bounding box of the formula.

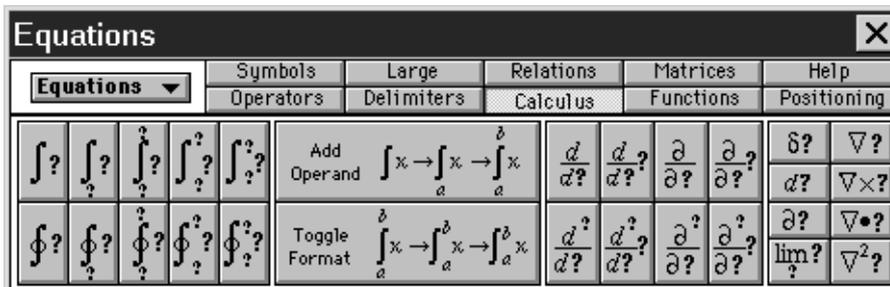
Palette overview

The Symbols and Operators palette are displayed on page 3.

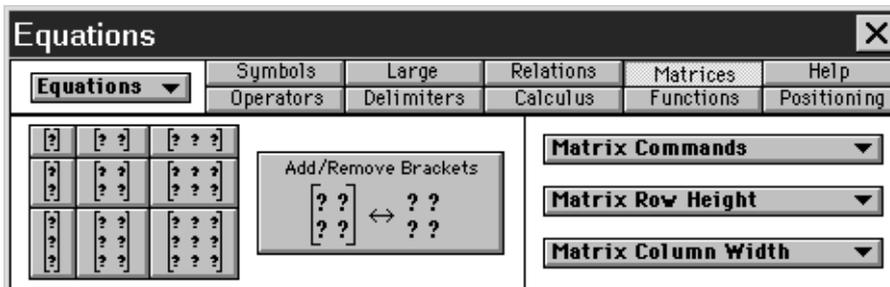
Large Symbols



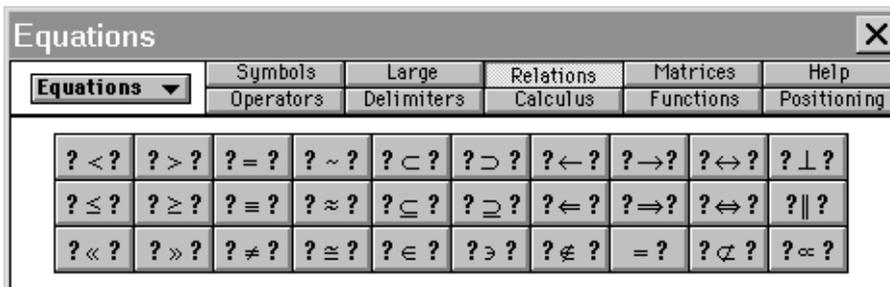
Calculus



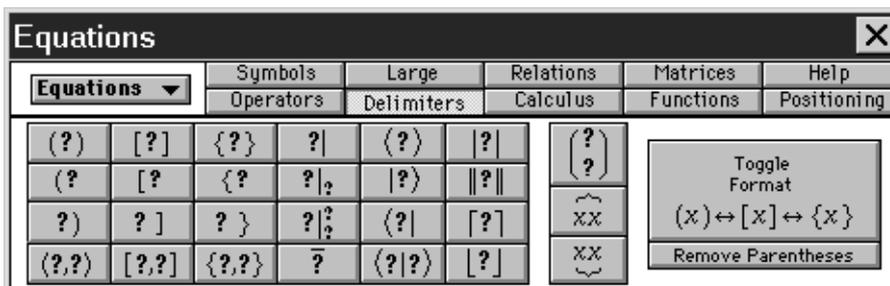
Matrix



Relations



Delimiters



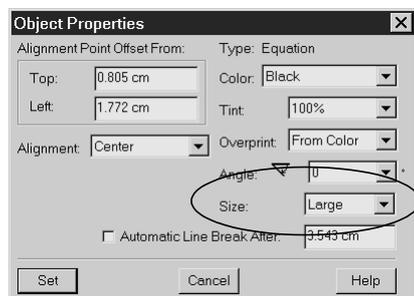
2007-06-22

E:\FM-course\handout_70\formulas.fm

D+D D

Special formatting of formulas

Resize a formula



When setting up a formula you must choose a size (small, medium, large). To change this afterwards,

- 1 Select the formula. It may be shrink wrapped or expanded.
- 2 Select **Graphics > Object properties**
- 3 Change the size attribute to your desire; **Set!**

Align formulas

Align formulas graphically

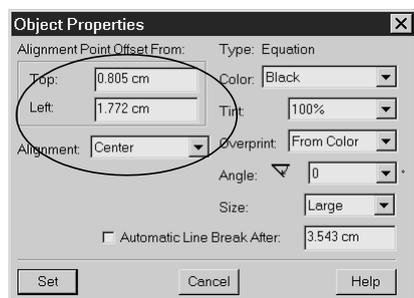
$$\begin{array}{l} \sin x \\ 1ax \\ \sum \\ nin \end{array} \sin x = 4 \sqrt[4]{\frac{\operatorname{asech} \sqrt{b}}{x}}$$

Formulas can only be aligned if they are located in the same frame. Hence you may start with a frame and add the formulas to it.

To align the formulas at their boundaries (bounding box) treat the formulas as graphic elements:

- 1 Select the equation (s) which you want to align.
- 2 Select the equation which will be the master for the alignment.
- 3 Choose **Graphics > Align** and set the alignment to your desire. You may wish to use a guiding line (see image).

Align formulas along special symbol



$$\begin{array}{l} \sin x \\ max \\ \sum \\ min \end{array} \sin x = 4 \sqrt[4]{\frac{\operatorname{asech} \sqrt{b}}{x}}$$

To align the formulas along a special point (e.g. the equal sign):

- 1 Click into the first formula to set the alignment point. You may move the alignment point with the **left** or **right arrow**.
- 2 Set the alignment point with the Equations palette **Positioning > Left/Right > Set Manual** or ESC, m, a, s.
- 3 Repeat the above sequence for all formulas in the frame which you want to align.
- 4 To clear an alignment point, select the formula and enter ESC, m, a, d (or choose from the Equations palette **Clear Manual**).
- 5 Select the formula (**CTRL+click**) with the most proper alignment and choose **Graphics > Object Properties**.
- 6 Set the Alignment to **Manual** and set the left position to a memorable value (2.544 → 2.5) or copy the formula to the clipboard.

- 7 Select the next formula to be aligned, with **Object Properties** set Alignment to **Manual** and the left position to the new/copied value.
- 8 Repeat the last operation for all formulas in the frame to be aligned.

Break long formula into lines

To break a long formula

$(1 + x)^8 = x^8 + 8x^7 + 28x^6 + 56x^5 + 70x^4 + 56x^3 + 28x^2 + 8x + 1$ into lines,

$$1 + x)^8 = x^8 + 8x^7 + 8x^6 + 56x^5 + 70x^4 + 6x^3 + 28x^2 + 8x + 1$$

- 1 Place the cursor at the point where you want to break the formula. This can not be between a string (entered with "") and an operator!
- 2 Enter a manual break with Equations palette **Positioning > Line Breaking > Set Manual** or ESC, m, b, s.
- 3 To remove a manual line break, select the preceding and succeeding elements also (e.g. $70x^4 + 56x^3$) and apply ESC, m, b, c or choose from the Equations palette **Clear Manual**.

Copy and paste formula elements

Formulas with 'self repeating' contents can be set up very quickly with the keyboard:

ESCm]

1/a+

enter 2 blanks to select the whole formula

copy

press 'arrow right' 3 times to select the ?

paste

press 'arrow right' 3+2 times to select the ?

paste

...

Select the last ? and replace it by \ldots (small L)

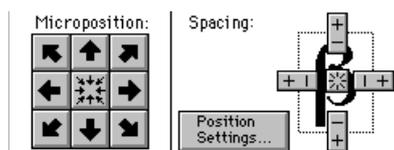
The formula may not be visible, since it is larger than the initially opened frame. Enlarge the frame to make the complete formula visible, before you shrink wrap it with ESC m p.

Physical dimensions and other strings

Physical dimensions are just strings for the FrameMaker Equation editor. They do not bear any mathematical property and hence are not considered in evaluations.

To enter a string into a formula, start the string with a " (straight quote) and terminate it with the Return key (␣). You see two double quotes ("") after entering the beginning straight quote. These disappear as soon as you type the first character of the string.

For example, for the first term of the following formula, enter v "[m/sec]␣. As soon as you close the string with the Return key (␣), the string is selected. To may just continue with the equal sign.



$$\text{Vehicle speed: } v[\text{m/sec}] = \frac{s[\text{m}]}{t[\text{sec}]} \quad (2)$$

You may not be satisfied with the space between the variable and the physical dimension. You are tempted to increase this space with positioning or spacing:

$$\text{Vehicle speed: } v [\text{m/sec}] = \frac{s [\text{m}]}{t [\text{sec}]} \quad (3)$$

This method does not adjust the length of the fraction bar.

The method of choice is to enter a space as the *first* character in the string:

$$\text{Vehicle speed: } v [m/sec] = \frac{s [m]}{t [sec]} \quad (4)$$

To enter a thin space, type ESC, μ , t. To enter an n-space, type ESC, n, t. The following formula uses n-spaces:

$$\text{Vehicle speed: } v [m/sec] = \frac{s [m]}{t [sec]} \quad (5)$$

Note: *It is very difficult to insert or even change this first blank after you have closed the string! The best method is to remove the string (select and delete) and create it again.*

Adapt font for strings in formula

To specify a specific appearance of the formula strings, open **Equation palette > Equations > Equation fonts...** and enter a character format for Strings. You can not enter a font name. From the character format only the font property is used. The size is determined by the formula size (large, medium, small).

Decimal comma

The equation editor does not honour the regional settings of the operating system! Only some localised versions (e.g. German) can work with the decimal comma. However this works only correct, if at the same time the number *grouping symbol is not a period*.

If you need a decimal comma in the English version of FM you need to enter the decimal part as a string: **17", 5#** to get **17,5**. If you enter just the comma as string, the number will be put in parenthesis and the comma behind it: **17(5),**

Diacritical marks

$$\tilde{\hat{a}} = \widehat{\acute{v}xy}$$

$$\vec{\bar{a}} = \overrightarrow{\underline{bcde}}$$

Two diacritical marks can be stacked one on top of the other. More can be stacked only if the base elements are 'grouped'. The marks which can be elongated (based on a line) are always the lower ones. Tilde, hat, bow and dot are always on top of a line shape.

The following marks can be elongated to span more than one base element: overbar, underbar, arrow, half-arrow. These can be stacked according to the base elements.

The others are only placed centred above the spanned elements (see first formula in this topic). These forms are from a font, whereas the lines are drawn as line graphics.

Remove a diacritical mark

To remove a diacritical mark, select the base element and expand the selection to include the diacritics. Applying the diacritical mark again will remove it (toggle the mark on/off).

Special diacritical marks

The capabilities of FrameMaker for handling diacritical marks may not be sufficient for you, e.g. to place an elongated hat or tilde above three elements:

You need a little bit of work to create such constructs:

$$\frac{\partial}{\partial x} \widehat{uvw} + \frac{\partial}{\partial x} \widetilde{uvw} = 0$$

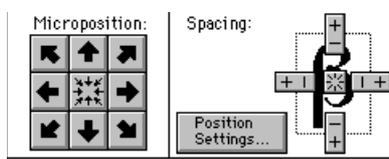
- 1 Create an anchored frame (here filled with gray to display it):
- 2 With the Graphic-Line tool from the graphics tools palette () create the desired character (as an example, we use the tilde): . You will notice that this is a graphic object with handles.
- 3 You can now elongate it by pulling the right handle: 
- 4 Select the modified symbol (tilde) as a graphic object and copy it into the formula frame:
 - Select the tilde
 - Copy the tilde to the paste buffer
 - Select the formula frame
 - Paste the tilde into the frame
- 5 Move the selected symbol (tilde) to the desired place with the mouse or with **CTRL+arrow**.

Working tip

In the anchored frame you may set up a collection of items: .

These symbols can only get character formats. If you need symbols from a special font (such as the last one from the Symbol font, you need to set up an appropriate character format.

Positioning, fine tuning presentation



You may not be satisfied with the space between math elements, the location of exponents and indices etc. Although FrameMaker does a good job, math typesetters and T_EX experts may have their complaints. In these cases manual work with micro positioning may be necessary.

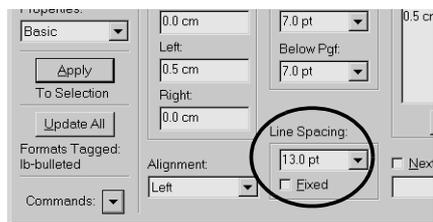
Use the keys ALT+↑ etc. for fine movements.

Editing formulas

- 1 Unwrap the formula (ESC, m, e)
- 2 Place the cursor behind the element you want to edit
- 3 Select the element with **Space bar**
- 4 Modify the element (delete, replace, ...)
- 5 Shrink wrap formula (esc, m, p)

Common problems with formulas

Formula overlaps surrounding paragraphs



The formula construct uses an anchored frame *at insertion point*, which can only expand the paragraph height, if the paragraph has variable Line spacing.

$$a = \left(\frac{\sqrt{5-1}}{2} \right) \cdot b$$

This is the «formula paragraph».

For paragraphs used as ‘anchors’ for formulas, the check box for fixed Line Spacing must be *unchecked*.

Variables are not displayed in italic

If the variables in a formula are not displayed in *italics*, you have accidentally removed the character format **EquationVariables** (English FM) or **GlgVar** (German FM).

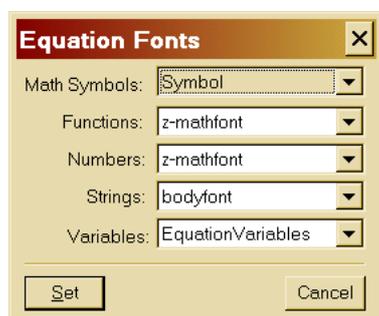
Set up the format again with the properties: Angle = italic; everything else *As Is*. The format must be in the character catalogue.

Fraction bar has not the desired length

$$\text{Vehicle speed: } v [\text{m/sec}] = \frac{s [\text{m}]}{t [\text{sec}]}$$

The fraction bar can get a correct length only if FrameMaker knows about the length of the elements involved. If you use micro-positioning or spacing, this is just an optical correction. To get correct results, see *Enter space in formula string* on page 8.

Alternative fonts in formulas



The fonts used in the formulas are defined by character formats. Within a formula use the context menu **Equation Fonts ...** to display the dialogue for setting the font properties.

Category	Default ^a	Modification needed ...
Math Symbols	Symbol	tweaking maker.ini (and mathchar.cfg)
Functions	Default ¶ Font	any character format (font family used only)
Numbers	Default ¶ Font	any character format (font family used only)
Strings	Default ¶ Font	any character format (font family used only)
Variables	EquationVariables	any character format (style used only)

a. The notion «Default ¶ Font» actually refers to the «DefaultFamily» as specified in `maker.ini`! At D+DD this is set to Lucida Sans rather than Times New Roman → see appearance of formulas here.

Possible font alternatives for Math Symbols

«Lucida New Math», «Mathematical PI Std» or «Universal Standard Greek with Math PI».

Note: *Re-defining the fonts may require re-shrinking of all equations! The definition in `mathchar.cfg` needs some tedious work!*

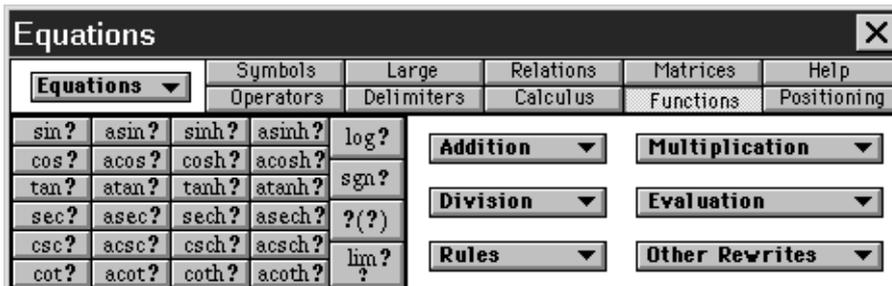
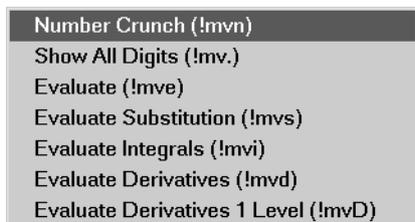
Evaluation

Numeric results

To evaluate an equation (get numeric results):

To evaluate a formula, for example $a = \left(\frac{\sqrt{5}-1}{2}\right) \cdot b$:

- 1 Select the equation inside its frame.
- 2 From the Equations palette choose **Functions > Evaluation > Number crunch**



- 3 You get the following result: $a = 0.61803399 \cdot b$
- 4 At this stage you may undo the operation to see the algebraic notation again.

Symbolic evaluation

With **Functions > Evaluations** some expansions are available. To apply an expansion, select the formula (or part of) and then choose the function:

Addition > Add Fractions

$$\frac{a}{4} + \frac{2a}{3} + \frac{7a}{5b} \text{ becomes } \frac{11a}{12} + \frac{7a}{5b} \text{ and then } \frac{55ab + 84a}{60b}$$

Division > Long Division

Numerator and denominator must be polynomials for this function. Select any x in

$$\frac{x^5 + 20x^4 + 160x^3 + 640x^2 + 1280x + 1024}{x^2 + 8x + 16} \text{ and apply the function:}$$

$$x^3 + \frac{640x^2 + 1280x + 12x^4 + 144x^3 + 1024}{x^2 + 8x + 16} \text{ and then}$$

$$3 + 12x^2 + \frac{1280x + 48x^3 + 448x^2 + 1024}{x^2 + 8x + 16}$$

Multiplication > Multiply out

$$y = (x+4)^5 \text{ becomes } y = x^5 + 20x^4 + 160x^3 + 640x^2 + 1280x + 1024$$

Evaluation > Evaluate

$$(x+4)^5 \text{ becomes } (x+4)(x+4)(x+4)(x+4)(x+4)$$

For even more mathematics see the manual.

Keyboard input for formula elements

Many maths elements and most functions can be entered via the keyboard.

To enter a Backslash sequence, press **Return** to end the backslash sequence.

Most short-cuts are not localised, so they are valid both for the English and German FrameMaker. The only exception is the input of diacritical marks, which depends on the language.

Note: *On a Swiss keyboard some short cuts are not available (not working). This is because some characters such as tilde are only available as accents on 'dead keys'.*

Note: *Some of the sequences listed in the Help for the German FM are wrong. The sequences given here are tested with Windows NT4 and 2000 with a Swiss keyboard. Sequences in shaded cells do not work at all. No correct key sequence could be found for these.*

Equations pop-up menu

Command	Short-cut
New Small Equation	Esc m s
New Medium Equation	Esc m m
New Large Equation	Esc m l (lc L)
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 Catalogue	Esc m c
Update Definition	Esc m U

Strings

Strings are single line comments in a formula. To enter them, just start with a single or double apostrophe and enter the text. Terminate with a **Return** (there is no terminating apostrophe).

Command	Short-cut
Start String	' or "
End String	Return

See example in *Physical dimensions and other strings* on page 7.

Symbols

Greek characters

Element	Short-cut	Backslash sequence
α	Control+Alt+a	<code>\alpha</code>
β	Control+Alt+b	<code>\beta</code>
Γ	Control+Alt+G	<code>\Gamma</code>
γ	Control+Alt+g	<code>\gamma</code>
Δ	Control+Alt+D	<code>\Delta</code>
δ	Control+Alt+d	<code>\delta</code>
ϵ	Control+Alt+e	<code>\epsilon</code>
ζ	Control+Alt+z	<code>\zeta</code>
η	Control+Alt+h	<code>\eta</code>
Θ	Control+Alt+Q	<code>\Theta</code>
θ	Control+Alt+q	<code>\theta</code>
ϑ	Control+Alt+j	<code>\vartheta</code>
ι	Control+Alt+i	<code>\iota</code>
κ	Control+Alt+k	<code>\kappa</code>
Λ	Control+Alt+L	<code>\Lambda</code>
λ	Control+Alt+l (lc L)	<code>\lambda</code>
μ	Control+Alt+m	<code>\mu</code>
ν	Control+Alt+n	<code>\nu</code>
Ξ	Control+Alt+X	<code>\Xi</code>
ξ	Control+Alt+x	<code>\xi</code>
Π	Control+Alt+P	<code>\Pi</code>
π	Control+Alt+p	<code>\pi</code>
ρ	Control+Alt+r	<code>\rho</code>
Σ	Control+Alt+S	<code>\Sigma</code>
σ	Control+Alt+s	<code>\sigma</code>
ς	Control+Alt+E	<code>\varsigma</code>
τ	Control+Alt+t	<code>\tau</code>
Υ	Control+Alt+U	<code>\Upsilon</code>
υ	Control+Alt+u	<code>\upsilon</code>
Φ	Control+Alt+F	<code>\Phi</code>
ϕ	Control+Alt+f	<code>\phi</code>
φ	Control+Alt+j	<code>\varphi</code>
χ	Control+Alt+c	<code>\chi</code>
Ψ	Control+Alt+Y	<code>\Psi</code>
ψ	Control+Alt+y	<code>\psi</code>
Ω	Control+Alt+O	<code>\Omega</code>
ω	Control+Alt+o	<code>\omega</code>
ϖ	Control+Alt+l (uc i)	<code>\varpi</code>
∂	Control+Alt+7	<code>\partial</code>

Other special symbols

Element	Short-cut	Backslash sequence
∞	Control+Alt+one	<code>\infty</code>
\perp	Control+Alt+2	<code>\bot</code>
\dots	Control+g period	<code>\ldots</code> (lowercase L)
\aleph	Control+Alt+3	<code>\aleph</code>
\Im	Control+Alt+4	<code>\Im</code>
\Re	Control+m \$	<code>\Re</code>
\wp	Control+Alt+5	<code>\wp</code>
\emptyset	Control+Alt+zero	<code>\emptyset</code>
∇	Control+Alt+6	<code>\nabla</code>
$^\circ$	Control+m)	<code>\degree</code>
'	Control+Alt+`	<code>\prime</code>
"	Control+m "	<code>\pprime</code>

Diacritical marks

Please note the remarks on page 12 concerning the shaded areas!

Element	Short-cut (FM-E)	Short-cut (FM-D)
x'	<code>`</code> (grave)	<code>`</code> (Grave)
\tilde{x}	<code>~</code> (tilde)	<code>~</code> (Tilde)
\bar{x}	Control+g hyphen Esc m _ (underline)	Control+g hyphen
\ddot{x}	Control+Alt+V	Strg+Alt+V
\hat{x}	Control+g ^	Strg+Alt+^
\dot{x}	period	Punkt
\tilde{x}	Control+g ~ (tilde)	Strg+Alt+~ (tilde)
\underline{x}	Control+g _ (underline)	Strg+g _ (underline)
\vec{x}	Control+g right arrow	Strg+Alt+= ^a
\widehat{x}	Control+g @	Strg+g @

a. Control+g right arrow works also in the German FM.

Operators

Please note the remarks on page 12 concerning the shaded areas!

Toggle format switches between the representation of fractions.

Element	Short-cut	Backslash sequence
? + ?	plus	\plus
? - ?	minus (after an operand)	
? x ?	Control+m * (asterisk)	\cross
? · ?	Control+m . (period)	\cdot
? · ?	Control+8	\bullet
Toggle Format	Control+T Esc m T	
? / ?	Control+Alt+ /	\frac
? ÷ ?	Control+m /	\div
$\frac{?}{?}$	/	\over
? = ?	=	\equal
= ?	Control+g =	\uequal
? ‡ ?	Control+j	\jotdot
? , ?	comma	\comma
? ⊗ ?	Control+q D	\otimes
? ⊕ ?	Control+q E	\oplus
? ^ ?	Control+q Y	\wedge
? ∨ ?	Control+q Z	\vee
? ∩ ?	Control+m i	\cap
? ∪ ?	Control+m u	\cup
, ?	Control+m , (comma)	\ucomma
; ?	; (semicolon)	\semicolon
¬ ?	Control+m n	\neg
- ?	Control+hyphen	\minus
± ?	Control+m one	\mp
± ?	Control+q one	\pm
∇ ?	Control+q Q	\grad
∇ ? ?	Control+q 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

Element	Short-cut	Backslash sequence
\therefore ?	Control+m t	\therefore
? ?	Control+a, Esc m v l (lc L)	\atop
? ?	Control+m ; (semicolon), Esc m h l (lc L)	\list
? ?	* (asterisk)	\times
| ? |	Control+g | (bar)	\abs
? ? (superscript)	Esc m ^	
? ? (subscript)	Esc m Control+_	
? ? (superscript in front)	Control+m Control+^	
? ? (subscript in front)	Control+m _ (underline)	
$\sqrt{\quad}$	Control+r	\sqrt
$\sqrt[3]{\quad}$	Control+r (and add operand)	
? $\times 10$?	Control+E	\sn
? ? (exponent)	^	\power
? †	Control+m d	\dagger
? !	!	\fact
? *	Control+m s	\ast
\angle ?	Control+q P	\angle

Large symbols

Use these short-cuts to type each element with only one operand. Then use **Add Operand** and **Toggle Format** as needed

Add Operand	$\int_a^b x \rightarrow \int_a^b x \rightarrow \int_a^b x$
Toggle Format	$\int_a^b x \rightarrow \int_a^b x \rightarrow \int_a^b x$

Element or command	Short-cut	Backslash sequence
Σ ?	Control+S	\sum
Π ?	Control+P	\prod
\int ?	Control+i	\int
\oint ?	Control+l (uc i)	\oint
\bigcap ?	Control+m l (uc i)	\bigcap
\bigcup ?	Control+m U	\bigcup
Add Operand	Control+N Esc m n	
Toggle Format	Control+T Esc m T	

Delimiters



Use **Toggle Format** to switch between the various types of parentheses.

Apply **Remove Parentheses** only to the selection from which you really want to remove the grouping. To remove only one delimiter (and its mate), place the cursor right to the delimiter and press Delete.

Element or command	Short-cut	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 N	\inprod
[?,?]	Control+m C	\cmut
{?,?}	Control+m A	\acmut
<u>?</u>	_ (underline)	\overline
<?|?>	Control+m B	\bket
[?]	Control+q k	\floor
([?] ?)	Control+m h	\choice
\overbrace{X}	Control+m D	\downbrace
\underbrace{X}	Control+m P	\upbrace
Toggle Format	Control+T Esc m T	
Remove Parentheses	Esc m r p	

Relation

Element	Short-cut	Backslash sequence
$<$	<code><</code>	<code>\lessthan</code>
$>$	<code>></code>	<code>\greaterthan</code>
$=$	<code>=</code>	<code>\equal</code>
\sim	<code>Control+m ~ (tilde)</code>	<code>\sim</code>
\subset	<code>Control+q L</code>	<code>\subset</code>
\supset	<code>Control+q I (uc i)</code>	<code>\supset</code>
\leftarrow	<code>Control+q comma</code>	<code>\leftarrow</code>
\rightarrow	<code>Control+q period</code>	<code>\rightarrow</code>
\leftrightarrow	<code>Control+q plus</code>	<code>\leftrightarrow</code>
\perp	<code>Control+m r</code>	<code>\perp</code>
\leq	<code>Control+g <</code>	<code>\leq</code>
\geq	<code>Control+g ></code>	<code>\geq</code>
\equiv	<code>Control+q : (colon)</code>	<code>\equiv</code>
\approx	<code>Control+q ; (semicolon)</code>	<code>\approx</code>
\subseteq	<code>Control+q J</code>	<code>\subseteq</code>
\supseteq	<code>Control+q M</code>	<code>\supseteq</code>
\Leftarrow	<code>Control+q \</code>	<code>\Leftarrow</code>
\Rightarrow	<code>Control+q ^</code>	<code>\Rightarrow</code>
\Leftrightarrow	<code>Control+q [</code>	<code>\Leftrightarrow</code>
\parallel	<code>Control+m p</code>	<code>\parallel</code>
\ll	<code>Control+q l (lc L)</code>	<code>\ll</code>
\gg	<code>Control+q g</code>	<code>\gg</code>
\neq	<code>Control+q =</code>	<code>\neq</code>
\cong	<code>@</code>	<code>\cong</code>
\in	<code>Control+q N</code>	<code>\in</code>
\ni	<code>Control+'</code>	<code>\ni</code>
\notin	<code>Control+q O (uc o)</code>	
\neq	<code>Control+g =</code>	<code>\neq</code>
$\not\subset$	<code>Control+q K</code>	<code>\notsubset</code>
\propto	<code>Control+q 5</code>	<code>\propto</code>

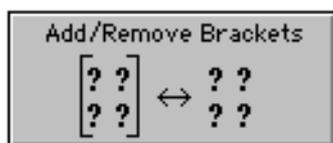
Table 2: Relational operators

Calculus

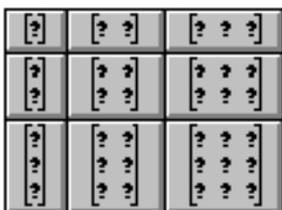
Use the first two mentioned short-cuts to type large symbols with only one operand. Then use **Add Operand** and **Toggle Format** as needed.

Element or command	Short-cut	Backslash sequence
$\int?$	Control+i	<code>\int</code>
$\oint?$	Control+l (uc i)	<code>\oint</code>
Add Operand	Control+N Esc m n	
Toggle Format	Control+T Esc m T	
$\frac{d}{d?}$	Control+g t	<code>\optotal</code>
$\frac{d}{d?}$	Control+g T	
$\frac{\partial}{\partial?}$	Control+g p	<code>\opartial</code>
$\frac{\partial}{\partial?}$	Control+g P	
$\frac{d^?}{d?}$	Control+g t (and add operand)	
$\frac{d^?}{d?}$	Control+g T (and add operand)	
$\frac{\partial^?}{\partial?}$	Control+g p (and add operand)	
$\frac{\partial^?}{\partial?}$	Control+g P (and add operand)	
$\delta ?$	Control+Alt+d	<code>\var</code>
$\nabla ?$	Control+q Q	<code>\grad</code>
$d?$	Control+d	<code>\diff</code>
$\nabla \times ?$	Control+m c	<code>\curl</code>
$\partial ?$	Control+D	<code>\partial</code>
$\nabla \bullet ?$	Control+m v	<code>\diver</code>
$\lim?$	Control+L	<code>\lim</code>
$\nabla^2 ?$	Control+m l (lc L)	<code>\lap</code>

Matrices



Pre defined matrices in

Equations palette > Matrix

To insert a matrix of any size, first insert a 1 by 1 matrix. Then add rows and columns one at a time. With the Equations palette you have a selection of pre defined matrices available

Command	Short-cut
Add/Remove Brackets	Control+T
Matrix Commands pop-up menu	
Create 1 x 1 Matrix	Esc x m
Add Row	Esc x r
Add Column	Esc x c Control+C
Matrix Transpose	Esc x t
Matrix Algebra	Esc x a
Matrix Row Height pop-up menu	
Toggle fixed/proportional	Esc m t r
Matrix Column Width pop-up menu	
Toggle fixed/proportional	Esc m t c

Functions

For the functions (except for the general function and the limit) you must have selected an appropriate portion of a formula.

Element / command	Short-cut	Backslash sequence
? (?)	Control+f	\function
lim? ?	Control+L	\lim
Addition pop-up menu		
Add Fractions	ESC m a a	
Order Sum	ESC m a o	
Order Sum Reverse	ESC m a O (uc o)	
Multiplication pop-up menu		
Factor	ESC m u f	
Factor Some	ESC m u F	
Multiply Out	ESC m u m	
Multiply Out Once	ESC m u M	
Distribute	ESC m u d	
Distribute Over Equality	ESC m u D	
Division pop-up menu		
Long Division	ESC m d l (lowercase L)	
Remove Division	ESC m d d	
Remove Division 1 Level	ESC m d D	
Remove Negative Powers	ESC m d n	
Remove Negative Powers 1 Level	ESC m d N	
Evaluation pop-up menu		

Element / command	Short-cut	Backslash sequence
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 D	
Rules pop-up menu		
Enter Rule	ESC m r e	
Apply Rule	ESC m r a	
Designate Dummy	ESC m r d	
Other Rewrites pop-up menu		
Simplify	ESC m o s	
Simplify Some	ESC m o S	
Isolate Term	ESC m o i	
Expand First Term	ESC m o e	
Expand All Terms	ESC m o E	

Positioning and line breaking

The number of points shown in the following table is based on a zoom setting of 100 percent.

Function	Short-cut
Micro positioning	
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 micro positioning	Alt+Home
Left/Right (Alignment) pop-up menu	
Left	Esc m a l (l c L)
Centre	Esc m a c
Right	Esc m a r
Left of =	Esc m a plus
Command	Shortcut
Right of =	Esc m a =
Set Manual	Esc m a s
Clear Manual	Esc m a d
Reset Alignment	Esc m a R
Up/Down (Alignment) pop-up menu	
Top	Esc m a t

Function	Short-cut
Baseline	Esc m a B
Bottom	Esc m a b
Line Breaking pop-up menu	
Set Manual	Esc m b s
Clear Manual	Esc m b c

Navigating in a formula

Select next prompt tabs through the entry fields of pop-up dialogues.

Function	Short-cut
Moving the insertion point	
Left	left arrow
Right	right arrow
From beside a fraction to the numerator	down arrow
Changing the selection	
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

Function	Short-cut
Moving math elements while retaining algebraic equivalency	
Left	Shift+left arrow
Right	Shift+right arrow
Up	Shift+up arrow
Down	Shift+down arrow
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	
Swap with element on left	Control+m Control+left arrow
Swap with element on right	Control+m Control+right arrow

Display comparison

Since Donald Knuth developed T_EX in the late 1970s for type setting mathematics the presentation of formulas with this tool is the gauge for

- Relative size of objects (exponents, indices etc.)
- Extension of symbols for root, sum, product etc.
- Extension of parentheses, brackets and braces
- Positioning of attributes (boundaries, limits, etc.)

Keep in mind that *the beauty in the eye of the beholder* [Scottish philosopher David Hume].

I do not have access to many systems, hence the following are mainly copies from books and screenshots.

T_EX

$$\frac{1}{2\pi} \int_{-\infty}^{\sqrt{y}} \left(\sum_{k=1}^n \sin^2 x_k(t) \right) (f(t) + g(t)) dt.$$

$$\left[\int_1^4 (3x^2 - 2) dx \quad \frac{2}{3} + \frac{1}{6} \quad \sum_{z=1}^5 (z^3 + z) \right] \Big|_{y=0}^1$$

FrameMaker

$$\sigma_x = \sqrt{\frac{1}{n} \left\{ \sum_{i=1}^n X_i^2 - \frac{1}{n} \left(\sum_{i=1}^n X_i \right)^2 \right\}} \quad \left[\int_1^4 (3x^2 - 2) dx \quad \frac{2}{3} + \frac{1}{6} \quad \sum_{z=1}^5 (z^3 + z) \right] \Big|_{y=0}^1$$

Mathtype

$$\sigma_x = \sqrt{\frac{1}{n} \left\{ \sum_{i=1}^n X_i^2 - \frac{1}{n} \left(\sum_{i=1}^n X_i \right)^2 \right\}}$$

MS Word EQ Editor 3.0

Object embedded

Bitmap embedded

$$\sigma_x = \sqrt{\frac{1}{n} \left\{ \sum_{i=1}^n X_i^2 - \frac{1}{n} \left(\sum_{i=1}^n X_i \right)^2 \right\}} \quad \sigma_x = \sqrt{\frac{1}{n} \left\{ \sum_{i=1}^n X_i^2 - \frac{1}{n} \left(\sum_{i=1}^n X_i \right)^2 \right\}}$$

MathCAD 11

$$\sigma_x := \sqrt{\frac{1}{n} \left[\sum_{i=1}^n [(X^2)_i] - \frac{1}{n} \left(\sum_{i=1}^n X_i \right)^2 \right]}$$

MathML (Netscape 7.1) with MIT fonts

$$\int_{x_i}^{x_i+h} f(x) dx \simeq \frac{h(f_i + f_{i+1})}{2} = \frac{1}{2} h f_i + \frac{1}{2} h f_{i+1}$$

12

Generate HTML

Overview

HTML can be generated from a FrameMaker file or all files of a book.

The transformation is controlled by a large table on the reference pages, which is set up by default with some guessing by FrameMaker.

To get good transformation results this table must be adapted.

Contents

Save as HTML	2
WebWorks Publisher Standard Edition	5

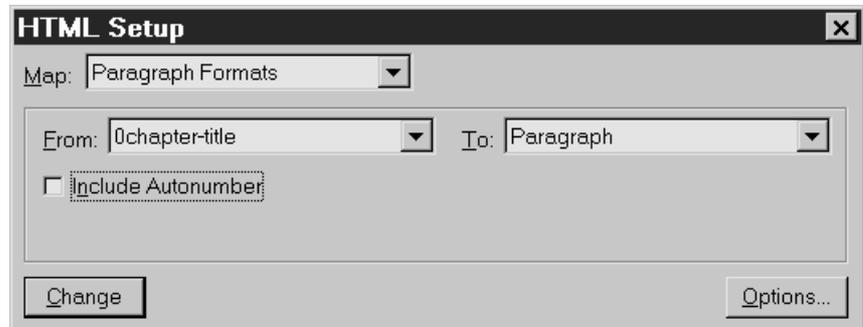
Save as HTML

With **File > Save as ...** and selecting HTML a FrameMaker internal process is used to convert the document to HTML.

Since FrameMaker 6 an independent program is distributed. With WebWorks Publisher Standard Edition (see page 5) you get more pleasing results. For serious work, however, you need the full product WebWorks Publisher which allows full configuration of the conversion process.

Note: *This process uses mapping tables on the reference tables named HTML. Hence a template may provide a complete set-up.*

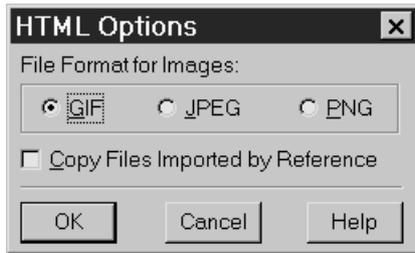
- To set up the mapping tables select **File > Utility > HTML setup**
- If not all styles in the document are in the paragraph catalogue, you get prompts for all of those. You may decide not to include them in the catalogue. Nevertheless they are available for conversion to HTML.



- Follow these rules for a reasonable setup:

Paragraph type / Character type	Mapping to HTML element
Heading, table heading, table title	Heading (autolevel)
Ordinary paragraphs and the like, table cells (except lists in tables)	Paragraph
Citations	Block Quote
Glossary term	Data term
Glossary definition	Data Definition
Code examples	Pre formatted Text
Numbered and bulleted lists	List Item
Continuation paragraphs to lists	List Item (Continued)
Character formats for code, keyboard input etc.	Code
Character formats for variables	Variable
Normal emphasis	Emphasis
Stronger emphasis	Strong Emphasis
anything you don't like to appear in the HTML output.	Throw Away

- After this set up you may need to change heading levels in the Heading table on the reference page **Headings**, because the automatism is not that good.



- Set the options for graphics. The conversion of graphic formats is only applied to graphics, which are copied to FrameMaker (not referenced) or FrameMaker vector graphics.
- Set the option **Copy Files Imported by Reference** if you want all referenced graphics to appear in the same directory as the HTML file. These files are not converted.
- Select **Save as...** and choose HTML from the **Save as type...** pull down list.
- Define an appropriate file name (with extension html) and wait some time.
- You may need tweaking of the generated mapping table on the reference pages names HTML and Headings (see *Heading table* on page 12-3).

The generation (with some tweaking according to the rules above and an adapted Headings table) gets useful results

Definitions on the Reference Pages

The tables are displayed here in there more or less original appearance. I have only removed the Comment columns in most cases.

Heading table

In most cases, this table need some adaptation, because FrameMaker defines arbitrary heading levels

HTML Mapping table

As soon as you change a H* item to a distinct HTML heading (for example, H3), this heading will disappear at the next HTML generation from the Heading table displayed above.

HTML options table

Control	Value	Comments
Image Format	0001IMAGGIF GIF	
Copy Files Imported by Reference	N	
Export Encoding	ISO-8859-1	
CSS Export Encoding	ISO-8859-1	

System macros

These macros can be used to define special headers at the entrance into an HTML page (see *Code for a navigation bar* on page 4).

Cross reference macros

These are OK for most purposes and don't need any changes.

General Macros

Have not yet figured out what can be done with these.

Character macros

This is a mapping of characters to HTML entities or ordinary characters. You may need to add some special characters here.

Code for a navigation bar

To insert a navigation bar of the kind ...

[First Page] [Previous Page] [Next Page] [Table of Contents] [Index]

... the following code should be used for macros *StartOfDoc*, *StartOfSubDoc*, *StartOfFirstSubDoc* and *StartOfLastSubDoc*.

```
<H5>  
  <A HREF=»$parentdoc»>[First Page] </A>  
  <A HREF=»$prevsubdoc»>[Previous Page] </A>  
  <A HREF=»$nextsubdoc»>[Next Page] </A>  
  <A HREF=»$FrameBookTOC.htm»>[Table of Contents]<A>  
  <A HREF=»$FrameBookIX]»>[Index] </A>  
</H5>
```

WebWorks Publisher Standard Edition

Since version 6 FrameMaker includes Quadralay WebWorks Publisher Standard Edition (WWPst), which provides robust features for creating HTML, Dynamic HTML, and XML output:

- Map FrameMaker elements (such as paragraph tags, character tags, and graphics) to online styles.
- Convert text, graphics, and tables to HTML, Dynamic HTML—HTML with cascading style sheets (CSS)—and XML.
- Determine how a FrameMaker document is divided into one or more HTML files.
- Convert any images into online formats.
- Specify how navigation bars appear at the top and bottom of a page.
- Create an HTML FrameSet.

Note: *On your system WWPst might not be installed or installed in a directory other than where FrameMaker is installed.*

Templates

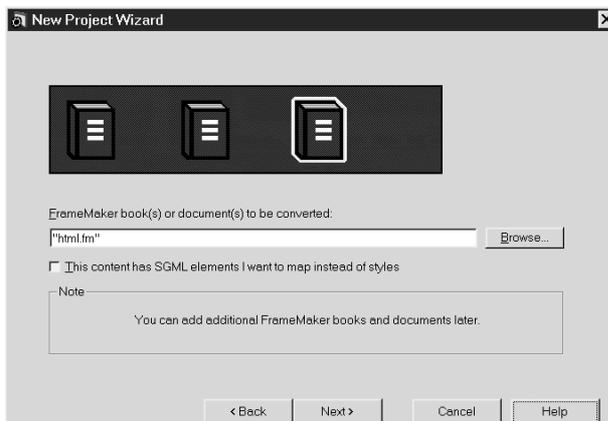
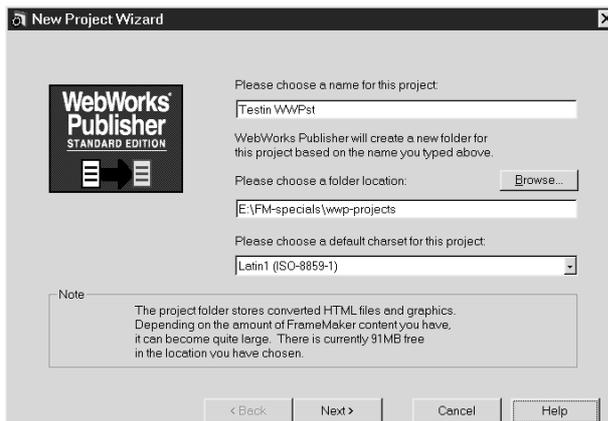
WWPst provides templates for the following output forms of web pages:

Dynamic HTML	This template produces HTML that uses a cascading style sheet (CSS) file and is compliant with the HTML version 4.0 standard. Dynamic HTML Standard Edition output requires a version 4 or later browser.
Portable HTML	This template produces basic HTML that is compliant with the HTML version 3.2 standard. Portable HTML Standard Edition output works well in any web browser (such as Netscape version 2 or higher and Internet Explorer version 3 or higher).
XML+CSS	This template produces Extensible Markup Language (XML) that can be displayed by browsers that support XML and CSS.
XML+XSL	This template produces XML that can be displayed in browsers that support the Extensible Stylesheet Language (XSL). The default XSL rules included with the template transform the generated XML into an HTML result set for display in IE5, however, they can easily be customized for other purposes if desired.

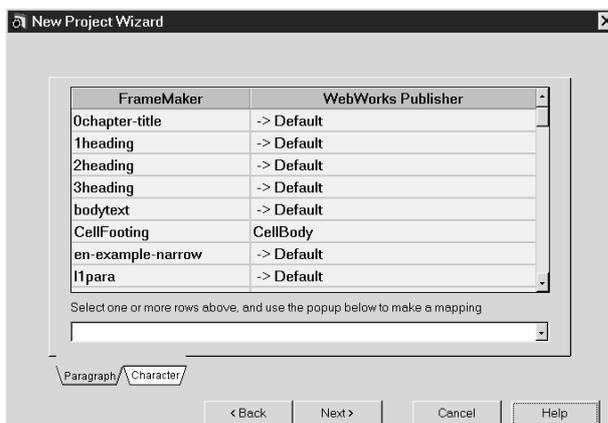
Conversion process

WWPst provides a wizard to set up a WWP project. Use **File > New** to start the wizard and follow the dialogues:

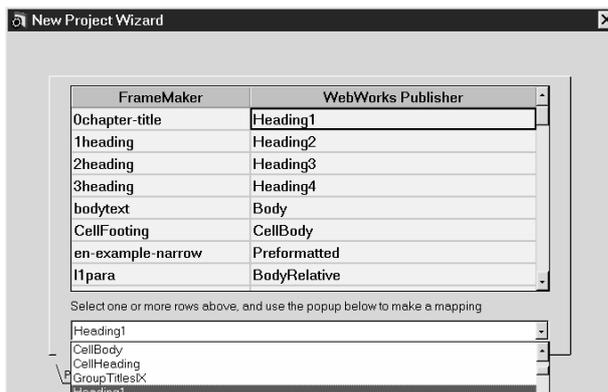
After defining the name and location (folder) of the project you are requested to enter the FrameMaker source. This may be a book or a FrameMaker file. The following example takes the file `html.fm` from this handout (chapter 11, first part).

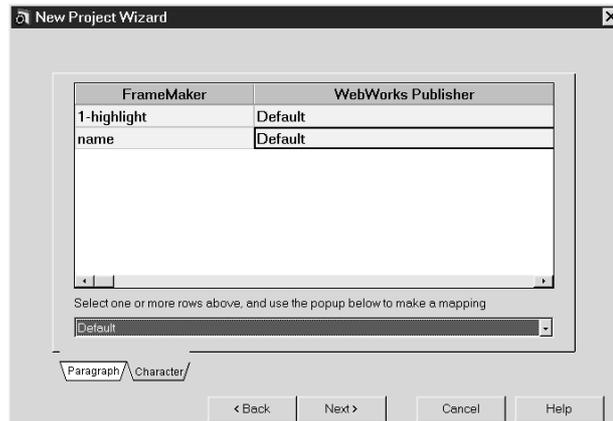


WWPst now analyses the input file(s) and creates a mapping table for the paragraph and character styles found (in use).



Set the defaults to more reasonable mappings:

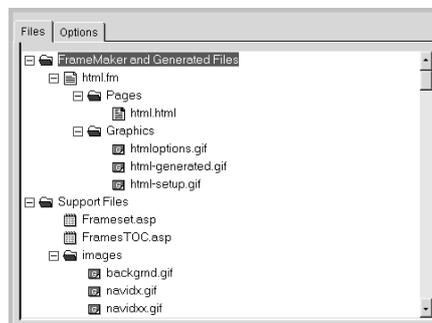




WWPst is now ready to convert the input files into HTML:



A number of project files become visible in the sub directories of the project.

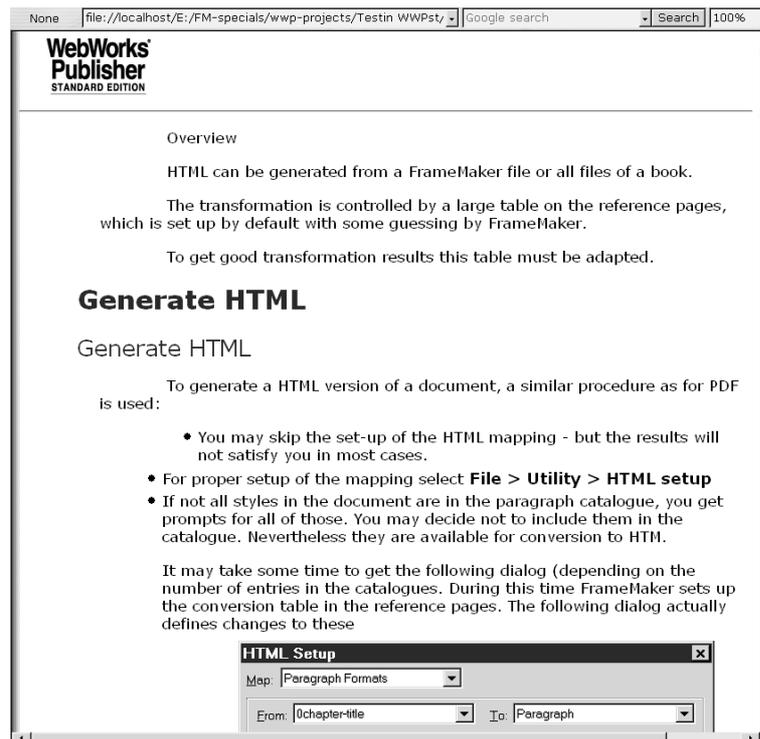


The most prominent results are the HTML file and the CSS file. We did not specify to break up the long input file into distinct HTML files at a certain heading level. Hence there is only one HTML file for one FrameMaker file.

Modifications to the WWPst project set up are not supported with the wizard.

The resulting HTML page looks much nicer than that one generated with the FrameMaker internal conversion tool. Obvi-

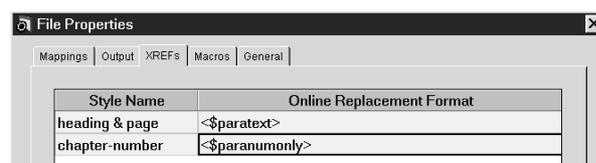
ously the WWPst is an advertisement for the full product - hence the banner on top and at the bottom of the page:



Refining the project

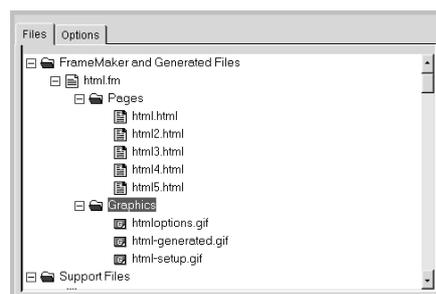
The mapping can be refined with **Project > Options:**

- Start new HTML pages with paragraph mapping to NewHTMLPage
- Map a table format to either *Default* or *Alternate Shading*
- In the mapping of cross reference formats remove the page number building blocks

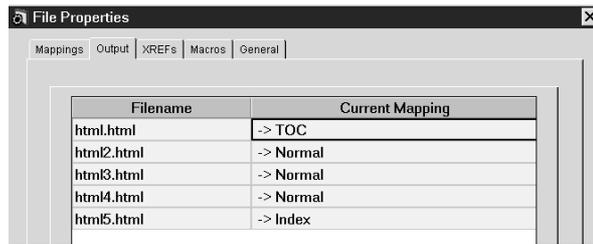


Note: *In WWPst the Macros and the General properties can not be changed. This requires the full product.*

After setting of NewHTMLPage for 1heading and 2heading we get these files in the project:



Now the FM file is broken up into 4 HTML pages. In addition we modify the default file mapping

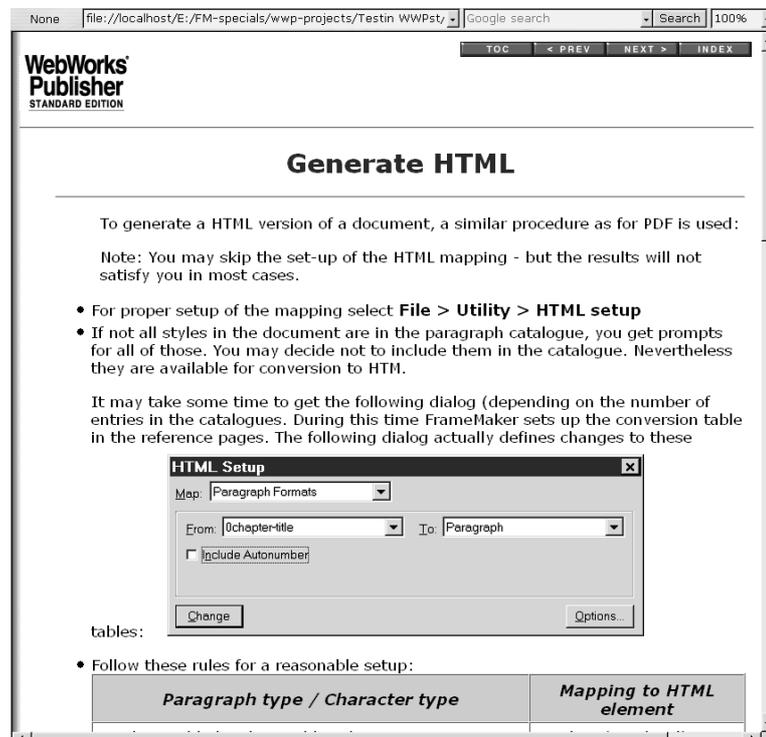


Filename	Current Mapping
html.html	-> TOC
html2.html	-> Normal
html3.html	-> Normal
html4.html	-> Normal
html5.html	-> Index

Also the first and last file shall use the Normal page style.

In addition we fix the mapping of the paragraph tag `lc-checklist` to `SmartList1` and in the style sheet we set the text-indent of the body tag to 0.

After these modifications page `html2.html` looks like this in Opera 6:



WebWorks Publisher STANDARD EDITION

Generate HTML

To generate a HTML version of a document, a similar procedure as for PDF is used:

Note: You may skip the set-up of the HTML mapping - but the results will not satisfy you in most cases.

- For proper setup of the mapping select **File > Utility > HTML setup**
- If not all styles in the document are in the paragraph catalogue, you get prompts for all of those. You may decide not to include them in the catalogue. Nevertheless they are available for conversion to HTML.

It may take some time to get the following dialog (depending on the number of entries in the catalogues. During this time FrameMaker sets up the conversion table in the reference pages. The following dialog actually defines changes to these

HTML Setup

Map: Paragraph Formats

From: 0chapter-title To: Paragraph

Include Autonumber

Change Options...

tables:

- Follow these rules for a reasonable setup:

Paragraph type / Character type	Mapping to HTML element

With the TOC button we get access to first and with the Index button to the last page of the set.

Navigation buttons

Since we now have multiple pages, WWPst automatically adds navigation buttons to the pages, both on top and at the bottom:



WWPst assumes that the first input file of a FrameMaker book is a TOC (table of contents) file and the last is an IX (index) file.

Style sheet (CSS)

Further tweaking, for example change indentations, can be performed by modifying the style sheet. This is also better organised than the version of the FrameMaker standard tool.

```
/* Document Defaults */
body { font-family: Verdana, Arial, Helvetica, sans-serif; font-size: 10pt; font-
style: normal; font-weight: normal; color: #000000; background-color: #FFFFFF;
letter-spacing: normal; text-align: left; text-indent: 15pt; word-spacing: normal}
a:active { color: #0000CC}
a:hover { color: #CC0033}
a:link { color: #3366CC}
a:visited { color: #9999CC}

/* Paragraph Styles */
.Body { margin-left: 30pt}
.BodyRelative { }
.CellBody { }
.CellHeading { text-align: center; font-weight: bold; color: #003366}
.GroupTitlesIX { font-size: 16pt; color: #003366}
.Heading1 { font-size: 18pt; color: #003366 ; font-weight: bold; margin-top: 20px}
.Heading2 { font-size: 15pt; font-weight: normal; color: #003366}
.Heading3 { font-size: 12pt; font-weight: bold; color: #003366}
.Heading4 { font-size: 10pt; font-weight: bold; font-style: italic; color: #003366}
.IndentedRelative { }
.NewHtmlPage { text-align: center; font-size: 18pt; color: #003366 ; font-weight:
bold; margin-top: 20px}
.Preformatted { }
.PreformattedRelative { }
.TableTitle { text-align: center; font-style: italic; font-weight: bold}
.Title { text-align: center; font-size: 18pt; color: #003366; font-weight: bold;
margin-top: 20px}
.TOC1 { font-size: 13pt; font-weight: bold}
.TOC2 { font-size: 11pt}
.TOC3 { font-size: 10pt}
.TOC4 { font-size: 9pt}
.TOC5 { font-size: 8pt}

/* Character styles */
.Code { }
.CodeEmphasis { font-style: italic}
.CodeStrong { font-weight: bold}
.Emphasis { font-style: italic}
.EmphasisUnderline { font-style: italic; text-decoration: underline}
.Strong { font-weight: bold}
.StrongUnderline { font-weight: bold; text-decoration: underline}
.SubScript { }
.SuperScript { }
.WebJump { }
```

13

Specials

Overview

In this chapter special and maybe rarely used functions of FrameMaker are presented.

Contents

Document structure	2
Conditional text	4
Text insets	7

Document structure

FrameMaker documents are structured with the following mechanisms:

- A book refers to chapters or parts of
- A chapter (or part of a chapter in a file) is broken down into sections by means of headings (1heading, 2headings)

There is no control of the structure. You are free to place a heading level 5 just after the chapter heading... Rigid control over structure is maintained with the SGML mechanism available with the Structured Interface (*Structured documents* on page 1-16).

Checking structure

A document should keep a logical structure which depends on the subject the document is about. For example, the structure of a user manual for a machine is regulated by standards. to judge the value of structure, look at a beautifully shaped tree with its branches, twigs and leaves.

The physical structure of a document is reflected in the book file. The logical structure can be seen in the Table of Contents and some aspects can also be seen in the index.

Check structure with TOC

In the enhanced structure we have a more even distribution of lower levels, thanks the new category *elements of the work space*:

Old structure	New structure
Working environment	Working environment
Some discipline required.	Starting FrameMaker in standard mode
Preferences	FrameMaker work space
Customising FrameMaker	Some discipline required
Control characters in the text	Preferences
...	Navigate the document
Palettes and catalogues	Customising FrameMaker
Tool palette	Sample templates
Catalogues.	Control characters in the text
Quick access bar (tool bar)	Appearance of check boxes.
Menus and palettes	...
Graphic tools	Elements of the work space
	Palettes and catalogues
	Quick access bar (tool bar)
	Menus and palettes

Check structure with index

For example, the index of this handout first displayed these entries:

editing

- cross-reference 7-8
- graphic shape 6-9

How about editing footnotes or formulas? Well, there was no such subject in there until the index making process revealed this defect.

Modifying structure

Re-arrange files within a book

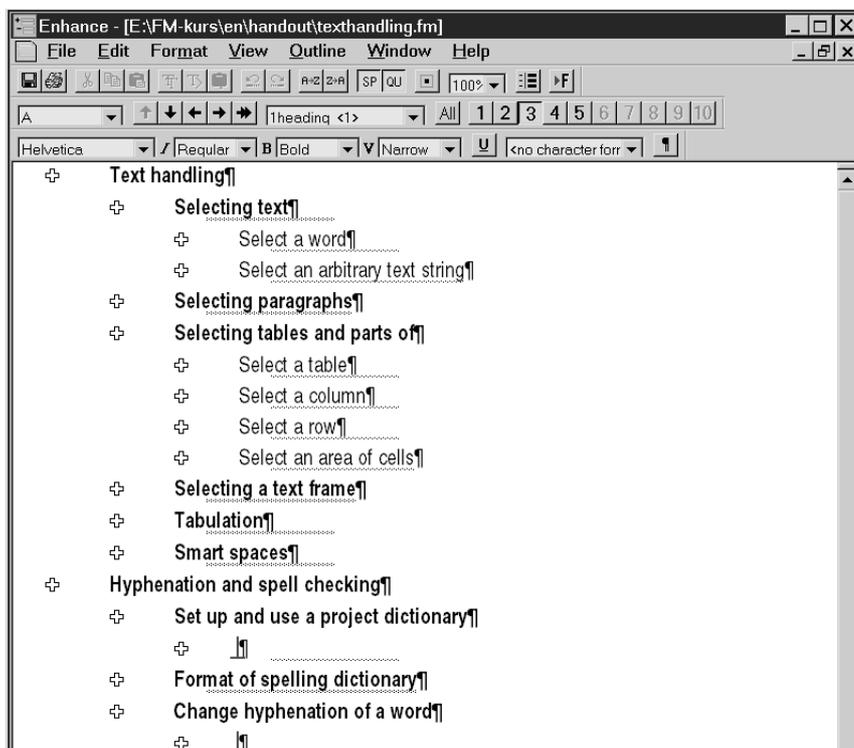
The files comprising a book are rearranged with **File > Rearrange Files...** while you are in a book file.

If you have broken chapters into several files, you may need to adjust the settings for the files (numbering starting at 1 or continue, prefixes for generated files etc.) with **File > Setup File**.

Re-arrange information within a file

The standard FrameMaker implementation does not provide an outline view of the document. The powerful API (plug-in) «Enhance» from Sandybrook Software (<http://www.sandybrook.com>) provides this feature:

- Define up to 10 structural levels (1heading, heading2, caption,...)
- Move entire levels or parts of
- Promote and demote levels or parts of
- Sort paragraphs alphabetically



Conditional text

Note: *Table columns (or individual cells in a table) cannot be made conditional.*

Application of conditional text

	Organising and implementing conditional text may be difficult. However, in the following cases it may be worth the effort:
Product levels	Standard, extended, professional may be the names for conditions in this case.
Development	Information which is not yet fixed can be hidden in the current release.
Review comments	Questions to the reviewer and the answers can be placed in conditional text which may be hidden to print a clean draft.
Platform dependencies	In software descriptions it may be useful to tag with Windows, Mac and Unix.
Tutorials	For training manuals you may wish to have both the Student part and the Instruction part in the same document.
Delivery medium	Maintaining single source documents may require to handle special portions for the CD release, the printed version and the version for the web.
Compare documents	File > Utilities > Compare Documents ... creates a new document with two conditions (inserted, deleted) relative to the current document.

Keep it simple

- Avoid assigning multiple condition tags to the same information. Although you can handle 6 variants with 3 conditions (mathematically) this makes you document very difficult to maintain.
- Limit the number of conditions to the minimum. There is only a limited set of styles to represent the condition, although you can have many colours ...
- Use distinct condition tag names which alphabetise well.
- If possible, tag entire paragraphs and not portions of paragraphs, such as sentences or even words.
- Define conditions for spaces and punctuation consistently.

Alternatives for conditional text

Variables	Company names, brands, product names and other short pieces are better handled by variables.
Custom markers	Use custom markers for different types of indexed information.

Note: *Be aware that hidden conditional text also hides all markers in that text (e.g. cross reference targets, index markers).*

- Chapters** Instead of applying conditions to whole chapters, create alternative books. To avoid conflicts between the generated documents (e.g. the TOC or index), define individual prefixes in the book variants (e.g. TOC1 in the first book, TOC2 in the second).
- Files** You may break down a particular chapter into files. Placing the text inset referring to the file into a condition allows you to maintain the file independently (see *Text insets* on page 13-7).

Setting up conditions

Before applying conditions set up a scheme about the conditions you need. For example, a software manual may have parts only relevant to operators and system programmers.

If you have portions only for beginners, you may face a 'subtracting' condition. The unconditional text is common to all types of readers and hence may not contain all parts for standard users. A possible scheme is this:

Type of reader	Conditional text to be included			
	std_user	operator	system	beginner
Beginners	not in	not in	not in	in
Standard user	in	not in	not in	not in
Operator	in	in	not in	not in
System programmer	in	not in	in	not in

Handle conditions

Presentation of conditional text

The following text is in condition tag «Comment».

This text is of condition «Comment». This is very useful for

- editorial comments
- this is both Comment and Detail - colours are mixed

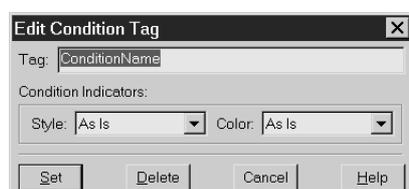
This is the last line with both the condition Comment and Detail.

This paragraph is without any condition, the following paragraph is «Detail»:

This text has condition «Detail». This is an example, how to use conditional texts for variants of documents. Details are, for example, only needed for a certain type of readers.

This paragraph is without any condition.

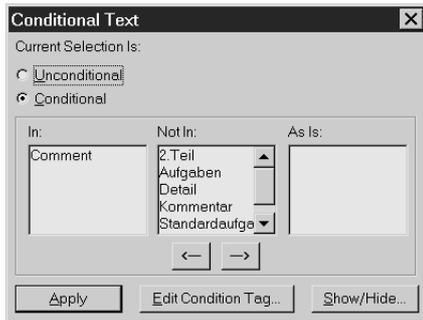
Define a new condition



To define a new condition tag (for example, operator):

- 1 In **Special > Conditional Text...** press Edit Condition Tag...
- 2 Provide the new name in the edit box and select an appropriate style and colour for the display (this style is not used for printing!); **Set!** The condition is now listed in the «Not In: column».

Display the current condition of a text



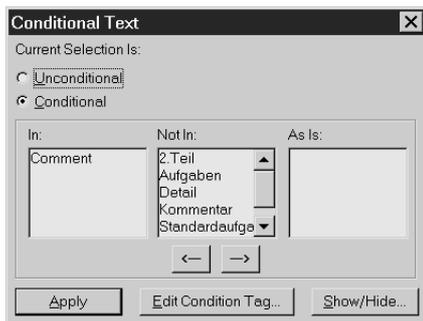
- 1 Place the cursor in the appropriate text
- 2 **Special > Conditional Text...** displays the dialogue Conditional text. This dialogue can stay open during work.
- 3 The radio button in **Current Selection Is** says whether the text is unconditional or conditional. The lists display the applicable conditions:

In The current selection is in this condition

Not in The current selection is not in these conditions

As is The current selection contains both text which is in a condition and text which is not.

Apply a condition



To apply conditions you will need to define the condition tags and the appearance of the conditioned text:

- 1 Select the text which will receive the condition (for example «comment»)
- 2 **Special > Conditional Text...** If you do not see the desired condition tag in the «Not in:» column, you must first set up this tag (see *Define a new condition* on page 5).
- 3 Set the current selection to **Conditional** (radio button) and move the desired condition to the left column («In:») and press **Apply!**

Delete conditions

- 1 Select the text you want to make unconditional
- 2 Select **Special > Conditional Text**
- 3 Activate the **Unconditional** radio button
- 4 Click **Apply**.

Copying conditions

You can use **Copy Special > Conditional Text Settings** and apply the condition(s) to a target selection by Paste.

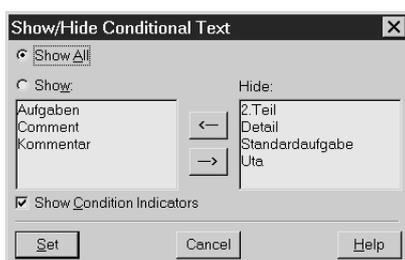
Display the conditional text

Hidden conditional text is represented by a maker symbol (**T**). At the beginning of a line the left portion of the T-arm is invisible (truncated by the boundary of the text frame).

Note: *If you delete a Conditional Text Marker you actually delete the conditional text!*

To display (and print) text with and/or without any condition, the following steps are required:

- 1 In **Special > Conditional Text...** click button **Show/Hide**.
- 2 To display (and print) everything, activate the radio button Show All.
- 3 To display (and print) only certain condition texts,
 - move the conditions into the appropriate column (Show or Hide).
 - Activate radio button **Show**



4 Set!

Note: *You may move all tags at once with **SHIFT+click** on an arrow.*

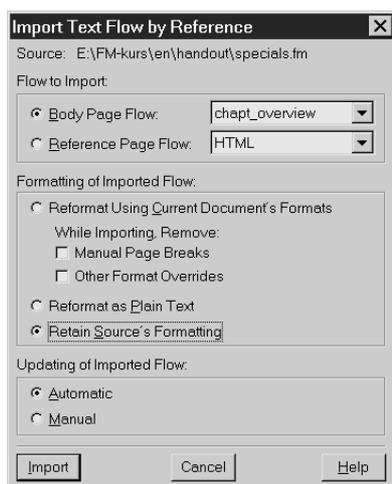
Text insets

Sources of text insets

- A file processed by import filters (original ASCII text, MS-Word doc etc.)
- A text flow from a FrameMaker document, which may be the current document (see example below). In most cases the complete file (the complete flow A) is imported.
- A text flow from a FrameMaker document which is in MIF format.

Text insets can be arranged in a single file in different flows. The flows may be located in reference pages and can have memorable names, for example `warning_highvoltage`, `warning_hotwater`. In file `text_inset.fm` a flow A provides an introduction and flow `warn_1` is short flow with boiler plate text.

Import text flow from a Frame document



As an example, we import hereafter the text flow `chapt_overview` from current document's reference pages:

- 1 **File > Import > File...**
- 2 Specify the proper file name (`specials.fm`) in the File selection dialogue, **Import!**
- 3 The imported file is a FrameMaker file, hence you get the dialogue displayed to the left. Select the proper text flow and specify «Retain Source's Formatting»; **Import!**

The imported text is placed at the current cursor location (in this case, below the current paragraph). The paragraph format of the insert is derived from the first paragraph format in the inset (here: `chapt_overview`).

Avoid re-formatting

When importing a text inset at the end of a paragraph, that paragraph gets the format of the first paragraph in the inset.

Importing a text inset in front of a paragraph does not re-format that paragraph).

When using empty 'anchoring paragraphs', insert a required blank prior to importing the text inset in front of that blank. You may wish to use a special format for the anchoring paragraph (small size, ...):

before importing →
place the insertion
point (cursor) here

¶

If you need to arrange text insets one after the other (modular texts) you may wish to define the 'anchoring paragraph' as Run-in-head which does not cause a line break at the end of the paragraph. Do not fill the Default Punctuation field with the non breaking space! This space must be in front.

Text inset with variables and references

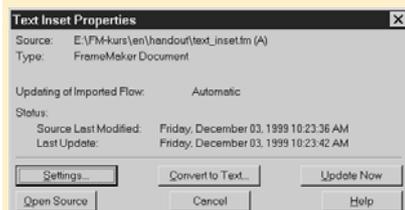
Text insets imported by reference have some properties, which must be considered when using them:

- Referenced texts can not be edited (obviously...)
- Formats (paragraph styles, table catalogue, character catalogue, cross-reference formats) stay local to the embedded document and are not added to the embedding document.
- Variables from the inset are copied to the embedding document and hence can be updated there (or the surrounding book).

Updating text insets

Whenever a FrameMaker document is opened references to other files (text inset, graphics) are updated. If this is not possible (for example, the file was moved or renamed), an error message is issued. Use **Edit > Find** and find «Unresolved Text Inset».

Update particular text inset



To update a particular text inset,

- 1 Double click into the text (this is selected and a dialogue appears).
- 2 In **Text Inset Properties** click on **Update Now**.
- 3 If the inset can not be updated (moved, renamed) an error message gives you a chance to search it yourself).

Update all references in file



To update all text insets of the current file,

- 1 **Edit > Update References...**
- 2 Activate the appropriate check boxes.
- 3 **Update!**

Update everything in a book

To update all references in a book,

- 1 Open the book file
- 2 Update external references with **File > Generate/Update...**

The process may halt in a particular file with «unresolved xyz». this may be a cross-reference or an inset or a graphic file. In this case open that file and find the unresolved xyz.

If unresolved cross-references are in the master pages (for example, a reference to a paragraph-number) this can not be discovered easily. The book error log points only to the body pages. You need to display the master pages and search for the unresolved reference.

Note: *As long as you have not cleared the problem, the generate/update process will halt at the first error.*

Import examples

For the sake of demonstration the text insets are underlaid with a colour.

Note: *Error in FrameMaker (in the following example): The variable Filename [Long] with the format <\$fullfilename> which is used in the text inset is re-evaluated when the text is imported. Hence the path noted in the third line is the path of the current document - and not that of the inset!*

Text inset from flow warn_1

Danger du mort



This is a flow from file E:\FM-course\handout_70\specials.fm.

ACHTUNG! ALLES LOOKENSPEEPERS!

Das computermachine ist nicht fuer gefingerpoken und mit-tengrabben. Ist easy snappen der springenwerk, blownfusen und poppencorken mit spitzensparken. Ist nicht fuer gwerken bei das dumpkopfen. Das rubbernecken sictseeren keepen das cotten-pickenen hans in das pockets muss; relaxen und wachen das blinkenlichten.

Relaxen und vatchen blinkenlichten!!!

The text inset is inserted at the beginning of this line

Inset from text flow A

This file (E:\FM-course\handout_70\specials.fm) is used as an example of *import by reference* in various situations. Paragraph styles are the same as in the main document with the exception of z_text-inset, which uses a script font for easy recognition.

Variable in the imbedded text. Lets see whats going on with a cross reference to another chapter in this book: **Teamwork** on page B-9. Please note the special format which is local to this text inset.

Hecate est Iovis et Latonae filia, soror Apollinis. Est tricopor et triceps, magicarum artium magistra ac fascinationum praeses, cinctra latrantium canum turma; noctu stans in triviis vel prope sepulcra et ubi loca sunt caedibus contaminata.

□ Hecate est Iovis et Latonae filia, soror Apollinis. Est tricopor et triceps, magicarum artium

□ vel prope sepulcra et ubi loca sunt caedibus contaminata.

Note: *Hecate est Iovis et Latonae filia, soror Apollinis. Cinctra latrantium canum turma; noctu stans in triviis vel prope sepulcra et ubi loca sunt caedibus contaminata.*

Hecate est Iovis et Latonae filia, soror Apollinis. Est tricopor et triceps, magicarum artium magistra ac fascinationum praeses,

Hecate est Iovis et Latonae filia, soror Apollinis. Est tricopor et triceps, magicarum praeses. This is the last line of the text inset.

The text inset is inserted at the beginning of this line



Hints and tips

Overview

This chapter provides some hints to speed up your work.

Section FAQ gives you tips which result from the daily work with FrameMaker. For experts they may seem obvious, but not so for beginners.

For a complete list of all FrameMaker 6 commands (both for the German and English FrameMaker) see www.daube.ch/docu/fmaker08.html

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Keyboard input

Short-cuts

Any FrameMaker function can be invoked from the keyboard. ESC sequences (for example, ESC, o, F) are independent of platform, but depend on the User Interface (UI) language. Short-cuts using special keys depend on platform and (often) UI.

Purpose	English FrameMaker version (Win)	Deutsche FrameMaker version (Win)
Format paragraph ^{a.)}	F9, <i>para_stylename</i> , RET	F9, <i>para_stylename</i> , RET
Format characters ^{a.)}	F8, <i>char_stylename</i> , RET	F8, <i>char_stylename</i> , RET
Select graphic object	CTRL+click on object	CTRL+click on object
Select 1st / next drawn object	ESC, o, F	ESC, o, F
Select next drawn object	ESC, o, n	ESC, o, n
Keep graphic tool	SHIFT+click the tool	SHIFT+click the tool
Properties of selected / current object	ALT+g, p	ALT+g, o
Open Paragraph designer	CTRL+m	CTRL+m
Open Character designer	CTRL+d	CTRL+d
Open Table designer	CTRL+t	CTRL+t
Repeat last character modification	ESC, c, c	ESC, z, w
Repeat last paragraph modification	ESC, j, j	ESC, A, W
Straight single quote	ESC, CTRL+'	
Straight double quote	ESC, " (SHIFT+2)	
· (bullet) appearance strongly depends!	CTRL+q, % / ALT 0149	CTRL+q, % / ALT 0149
† (dagger)	CTRL+q, SPACE	CTRL+q, SPACE
‡ (double dagger)	CTRL+q, ' (grave accent)	CTRL+q, ' (grave accent)
™ (trade mark)	CTRL+q,, *	CTRL+q, *
© (copyright)	CTRL+q,)	CTRL+q,)
® (registered)	CTRL+q, (	CTRL+q, (
¶ (paragraph symbol)	CTRL+q, &	CTRL+q, &
§ (section symbol)	CTRL+q, \$	CTRL+q, \$
... (ellipsis)	CTRL+q, l (uppercase í)	CTRL+q, l (uppercase í)
— m-dash	CTRL+q, Q / ALT 0151	CTRL+q, Q / ALT 0151
- n-dash	CTRL+q, P / ALT 0150	CTRL+q, P / ALT 0150
■ ■ m-space	ESC, blank, m / SHIFT+CTRL+blank	ESC, s, m / SHIFT+CTRL+leerstelle
■ ■ n-space (m/2)	ESC, blank, n / ALT+CTRL+blank	ESC, s, n / ALT+CTRL+leer
■ ■ thin space (m/12)	ESC, blank, t	ESC, s, t
numeric space	ESC, u , l	ESC, u , l
■ ■ non breaking space (m/3.5)	ESC, blank, h / CTRL+blank	ESC, s, z / CTRL+leerstelle
nonbreakable hyphen	ESC, -, h	ESC, -, w
optional hyphen	ESC, -, D / CTRL+minus	ESC, -, t / CTRL+minus
suppress hyphenation	ESC, n, s (front of word)	ESC, k, t (am wort-anfang)
TAB in table cell	ESC, TAB	ESC, TAB
Select entire table	triple click in any cell	triple click in any cell
Select table column	Double click close to R/L border of cell	Double click close to R/L border of cell
Select table row	Double click in the middle of a cell	Double click in the middle of a cell
Add row after current row in table	CTRL+RET	CTRL+RET
Go to anchor position (behind anchor)	ESC, t, SHIFT+i (cursor to be in table)	ESC, t, w (cursor in tabelle)

Purpose	English FrameMaker version (Win)	Deutsche FrameMaker version (Win)
Insert variable <i>name</i> ^{a.)}	ESC, q, v, <i>name</i> , RET CTRL+0, <i>name</i> , RET	ESC, k, v, <i>name</i> , RET CTRL+0, <i>name</i> , RET
Refresh display	CTRL+I (lower case L)	CTRL+I (lower case L)
Hyperjump from references	ALT+CTRL+click on the reference	ALT+CTRL+click on the reference
Previous view (goback) in same file	ESC, v, P	ESC, v, v
Pick up graphic properties	ESC, g, O (upper case letter o)	ESC, g, O (upper cas letter o)
Lock / unlock document (view / edit)	ESC, F, I (lower case L), k	ESC, d, Y
Heroic open ^{b)}	ESC o, H	ESC o, H
Open without updating references	CTRL+click on the Open button in the Open dialogue	

a. Name can be abbreviated to significant length

b. Another (empty) document must be open. This bypasses all sorts of checks to 'force' a file to open. Before any changes save the file and reopen it normally.

Special characters in dialogue boxes

Some of the most used special characters can be entered into dialogue boxes with a meta notation \xxx (the \ 'escapes' from the literal meaning of the character). These meta-notations are independent of the UI language and platform.

Desired character	Meta notation	hex	Desired character	Meta notation	hex
TAB	\t	\x08	per thousand (‰)	\%	
forced return	\r	\x09	guillemet single left (<)	\(
start of paragraph	\P		guillemet single right (>)	\)	
end of paragraph	\p	\0a	quote base single (,)	\, (comma)	
start of word	\<		quote base double (,,)	\g	
end of word	\>		quote double left 66 (")	\' (grave) \xd2	
end of flow / end of table cell	\f ^{a)}	\x0b	quote double right 99 (")	\' (single q.) \xd3	
non breaking hyphen	\+		quote single (')	\" (double q.) \x27	
optional hyphen	\-	\x04	accent circumflex (^)	\@	
suppress hyphenation	_ (underscore)	\x05	accent grave (`)	\{	
backslash	\\		accent tilde (~)	\~	
non breaking space	_ (space)	\x11	hungarian umlaut (ü)	\&	
numeric space	\s# or \#	\x10	registered (®)		\xa8
thin space	\st or \i	\x12	copyright (©)		\xa9
n-space	\sn or \N	\x13	trademark (™)	\TM	\xaa
m-space	\sm or \M	\x14	ligature fi	\fi	only on Mac
n-dash	\=	\xd0	ligature fl	\fl	only on Mac
m-dash	\m	\xd1	micro sign (μ)	\u	only on Mac
bullet (·)	\b	\xa5	ligature Œ	\OE	
dagger (†)	\d	\xa0	ligature œ	\oe	
double dagger (‡)	\D	\xe0	ß (sharp s)	\xa7 or ALT+0223	
ellipsis (...)	\e	\xc9	Y-trema (ÿ)	\Y:	
florin (f)	\F		z-caron (ž)	\k	
fraction, non breaking slash (/)	\ / (slash) ^{b)}	\xda	Z-caron (Ž)	\.	

a. \f does not work in Windows, \x0b finds the end-of-flow mark correctly

b. This is taken from the Symbol font, hence does normally not match the body font

Wildcard-characters for Find dialogue

Use Wildcard must be set ON

Matching ^{a)}	Wild-card char.
Any number of characters	* (asterisk)
Any one character	?
White space or punctuation	| (vertical bar)
Start of line	^
End of line	\$
any character from list xyz (or alphanumeric)	[abcd] or [a-zA-Z0-9]
any character except the listed	[^abcd]
brackets	\[and \]
Special characters such as TAB or m-dash	See table above

a. Error in FrameMaker: The characters Đ, đ, Þ, þ, Š, š, Ý and ý are not recognises as such, but as punctuation when searching with wildcard characters * or ?.

Example To find a \$ or ^ while searching with Wild cards use \\$ or \^
To find *manually numbered* paragraphs (start the line with a figure, followed by a period and a TAB symbol), use this pattern: `^[0-9].\t`

Note: *There are no wildcard notations for the replacement text.*

Characters with diacritical marks etc.

For platform independence FrameMaker uses a special internal code table (see page 16). This defines a rich set of accented characters from the latin script. However, some characters even for European languages are missing (such as Ğ or Ŋ) due to the limitations of an 8-bit coding and FM internal use of some code points.

Text entry

Escape sequences

A rich keyboard (e.g. the Swiss one) gives you direct access to all accented characters (except those with ring). These can be entered both in text and dialogue boxes by two methods:

Characters in rows 80 and 90 of the internal code page are created with `esc` sequences. For example, to get an Å type `ESC, *, A` (3 key strokes). See

CTRL-q sequence

Characters in rows a0 ... f0 of the internal code page are created with `CTRL+q`, followed by a character from the ASCII code page at a corresponding location ($loc_{ascii} = loc_{fm} - 80_{hex}$). For example, to get a Þ type `CTRL+q, w` (2 keys).

Select from context menu

With *microtype*'s enhanced tool bar installed, you can select a great number of special symbols from the context menu. No foreign characters (such as Å) are provides though.

Entry into dialogue fields

For characters not supported by the keyboard neither the `CTR-q` sequence nor the `ESC` sequences work. You need the hexadecimal value of the code point within the FrameMaker code. For example, to get an å into the entry field, type `\x8c`.

Non-latin scripts

Non-latin scripts, such as cyrillic or greek or even arabic or hebrew are not supported directly by Framemaker. However special methods have been developed (with virtual fonts) which work on the NT based Windows platform. For Asian scripts (Chinese, Japanese) the Asian version of FrameMaker supports certain double-byte codes.

Symbols and dingbats

Symbols not belonging to an alphabet are collected in symbol fonts (for example: wingdings, Symbol, Zapf Dingbats, Monotype Sorts, Mathematical PI).

The handling of these fonts bypasses the internal code page. Hence the entry method from the operating system can also be applied (copy/paste, ALT+0nnn):

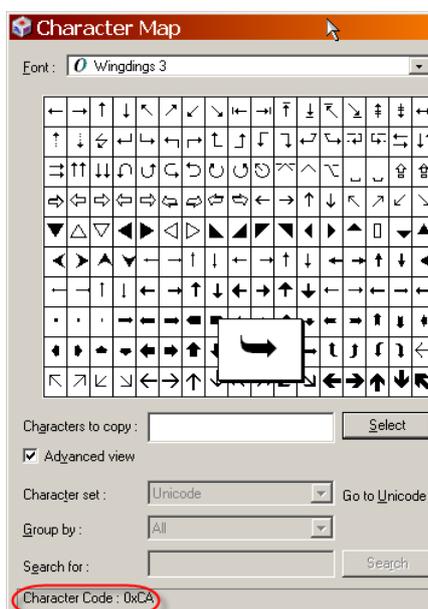
Place symbol into text

For example, you want to enter the symbol ↩ into text. This symbol is found in the font `wingdings 3` at the location of the character Ê, which has the code CA. Do the following:

- 1 Use your keyboard to enter the base character (Ê).
- 2 If not available on the keyboard,
 - use the CTRL-q sequence (CTRL-q, f), or
 - the ESC sequence (none available in this case), or
 - copy the symbol from the character map (gets Ê), or
 - enter it with ALT+0202 (↩ has Windows code CA = 202), gets Ê.
- 3 Apply the font property by character format (e.g. webbies) or font (wingdings 3).

Note: *If you first define the font and then enter a character, you get different results, which are not correct.*

Place symbol into dialogue box



Using symbols from other fonts (than the font of the text) is only possible in such dialogues which allow to define a character format: numbering of ¶, marker text, cross reference.

For example, to enter an ↩ (located at code CA in the wingdings 3 font) into an index marker:

- 1 Use your keyboard to enter the base character (Ê).
- 2 If not available on the keyboard, use the alternative methods presented before for the base character or specify the FM code (`\xe6`).
- 3 Define the special font by a character format, e.g. webbies.
- 4 The index marker may now have this content:
changing `<webbies>Ê</>` finding and changing or
changing `<webbies>\xe6</>` finding and changing

Keep in mind here, that the code `\xe6` is that of the character Ê in the *FrameMaker internal code page* (see the following table).

Table of characters and symbols

Although every effort was taken to get a complete and accurate table, the author can not be held responsible for any errors.

This table contains 217 lines, hence all codes in a Windows character set are covered. For an interactive PDF table see [Microtype](#)

PostScript font Zapf Dingbats has not been included, because the role of PS fonts (T1 type) has dwindled since 2000.

Note

The code in the third column (hex) is the hex code of the base character (leftmost column) in the FrameMaker internal code page.

This code is *not identical* to the code you get when consulting the Windows Character Map!

Standard chars							
char	Ctrl+q or esc	\x (hex)	Symbol	D+DD	Wing dings	Wing-dings2	Web dings
A		41	A	☐	✌	☞	🏠
a		61	α	☑	☪	☞	✓
À	K	cb	∕	☐	☪	+	📠
à	esc ' a	88	☐	☐	⑧	🕒	🏂
Á	g	e7	|	☐	←	✦	🏠
á	esc ' a	87	☐	☐	⑦	🕒	🏂
Â	e	e5	Σ	☐	↙	✦	🍸
â	esc ^ a	89	☐	☐	⑨	🕒	👤
Ã	L	cc	∩	☐	☪	+	📁
ã	esc ~ a	8b	☐	☐	⓪	🕒	🏂
Ä	esc : A	80	☐	☐	⑩	🕒	👤
ä	esc : a	8a	☐	☐	⑩	🕒	🏂
Å	esc * A	81	☐	☐	①	◯	👤
å	esc * a	8c	☐	☐	✌	☞	🏍️
Æ	.	ae	→	☐	☪	☞	👫
æ	>	be	—	☐	☪	+	☐
b		62	β	☑	☪	☞	🚲
B		42	B	☞	☞	☞	🏠

Standard chars							
char	Ctrl+q or esc	\x (hex)	Symbol	D+DD	Wing dings	Wing- dings2	Web dings
C		43	X	∅			
c		63	χ	↶			
Ç	esc , C	82	☐	☐	②	☾	
ç	esc , c	8d	☐	☐	②		
D		44	Δ	⌘+D+D			
d		64	δ	☐			
Ð	C	c3	ð	☐			
ð	2	b2	"	☐			
E		45	E	⇨			
e		65	ε	⇨			
È	i	e9	┌	☐	↑	★	
è	esc ` e	8f	☐	☐	④		
É	esc ´ E	83	☐	☐	③	☾	
é	esc ´ e	8e	☐	☐	③		
Ê	f	e6	┌	☐	↙	▲	
ê	esc ^ e	90	☐	☐	⑤		
Ë	h	e8	┌	☐	➔	◆	
ë	esc : e	91	☐	☐	⑥		
F		46	Φ	⇨			
f		66	φ	⇨			
G		47	Γ	↵			
g		67	γ	↵			
H		48	H	⤴			

Standard chars							
char	Ctrl+q or esc	\x (hex)	Symbol	D+DD	Wing dings	Wing- dings2	Web dings
h		68	η				
l		49	I	○			
i		69	ι	↵		⓪	ⓘ
ì	m	ed	}	□	↙	✱	∕∕
ï	esc i	93	□	□	⑧		
í	j	ea	|	□	↓	★	△
í	esc i	92	□	□	⑦		
î	k	eb	└	□	↖	✱	
î	esc ^ i	94	□	□	⑨		
ï	l	ec	┌	□	↗	★	
ï	esc : i	95	□	□	⑩	.	
J		4a	Ɔ	H			
j		6a	φ	S	et	①	
K		4b	K	⊞			
k		6b	κ	⊞	&	②	
L		4c	Λ	↵			
l		6c	λ	↵	●	③	
M		4d	M	⊞			
m		6d	μ	⊞	○	④	
N		4e	N	↙			
n		6e	v	▼	■	⑤	●
Ñ	esc ~ N	84	□	□	④	¢	
ñ	esc ~ n	96	□	□	∞	.	

Note

On a Swiss (and many other European) keyboard the tilde is an accent, hence you must type a character (e.g. blank) after it.

ESC, ~, o creates the same as ~, o

Standard chars							
char	Ctrl+q or esc	\x (hex)	Symbol	D+DD	Wing dings	Wing- dings2	Web dings
O		4f	Ō	▲	↶	✕	👂
o		6f	o	▲	□	⑥	🚗
Ò	q	f1	›	□	↑	✈	✈
ò	esc ' o	98	□	□	↻	●	★
Ó	n	ee	¸	□	↙	✳	⋮
ó	esc ' o	97	□	□	↻	●	💡
Ô	o	ef	|	□	↑	✳	⋮
ô	esc ^ o	99	□	□	↻	○	✉
Õ	M	cd	∩	□	↻	✕	📁
õ	esc ~ o	9b	□	□	↻	●	📧
ö	esc : o	9a	□	□	↻	○	📧
Ö	esc : o	85	□	□	⑤	†	👁
Œ	N	ce	€	□	↻	✕	📧
œ	O	cf	≠	□	↻	✕	🔒
Ø	/	af	↓	□	✳	◇	🎵
ø	?	bf	↙	□	🕒	◆	📺
P		50	Π	➡	↶	✓	🌲
p		70	π	▶	□	⑦	🚗
Q		51	⊕	⬅	✈	☒	🌲
q		71	θ	◀	□	⑧	↻
R		52	Ρ	∅	☀	☑	🏠
r		72	ρ	⊘	□	⑨	✕
S		53	Σ	🍏	💧	☒	🏟

Straight single quote

To get the straight single quote either «Smart Quotes» must be switched off in **Format > Document > Text Options...** or you type ESC, CTRL+'.

Standard chars							
char	Ctrl+q or esc	\x (hex)	Symbol	D+DD	Wing dings	Wing- dings2	Web dings
S		73	σ	⏪	◆	⑩	?
ß	' single quote	a7	♣	□	■	◻	📖
Š	3	b3	≥	□	✧	◊	🎮
š	p	f0	□	□	➔	☀	☺
þ	W	d7	·	□	➤	✱	🌃
þ	J	ca	⊃	□	➤	+	📄
T		54	T	✂	❄	☒	📠
t		74	τ	⏩	◆	⓪	📠
U		55	Y	☒	+	⊗	📢
u		75	υ	□	◆	ⓘ	🔒
Ù	t	f4	|	□	↕	✧	🐟
ù	esc ' u	9d	□	□	☞	⊙	📄
Ú	r	f2	∫	□	↓	✧	👉
ú	esc ' u	9c	□	□	☞	⊙	👉
Û	s	f3	∫	□	↔	★	👉
û	esc ^ u	9e	□	□	·	⊙	📄
Ü	esc : U	86	□	□	⑥	+	📡
ü	esc : u	9f	□	□	•	·	📠
V		56	ς	☒	+	⊗	📢
v		76	ϖ	□	✦	②	📠
W		57	Ω	↑	⊕	⊘	📢
w		77	ω	□	◆	③	🎯

Standard chars							
char	Ctrl+q or esc	\x (hex)	Symbol	D+DD	Wing dings	Wing- dings2	Web dings
X		58	☒	☰	☒	☒	☒
x		78	ξ	☐	☒	④	☒
Y		59	Ψ	^	☆	er	♥
y		79	ψ	☐	☒	⑤	⊖
Ý	E	c5	⊕	☐	↪	●	☎
ý	F	c6	∅	☐	↪	+	☎
ÿ	Y	d9	^	☐	▲	✱	☂
ÿ	X	d8	┘	☐	▶	✱	☂
Z		5a	Z	⋈	☾	&	☎
z		7a	ζ	€	☒	⑥	☒
Ž	z	fa	|	☐	◻	☐	☎
ž	~	fe	┘	☐	☑	☐	🌐
0		30	0	☐1	📁	☐	—
1		31	1	>	📁	📄	☐
2		32	2	<	📄	🗑️	☐
3		33	3	▬	📄	🗑️	◀
4		34	4	—	📄	📁	▶
5		35	5	⌞	📄	☐	▲
6		36	6	T	⌚	🖨️	▼
7		37	7	L	🖨️	🖨️	◀
8		38	8	➔	🖱️	🎯	▶
9		39	9	➤	📷	📷	◀
!		21	!	!	🖋️	🖋️	🕷️

Straight double quote

To get the straight double quote either «Smart Quotes» must be switched off in **Format > Document > Text Options...** or you type ESC, "

Straight single quote

To get the straight single quote either «Smart Quotes» must be switched off in **Format > Document > Text Options...** or you type ESC, CTRL+'

Standard chars			Symbol	D+DD	Wing dings	Wing-dings2	Web dings
char	Ctrl+q or esc	\x (hex)					
"	esc "	22	∇	⚠	✂	✍	🕸
#		23	#	👉	✂	✍	📞
\$		24	≡	📎	🕶	✍	🕶
%		25	%	⚡	🔔	✂	🏆
&		26	&	⚡	📖	✂	🏅
'	ctrl+ single quote	27 \q	☺	📦	💡	📞	📎
(		28	(⚡	📞	📞	💬
)		29)	⚡	📞	📄	💬
*		2a	*	≡	✉	📄	💥
+		2b	+	~	✉	📄	💥
,		2c	,	≈	📧	📄	👉
-		2d	-	☐	📧	📄	🎗
.		2e	.	📎	👉	📄	📄
/		2f	/	📄	📧	📄	📄
:		3a	:	↑	💻	📎	▶▶
;		3b	;	↖	💳	📎	||
<		3c	<	←	💾	👍	■
=		3d	=	↙	💾	👎	●
>		3e	>	↓	🙄	👉	AA
?		3f	?	↘	🗑	👉	🗑
@		40	≈	☐	🗑	👉	🔧
[		5b	[↙	☯	👉	🗨
\		5c \\	∴	☐	ॐ	👉	🗨

2007-06-22

Grave

On a Swiss keyboard (and other European) this is an accent. Nevertheless you can not create it like a tilde.

CTRL+Q, CTRL+' creates `

Vertical bar

On a Swiss keyboard the key | (ALTGR+7) must be used!

Example

To get an Aleph symbol (ℵ) into the text, enter CTRL+q, @ (two key strokes) and apply to the appearing ¿ a character format which provides the Symbol font.

Standard chars			Symbol	D+DD	Wing dings	Wing-dings2	Web dings
char	Ctrl+q or esc	\x (hex)					
]		5d]	☐	⚙	?	💬
^		5e	⊥	☐	♊	?	💬
_		5f	—	☐	♋	?	💬
`		60	—	■	♌	?	🔄
grave		\Q					
{		7b	{	⬢	🌸	7	💥
|		7c	|	Ⓢ	🌸	8	—
}		7d	}	☐	“	9	💥
~		7e	~	🏠	”	10	⚡
·	a	e1	<	☐	↑	*	🌡
ı	A	c1	ı	☐	🕒	⬢	📞
¿	@	c0	¿	☐	🕒	⬢	📄
£	#	a3	≤	☐	⦿	☐	☒
¥	4	b4	×	☐	⚠	·	🎞
f	D	c4	⊗	☐	👉	⬢	🎮
¢	"	a2	'	☐	⦿	■	🏠
↔	[	db	↔	☐	⦿	*	☔
®	(	a8	◆	☐	☐	☐	📖
©	)	a9	♥	☐	▲	☐	🔑
™	*	aa	♠	☐	★	☐	📄
¼	9	b9	≠	☐	🕒	◆	📹
½	:	ba	≡	☐	🕒	◐	📻
¾	=	bd	—	☐	🕒	◑	📺
α	;	bb	≈	☐	🕒	◑	📺

E:\FM-course\handout_70\tips.fm

DD

Standard chars							
char	Ctrl+q or esc	\x (hex)	Symbol	D+DD	Wing dings	Wing- dings2	Web dings
0	<	bc	...	□	🕒	◐	📄
±	1	b1	±	□	⊕	◈	🔊
×	0	b0	◦	□	⊞	◈	🏢
÷	V	d6	√	□	⊠	✳	⚙️
/	Z	da	✓	□	📌	✳	☁️
μ	5	b5	∞	□	🌟	•	📷
¶	&	a6	f	□	🌑	◼	📅
§	\$	a4	/	□	🎯	◼	📝
†	blank	a0 \d	□	□	•	•	👤
¬	B	c2	℞	□	🕒	◼	🏠
%o	d	e4	™	□	↗️	✳	🍴
1	6	b6	∂	□	★	•	📶
2	7	b7	•	□	🕒	◈	🎬
3	8	b8	÷	□	🕒	◈	🎬
|	-	ad	↑	□	✳	•	🖼️
°	!	a1	Υ	□	◯	◼	🕒
•	%	a5	∞	□	🎯	◼	📅
-	P	d0	∠	□	🌀	✳	🔧
—	Q	d1	∇	□	🌀	✳	🔑
...	I	c9	⤵	□	👉	+	📞
—	X	f8)	□	👉	✳	🔪
^	V	f6)	□	👈	✳	🐱
~	W	f7	|	□	👈	✳	🔪

Broken vertical bar

On a Swiss keyboard the key | (ALTGR+1) must be used!

Double dagger

On a Swiss keyboard the grave character can not be entered directly into FM. A CTRL-Q sequence is needed:

CTRL+Q, ` creates ‡ You type the ` as ALTGR+`

Vertical bar (solid)

On a Swiss keyboard the broken vertical must be used (ALTGR+7).

Standard chars							
char	Ctrl+q or esc	\x (hex)	Symbol	D+DD	Wing dings	Wing- dings2	Web dings
'	+	ab	↔	□	★	·	📦
..	,	ac	←	□	★	·	🏠
°	{	fb	┘	□	✕	□	🌐
t'	}	fd \&	┘	□	☒	□	🌐
“	R	d2	®	□	🔗	✕	📦
”	S	d3	©	□	🔗	✕	📦
‘	T	d4	™	□	🔗	✕	📦
’	U	d5	∏	□	☒	✕	📦
„	C	e3	©	□	↗	✱	📦
,	b	e2	®	□	↓	✱	📦
‡	acc. grave	e0 \D	◇	□	→	✱	🌙
,	|	fc	|	□	✓	□	🌐
<	\	dc	⇐	□	🔄	✱	🌩
>	]	dd	⇨	□	🔄	✱	🌩
«	G	c7	⤵	□	🔗	+	📦
»	H	c8	⤴	□	🔗	+	📦

Example

To enter the ✓ symbol in text, type the | character and apply a character format which defines the font **Wingdings**

To get a list ‘numbered’ with the ✓ symbol, enter the sequence \xfc into the numbering field and apply a character format which defines the font **Wingdings**.

Internal code table

The small character (sequences) below a row indicate the reference characters needed in ESC sequence or the CTRL-q sequence (see note).

	00	01	02	03	04	05	06	07	08	09	0a	0b	0c	0d	0e	0f
00					descr. hyph	suppr hyph			TAB	NL	para end	flow end				
10	num space	nonbr space	thin space	en space	em space	nonbr hyph										
20	blank	!	"	#	\$	%	&	'	()	*	+	,	-	.	/
30	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
40	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
50	P	Q	R	S	T	U	V	W	X	Y	Z	[\]	^	_
60	'	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
70	p	q	r	s	t	u	v	w	x	y	z	{	|	}	~	DEL
80	Ä	Å	Ç	É	Ñ	Ö	Ü	á	à	â	ä	ã	å	ç	é	è
	:A	*A	,C	'E	~N	:O	:U	'a	'a	^a	:a	~a	*a	,c	'e	'e
90	ê	ë	í	ì	î	ï	ñ	ó	ò	ô	ö	õ	ú	ù	û	ü
	^e	:e	'i	'i	^i	:i	~n	'o	'o	^o	:o	~o	'u	'u	^u	:u
a0	†	°	¢	£	§	•	¶	ß	®	©	™	'	¨	¡	Æ	Ø
	blank	!	"	#	\$	%	&	'	()	*	+	,	-	.	/
b0	×	±	ð	š	¥	µ	¹	²	³	¼	½	¾				
	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
c0	¿	¡	¬	Ð	ƒ	Ý	ý	«	»	…	þ	À	Ã	Õ	Œ	œ
	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
d0	–	—	“	”	‘	’	÷	þ	ÿ	ÿ	/	œ	<	>	Ž	ff
	P	Q	R	S	T	U	V	W	X	Y	Z	[\]	^	_
e0	‡	•	,	„	%o	Â	Ê	Á	Ë	È	Í	Î	Ï	Ì	Ó	Ô
	'	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
f0	š	Ò	Ú	Û	Ù	€	ˆ circum flex	˜ tilde	ˉ macron	˘ breve	Ž	˚ ring	¸ cedilla	t'	ž	undef
	p	q	r	s	t	u	v	w	x	y	z	{	|	}	~	

Use one of these methods for characters not on the keyboard:

Escape sequences

Characters in rows 80 and 90 are created with esc sequences, e.g. to get a Å type ESC, *, A (3 key strokes).

CTRL-q sequence

Characters in rows a0 ... f0 are created by CTRL+q, followed by a character from the ASCII code page at a resp. location (loc_{ascii} = loc_{fm} - 80_{hex}); e.g. to get a Þ type CTRL+q, w (2 keys).



Characters require FrameMaker 7.2p158 and Win CE font.



These characters are available only on the Mac.

Note: Characters CTRL-q v ... } are accents. For example CTRL-q v (^) and ^ are different characters. The code table is based on Mac-Roman.

Non-width characters

With **View > Text Symbols** active FrameMaker displays special symbols such as anchors, optional hyphens etc. This display must not disturb the layout - hence these characters have no width.

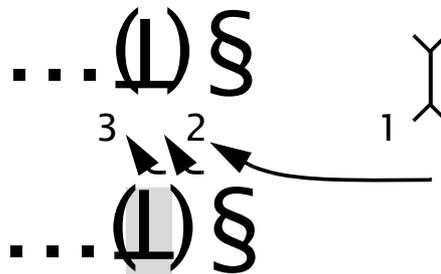
No width characters can be stacked at a place - for example, anchoring several tables at the same place. This makes it very difficult, to select a distinct element, which is either the special character itself (e.g. optional hyphen) or the anchored item. Even with 500% zoom factor you can not grab an individual anchor.

Select a non-width character (or narrow characters)

- 1 Place the cursor behind the last recognisable character or the end of the paragraph (as in this diagram)
- 2 With the **arrow left key** move through the characters (in this case, before the closing parenthesis)
- 3 Hold down **shift key** while moving with the **arrow left key** over the anchor. This «extends the selection» (GUI term).
- 4 The anchored object becomes selected also. So you know, whether you have selected the right stuff...

This is any text with an anchor for the following table just here

(¶)



If you didn't catch the right thing, release the **shift key**, move back one character (in our case with the **arrow right key**) and repeat step 3 for any anchor which may be present left to the already found one.

Of course you can apply this procedure also from left to right.

FrameMaker set up

General preferences



With **File > Preferences > General** you set the most used preferences:

Saving a file in FrameMaker does not take much time. Even for large files (200 pages) it is possible to **automatically save** every 10 minutes without significant delay of the work.

Automatic backup creates a backup file whenever you open the file. This file is over written at the next open. If you want to preserve versions, you need to rename the backups.

Sharing files in a network requires the option **Network File Locking** to be set. FrameMaker will create a file *document.1ck* which existence is checked at open to prevent an additional open by an other user.

After selecting a different **Product Interface** (standard FrameMaker or Structured FrameMaker) you need to restart the program.

Since FM 7.2 the warnings about clearing the **Undo History** can be specified.

Be aware of unavailable fonts

In the preferences dialogue you can set **Remember Missing Font Names**. Always set this option when you receive documents from other platforms.

Set this option also, if you receive a document for revision and need to give it back again. The font situation differs on most systems - even with the same operating system!

If a document contains fonts which are not available on the Windows platform and this option is not set then all unknown fonts are replaced by Times Roman and the information concerning the original fonts used is lost.

Units of measure

www.cl.cam.ac.uk states:

The length of an inch changed from 1/0.3937 cm to 2.54 cm in 1959; the size of a point did not. Consequently, the imperial 'size' of a point changed from 1/72 inch to 1/72.27 inch. [Knuth 1984, The T_EXbook, p. 58]

DTP point = PostScript point.

1 ATA pt (American Typefounders Association) = 0.013837".

1 T_EX pt = 1/72.27"

When entering just a numeric value into an entry field in a dialogue, FrameMaker uses the default unit (which depends on purpose). Hence for clarity always enter also the unit.

Unit	Enter into dialogue	metric Equivalent	Imperial equivalent	Definition
cm	cm	10 mm	03937. inch	
mm	mm	0.1 cm	0.03937 inch	
inch	in, "	2.54 cm	1 inch	USA, UK
pica	pc, pi, pica	4.2175176 mm	1/6 inch	12 points (ATA)
DTP point	pt, point	0.35278 mm	1/72 = 0.0139 "	1/72 US inch
Didot point	dd	0.376 mm	1.07 pt	1/72 French inch
Cicero	cc, cicero	4.531 mm	12.84 pt	12 Didot point

Platform specifics

Macintosh system 9

Windows handling

Quick access bar

The quick access bar (button bar) is part of the document interface and hence only available with an open document

Palettes and non-modal windows

Palettes (¶-catalogue, graphic tools etc.) and non-modal windows (Find/Replace etc.) are not automatically kept on top of the displayed windows. To avoid frequent re-calling them, either install an appropriate system extension or reduce the document window width to allow grabbing the ancillary windows at the right of the document window.

Keyboard input

All entries using **ESC** sequences and **CTR+q** sequences are also valid on the Macintosh. The keyboard short cut using the modifier keys are different to those on Windows:

Key	Meaning	Key	Meaning
⇧	Shift	⌥	Option, sometimes called Alt
⌘	Control	⌘	Command

Operations and typographic characters

Style name can be abbreviated to significant length

Purpose	Short cut	Purpose	Short cut
Format paragraph	⇧+9	— m-dash	⇧+⌥+minus
Format characters	⇧+8	- n-dash	⌥+minus
Open Paragraph designer	⌥+⌘+m	n n m-space	⌥+⌘+9
Open Character designer	⌥+⌘+d	n n n-space (m/2)	⌥+⌘+8
Open Table designer	⌥+⌘+t	n n thin space (m/12)	⌥+⌘+7
Repeat last character modification	⌘+C	numeric space	⌥+⌘+0
Repeat last paragraph modification	⌘+A	n n non breaking space (m/3.5)	⌥+blank
Straight single quote	⇧+'	optional hyphen	⌘+minus
Straight double quote	⇧+»	suppress hyphenation	⌥+⌘+minus
		Refresh display	⇧+l (lower case L)

Special characters

Some of these you might have forgotten how to type:

char	keys	char	keys	char	keys
[	⌥+5	]	⌥+6	\	⇧+⌥+7
{	⌥+8	}	⌥+9	@	⌥+g
'	⇧+'	"	⇧+⇧+'	#	⌥+3

Appearance of check boxes

The «As Is» state occurs, if some of the selected items have set properties and some have not set (cleared) properties.

	checked (active)	unchecked (inactive)	As Is (may be)
Appearance in Mac OS 9			

Unix (Sun Solaris)

Window handling

Quick access bar, palettes and all non-modal windows are distinct windows and are not 'integrated' into the document window. For easy access reduce the document window width to allow grabbing the ancillary windows at the right of the document window.

Appearance of check boxes

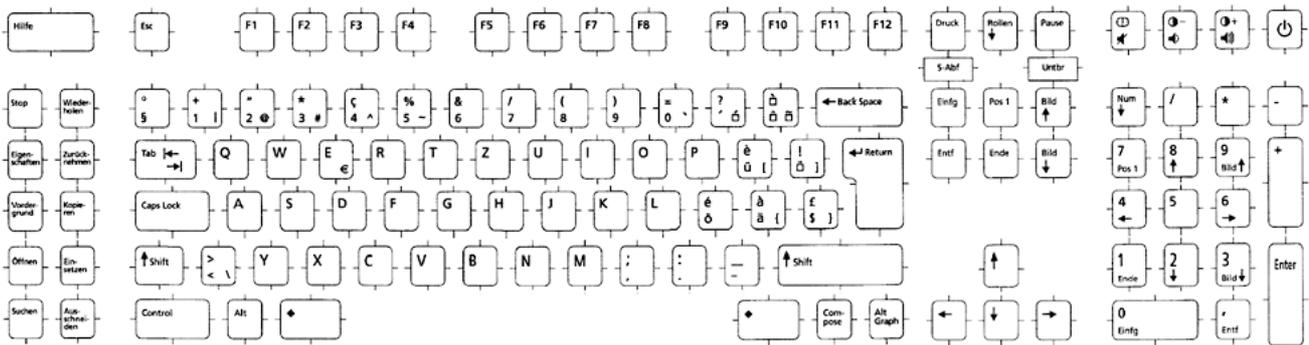
The «As Is» state occurs, if some of the selected items have set properties and some have not set (cleared) properties.

	checked (active)	unchecked (inactive)	As Is (may be)
UNIX Solaris KDE			

Keyboard specials

The following relates to a Swiss-German keyboard only. I do not have experience with other keyboards on Sun Solaris.

- There is no forward delete (deleting character to the right of the cursor) only the Backspace function exists.
- A common keyboard layout includes function keys to the left of the typewriter layout:



Sole accents

These can not be entered by using the compose + accent key followed by a blank (as on Windows and Mac). This method allows only to construct accented characters from the ISO Latin 1 set (e.g. ã ñ). To create accent characters of their own, do the following:

Tilde press ALTGR + 5

Circumflex press ALTGR + 4

Grave press ALTGR + 0 ¹²⁾

Aigu press ALTGR + ? (key right to the 0)

Closing bracket

The character] can not be entered from the keyboard. It needs to be created in a text editor and then pasted to FM.

Degree symbol

The degree symbol is very unruly when entered with the top left key. In some fonts it does not show up; in others it appears an infinity symbol (∞). When entered into a dialogue field it results in \xb0. Using CTRL+Q, ! results in \xb1. You need to copy this symbol from a text editor or Word ...

12 On the systems I had available this created an aigu accent (´) in text, but a correct grave accent (˘) in dialogue fields.

Copy and paste

Within FrameMaker text

To handle all situations (including copy/paste from other applications), different methods are necessary.

The left key group contains **Again, Undo, Copy, Paste** and **Cut**. **Within** FrameMaker these keys must be used - if you do not like to use the **ESC** sequences (for example **ESC, e, c** for copy) or menu entries.

This method can not be used to transfer data from the document into a dialogue field.

Into FrameMaker dialogues and across applications

To transfer data from the FM document text into a FM dialogue field the X-windows buffer must be used. The same is true for transferring data between FM and another applications.

The X-buffer is automatically filled if text is selected. It is pasted into a new location by the middle mouse button:

- 1 Select the text to be copied with the left mouse. Get a word including the trailing space by double click or a paragraph by triple click.
- 2 Paste the buffer contents at the new location by placing the cursor and middle click.

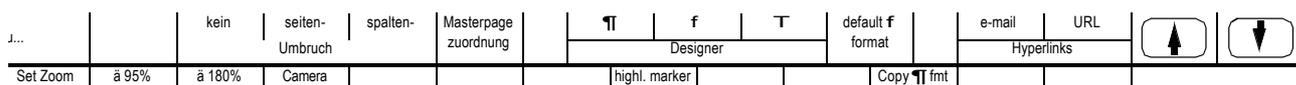
Hyperlinks

Hypertext (e.g. a cross-reference) is activated by **CTRL-right-click**. Under some circumstances (e.g. X-Window client is an emulation on Windows) an additional read-only document is created and jumped into this.

In case of URLs (web link, e-mail) nothing may happen, because no connection to a browser or e-mail client may be established.

Keyboard macros

Unix allows to create keyboard macros via menu **File > Utilities > Macro**. It is good practice to invoke macros with a special key such as the meta key (**⬠**), located on both sides of the space bar:



Code of macro Copy Paragraph Format

```
Copy para format (meta null):
<Macro Macro10
  <Label Macro10>
  <Trigger ~0>
  <TriggerLabel ~0>
  <Definition \!bf>
  <Mode NonMath>>
```

Macros can not contain symbolic entries. It is quite difficult also to handle dialog input.

Macros can not ...

- Wait for keyboard input in a dialogue and then continue the macro. You will need to set up two macros.
- Record mouse actions
- Record F10 (put focus on menu bar)
- Record F4 (display context menu)

Macro with dialogue input	<ol style="list-style-type: none">1 Start recording. Use only keyboard input for the actions to be recorded.2 When at the dialogue, press CTRL+TAB to get to the first entry. This start is essential.3 Enter the first value in the first field and jump to the next field with TAB or SHIFT+TAB to jump back.4 Fill all fields, also those which already contain the desired values. Use the UP/DOWN arrow keys to navigate in scroll lists.5 Enter RETURN to close the dialogue and get the values6 Stop the macro and save it with appropriate name and trigger.
Stop macro at dialogue ¹³⁾	<p>To create a macro which stops at a dialogue to enter values manually, enter CTRL+] when the dialogue appears in the recording. Then save the macro.</p> <p>In the running macro (which stops at the open dialogue) enter the values, then press CTRL+] .</p>
Macro with repeated actions	<ol style="list-style-type: none">1 Record the actions to be repeated in a macro A2 Set up a second macro B, in which macro A is invoked as often as necessary.
Location of macros	Macros are located in a text file in the current account, for example at /home/afs99/fmMacros. The name must be fmMacros.

13 Procedure not rally clear - need to verify at LuStat

Solving real and assumed problems

See also hints and tips on the web: www.daube.ch/docu/fmaker00.html

Method to find the cause of problems

The general method to encircle problems is to bisect the document and check each halve.

By further narrowing down to one page and then to paragraphs, tables, graphics etc. you can find the culprit.

General problems

Warning: only one Undo level until version 7.1

Until version 7.1 FrameMaker has only *one undo level*. Hence save the file before you start any experiments or are not certain about the usefulness of a specific manipulation! From my long lasting experience with FrameMaker I can tell You that there is no reason to bemoan this situation. After some time of familiarity with FrameMaker You don't need much undo.

Since version 7.2 FrameMaker provides multiple undo. However there are still operations which can not be undone and which therefore clear the undo-history. See [this Adobe document](#) for details of the function.

Strange behaviour of document

There are situations where FrameMaker seems to have lost all its 'sense'. What's going on?

FrameMaker relies on the Windows system services for storage management, and these are not very water tight. Hence you may get situations which are the result of lost pointers or other garbage in storage.

Most of these situations can be fixed with the following:

- Save the file in MIF
- Close the document (do not save it)
- Open the MIF file
- Save the file again as FrameMaker (you may wish to use a different name to the original one).

In most cases the file now behaves 'normal' again.

Can not copy/paste text



Text selected from a text line (produced with graphic tool **A**) can be copied to the clipboard, however:

- it *can only* be pasted into a text frame (like this one);
- it *can not* be pasted into dialogue boxes;
- it *can not* be pasted into another application.

Find does not find

You may need to switch to the masterpages or the reference pages to find the requested item. You can not search within text inserts - they are independent files.

See also *Can not find words* on page A-27

Display and layout issues

Display jumps back when scrolling

Solution according to
Adobe KNB document
322405

This is a known bug since version 4 at least. The problem is caused by graphics with property «run around» which touches or overlaps a text frame (which may be on a master page).

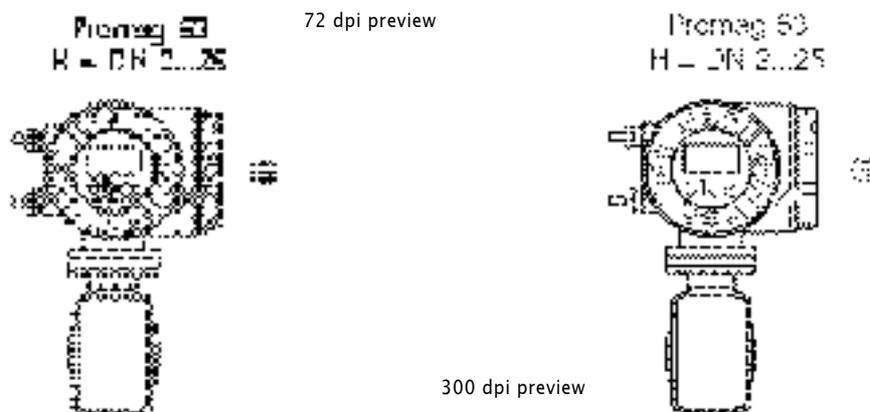
- 1 FrameMaker 6.0 should have cleared this problem.
- 2 Locate the graphic that triggers the jump and
Adjust the adjacent text frame to remove the overlap / touching; or remove the run-around property from the graphic (if applicable).
- 3 Terminate the behaviour for the current FM session:
 - Click outside any text frame and scroll through the complete document.
 - After any close / re-open or File > Revert to Save, this procedure must be repeated.

General solution

Install the free plug-in RunaroundNone
(www.frameexpert.com)

EPS looks awful on screen

An eps may contain a preview image, which is displayed on the screen. The resolution of this preview image can be set in most graphic applications. If not, a default of 72 dpi (dots to the inch) is used. Compare the two screen images:



If you need to position graphic elements (arrows, pointers) precisely or to get an idea of small print on an imported eps, you need to create it with a good preview picture. Just zooming into the image in FrameMaker does not do the job.

EPS prints, but on screen is only gray area

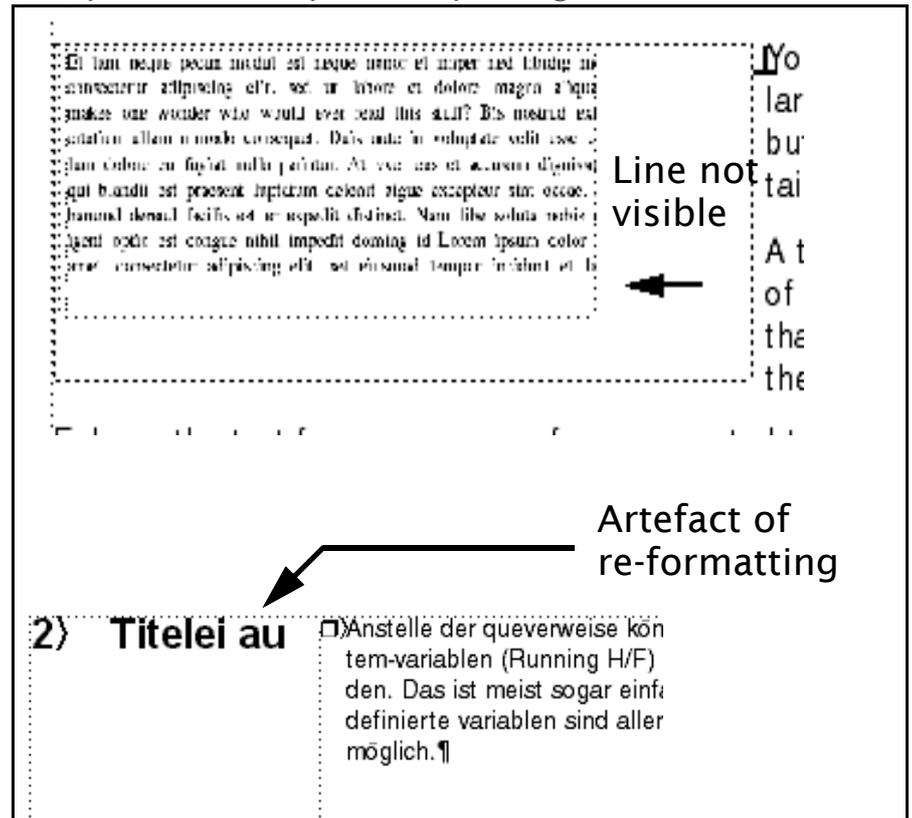
The cause is trivial: the eps does not contain a preview image. If you need to overlay some information on such an image, you do not have a clue where to place things. Hence you need to recreate the eps with a preview image.

If the source image and/or application not available, these steps may help you:

- 1 Print the page with the image to a PostScript file
- 2 Make a PDF from the page using Acrobat Distiller
- 3 Crop the page in Acrobat to the size of the image and export as eps with preview.
- 4 Import the eps to FrameMaker

Destroyed file contents?

After some work (e.g. delete rows in tables, heavy editing of text) your screen may look very strange:



- line thicknesses are wrong
- lines are lost
- text lines are intermingled
- graphics are incomplete
- etc.

Don't panic, force a screen refresh either with CTRL+l (lower case L) or PageUp, then PageDown or other scrolling and do not forget to enlarge the image (the line may simply 'fall between the pixels' as in the depicted case).

Text can not be selected



You can not select text, as long as the cursor has the shape of a hollow arrow. Wherever you click with this cursor, the object (text frame) is selected (you see the handles of the object) - not the contents (the text).

Check the tools palette for the cursor setting. It will look as displayed in the image.

You must select the 'intelligent' type of cursor (left button with the two cursor shapes on it).

Paragraph can not be removed or changed

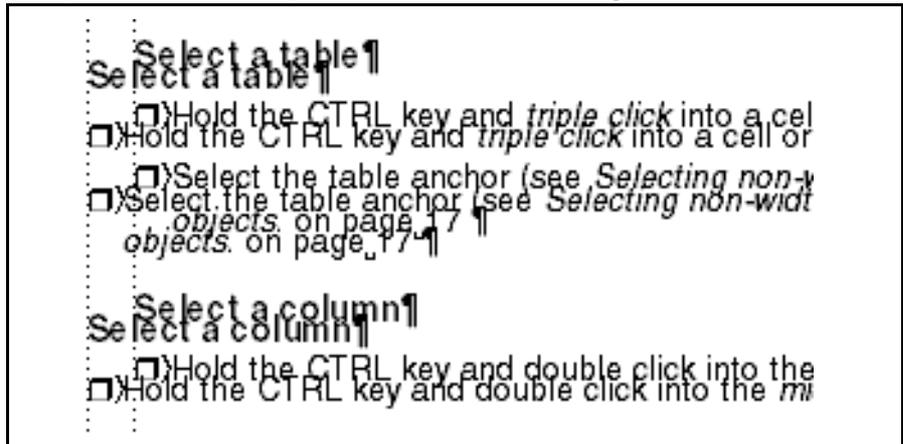
After deletion of text insets you may have a paragraph, e.g. at the end of a chapter, that can not be removed, its format changed or otherwise manipulated.

- Save the file as MIF, open MIF in a good text editor.
- Search for <PgFLocked Yes> and assure the correct paragraph by checking the text around it.
- Delete the MIF line and save the MIF, re-open in FM.

Ghost objects

Real duplicates

You can access any object (e.g. a text frame) with CTRL+click. But you create a duplicate with CTRL+drag...



The current (selected) object is the duplicate which you can delete. It is also possible to undo the duplication operation.

Additional table headers

Another type of ghost object is an additional table header on subsequent table pages

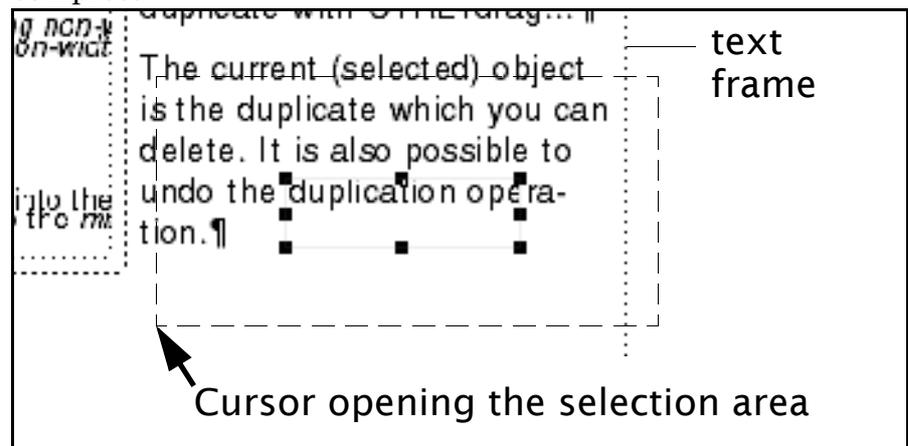
The original heading row	Original heading row
This is something you can not get rid of, but you can not select it!	
The first table cell	the second table cell
and the next table cell	the fourth table cell
the last line in the table	the last cell in the table

Try to cure this situation by

- Switching to the master pages, to look whether there is something wrong.
- Switching back to the body pages with **Remove Overrides** activated.

Concealed objects

Sometimes you can just see the black handles during the build-up of the screen. They are invisible when the screen is complete

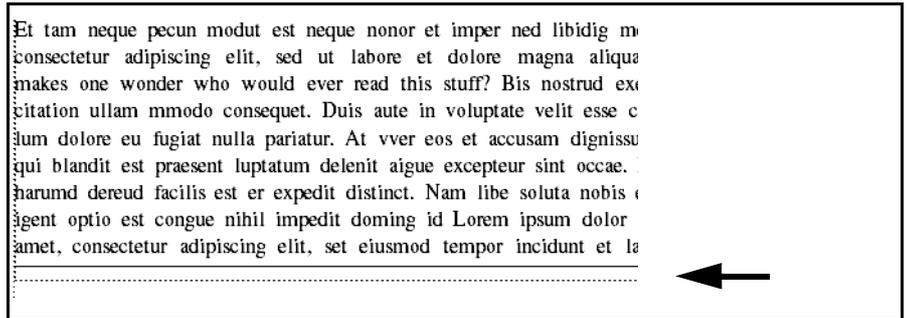


If you suspect invisible objects,

- Start a selection rectangle **outside** the text frame and sweep the suspected area.
- This will select the hidden objects (if there are any).
- Bring them to the foreground with **Graphics > Bring to Front**

Where is the text?

You have just imported a large text into a text frame, but the frame does not contain all the text.



A thin solid line at the bottom of the text frame indicates that there is more text than the frame can hold.

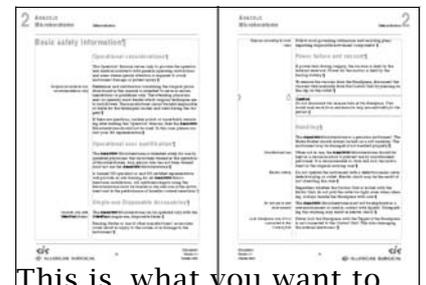
Enlarge the text frame or arrange for a connected text frame with the same text flow name.

Can not see facing pages

You have reduced the zoom factor to a value with which pages could be arranged face to face (for example, to check the layout), but they do not:



What you see



This is, what you want to see.

You may need a low zoom factor if rotated pages are in the document.

The view of a document is saved in the file, hence you can have a different view on each open document.

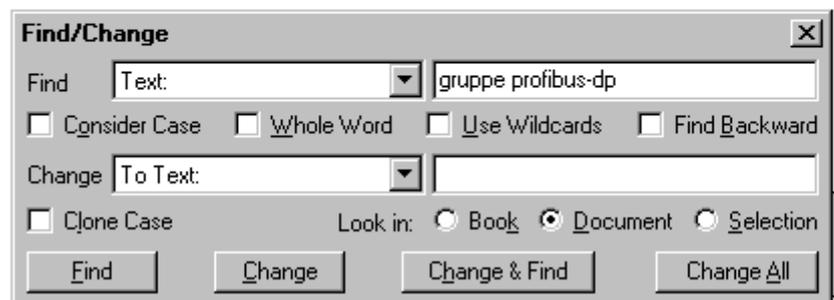
In **View > Options...** select **Variable** for Page Scrolling to get the display of facing pages.

Can not find words

Searching for a sequence of words may not yield any result, if the text is interspersed with markers. In this example, the search reports 'not found':

6.1) ~~T~~Gruppe~~T~~ PROFIBUS-DP / PROFIBUS-D

6.1.1) ~~F~~unktionsgruppe~~T~~ EINSTELLUNGEN~~T~~



To avoid such situations:

- Place cross reference markers at the beginning of a paragraph.
- Insert index markers at the end of a paragraph and combine multiple entries into one marker.

Optional (discretionary) hyphen not working

You may see ample space at the end of a line and try to split the first word in the next line - but the word is not hyphenated...

You have just hit a WYSIWYG problem: with standard installation FrameMaker displays fonts with font metrics for optimised presentation of shape - but what we need is optimised placement similar to the placement of text in the printed page. See *Display character positions correctly* on page 37 for a suggestion.

DisplayUsingPrinterMetrics=Off

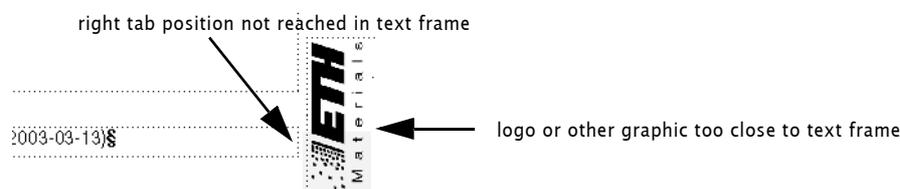
Hecate est Iovis et Latonae filia, soror. Est tr-
icopor et triceps, magicarum artium magistra ac-
fascinationum praeses, cinctra latrantium ca-
num turma; noctu stans in triviis vel prope
sepulcra et ubi loca sunt caedibus contaminata. §

DisplayUsingPrinterMetrics=On

Hecate est Iovis et Latonae filia, soror. Est tr-
icopor et triceps, magicarum artium magistra ac-
fascinationum praeses, cinctra latrantium ca-
num turma; noctu stans in triviis vel prope
sepulcra et ubi loca sunt caedibus contaminata. §

Right tab not working

When setting up text frames the inside text may not behave as expected. For example, a right tab might not be executed:



Reason Watch out for a graphic close to the text frame. The graphic may have the (default) run-around property „Run around Contour« with a gap value > 0.

As soon as this kind of graphic is closer to the text frame than the gap value (or the graphic overlaps the text frame), the graphic will push text away.

Correction Remove any overlap or influence of the graphic by

- placing the graphic far away from the text frame (distance > gap value), or
- setting the run-around property of the graphic to „Don't run around«, or
- Allowing „Run around Contour«, but setting the gap value to zero.

Table does not split at desired row

A table can not split automatically at a certain row, if

- vertically straddled cells hold rows together. Look at all columns to find overlaps of vertically straddles cells.
- the table attribute «start on next page» forces a table start.
- the attribute «float» keeps the first page together
- Rows are kept together with «keep with next» or «keep with previous».

Example for vertically straddled cells

The bordered frame is the text frame simulating 2 pages containing the table

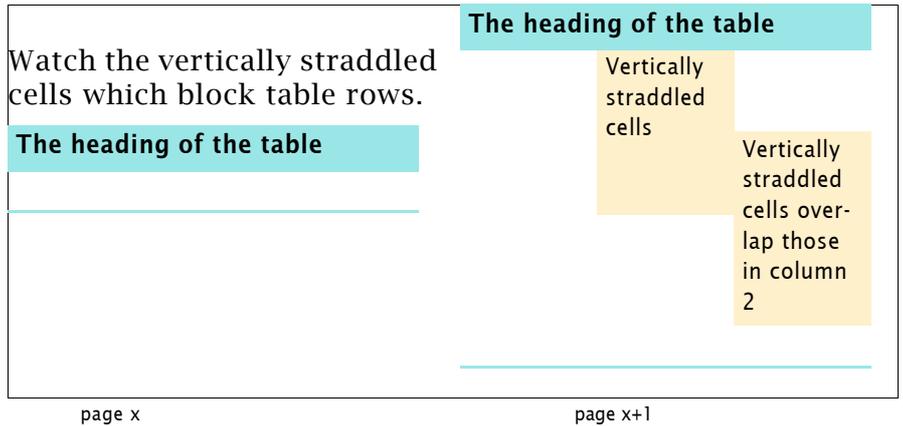


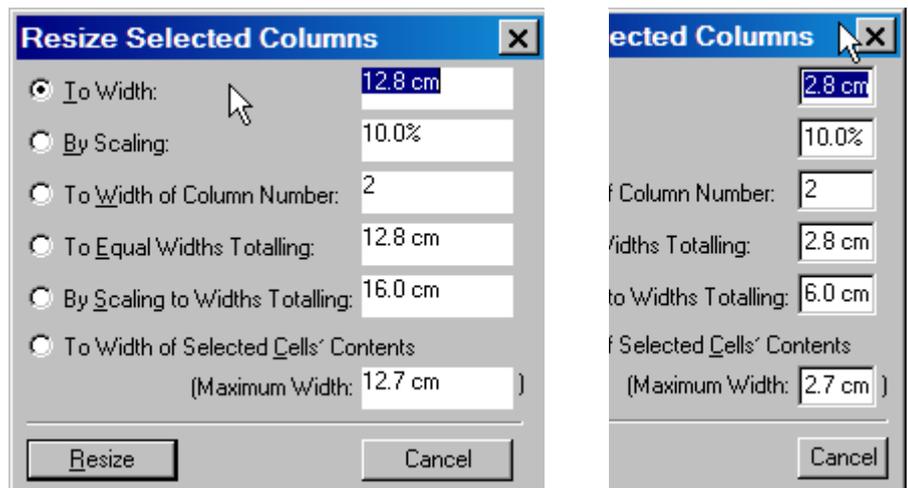
Table width and columns widths are wrong

Some of the FrameMaker dialogues provide too short entry fields. **Table > Resize Columns** may not display all figures in an entry field. Only the right most figures are displayed!

To select a value, *do not sweep with the mouse over the figures* - you might not get all the figures! Instead, *double click on the figures to select all of them* - also the hidden ones.

The real value of the selected figures may be 318.0 cm

For a solution of this problem see http://www.daube.ch/public_html/docu/fmaker20.html and [fmaker36.html](http://www.daube.ch/public_html/docu/fmaker36.html)



Importing and graphics

Problems with imported graphics

Vendors of graphic software tend to modify 'standard' output formats, which are needed to exchange graphics between applications (DXF, EPS, TIFF, WMF, etc.).

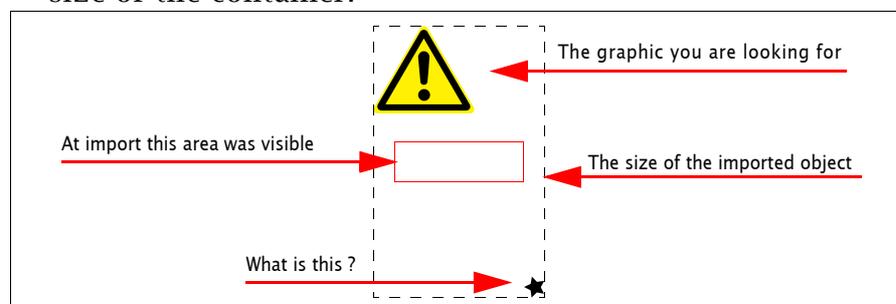
If you encounter problems with a FrameMaker document after importing a graphic, at first blame the graphic or its creating application. To fix the problem:

- Import the graphic to another application - does it create problems also there?
- Try to get another version of the graphic.

Imported graphic is not visible

If you import a graphic and it is not visible in the container (page, anchored frame, graphic frame), you may just see a white portion of it:

- 1 Select the container frame and with **CTRL+a** select all its contents. You will not see the object handles inside the now unselected container.
- 2 If there is really no graphic in the container, all graphic menu items (or buttons) are greyed out. You will re-import the graphic.
- 3 Group the invisible selection just in case more than one object is in the container.
- 4 Scale this contents down very much and **Align Tops** and **L/R Centers** it in the container.
- 5 Now you should see the complete graphic, at least very small. Grab a corner handle and enlarge the graphic to the size of the container:



- 6 Now you may see what (might have) happened:

In most cases a small object is included in the complete graphic - especially if an eps was created from a CAD drawing not all surrounding stuff might have been removed.

The small objects may even be far out of the paper on the pasteboard of the drawing application (e.g. Illustrator). To avoid this error, you should not select all before creating the eps, but select only the desired items and then create the eps.

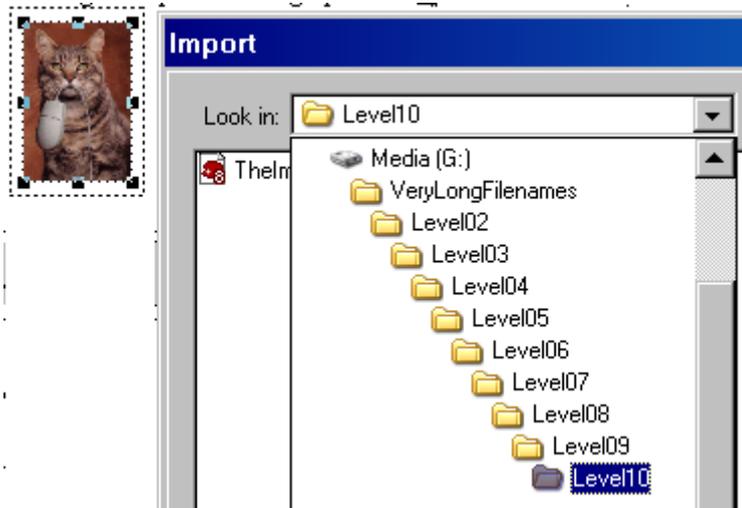
Full path of inserted graphics

The object property dialogue does not display the full path of an imported object, if the path name is too long:

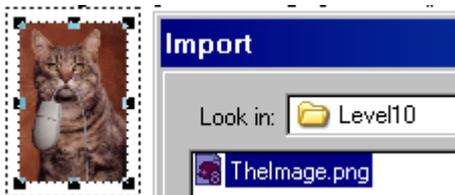
```
G:\VeryLongFilenames\Level02\...\TheImage.png
E:\VeryLongFilenames\L...03\Level04\TheImage.png
...\Samples\Glossary...s\Graphics\TheImage.png
```

Relative paths are used only up to a certain level of directories. I have not yet found out what this level is. In the above examples the path for the document containing the image is E:\FM-specials\Tips\GraphicsFiguresEps\Path-of-graphics.fm

Method one Find out the full path name by 're-importing' - just opening the import dialogue for the selected image. In the Import dialogue expand the Look in drop down list to see the full directory hierarchy.



Method two If you have the extended Send to function implemented in Windows, you may get the full path with the **Send To Clipboard** function on the selected file:



G:\VeryLongFileNames\Level02\Level03\Level04\Level05\Level06\Level07\Level08\Level09\Level10\TheImage.png

If you don't find this useful tool anymore on the [MS-site](#), here is a copy of [W95powertoy.zip](#). Unzip and right-click on SENDTOX.INF and select **Install**. It works fine in Win NT4, W2K and XP (although MS negates this).

2007-06-22

E:\FM-course\handout_70\tips.fm

D+D D

Colour issues

Inconsistent colour

Import colour from correct document

One of the most pertinent errors is the inconsistent definition of colour in files. You can not get rid of this without major work:

- 1 Open a document from which you know that the colours are OK
- 2 Open the document with incorrect colour definitions.
- 3 Import only the colour definitions (**File > Import > Formats...**) from the clean source document.
- 4 This import is cumulative, that is, special colours in the target document are not removed.
- 5 If the problem persists when updating the book with the file in question, an imported graphic may be the culprit.

Start with an empty document

- 1 Set up an empty file with **File > New > Document > Portrait**
- 2 Delete all entries in the catalogues (paragraph, character), the table designer, the cross-reference formats.
- 3 Import the desired formats from the file with the colour error - *but do not import the colour specifications!*
- 4 If you really have a special colour set up, do it again.
- 5 Select the text in the file with the error and paste it into the new file. You may use **Select All (CTRL+A)** to get everything.

Note: *In many cases, however, this method import the error with the selected text (and graphics included etc.)*

Just live the annoyance

Ignoring the problem is only possible if you do not intend to take this document to a commercial printer!

Imported graphics

Imported graphics can be the source of invalid colour definitions. To find the graphic which causes the problem,

- Remove one by one of the graphics and check for the problem. As soon the problem disappears, you have found the graphic in error.
- The colour definition in the erroneous graphic can only be handled in the application in which the graphic was created.
- If the problematic graphic is an eps (Encapsulated Post-Script), a TIFF or JPEG the original application can not be determined by the graphic type. Only Your intelligence can help here ...

Huge number of colours

You may notice a huge number of colours in your colour catalogue after importing graphics of format png (portable network graphic). These colours are named RGB nnn,nnn,nnn. You should not delete these, but also not apply to any objects, since these colours may get lost when the file is saved as MIF (see www.microtype.com).

Note: *You get these colours only for 256-colour (8-bit) PNG files. Hence use also for screen dumps PNG with 'millions of colours'.*

Font issues

Font xxx missing

See also *Be aware of unavailable fonts* on page 18

When opening a file, the following error message may occur:

Document named abc uses unavailable fonts.

To reformat the document using available fonts, click OK

In the FrameMaker console window you see what has been found and substituted:

The "Gugus" Font is not available.

"Times-Roman" will be used in this session.

Situation	Action
The unknown fonts are important and they must not be substituted permanently by the FrameMaker default Times.	Cancel
Activate File > Preferences > Remember missing Font names. Now open the file again (you get the same message).	OK
The unavailable font is not essential or just a variation of Times.	OK
Whether the substitution is permanent or just in this session, depend on the setting of File > Preferences > Remember missing Font names	
You want to get rid of the unavailable fonts in the document	Cancel
Activate File > Preferences > Remember missing Font names. Now open the file again (you get the same message).	OK
Save the file; Deactivate File > Preferences > Remember missing Font names	

Note: *If you can not get rid of the unavailable font by these measures, the font may be used in an imported graphic or an empty document. See hereafter for methods to find these occurrences.*

Where is the unavailable font used?

Make a copy of your document before you start your research!

- Use the **Edit > Find/Change** dialogue to search for a Character Format. In the character definitions dialogue set all but the font family name **to as** is.
Search the body pages, the master pages and the reference pages for the font and correct any use of it.
- The font in question may be used in imported graphics (also in an eps). You need the original application to change the font. In an eps file you can at least search with an ordinary text editor - but do not modify the font name just in the editor! Recreate the eps file in case.
- The font in question may be used in empty text lines of FrameMaker graphics. Text lines are created with the **A-** tool. To find these, do for each anchored frame with a graphic:
 - Select the anchored frame, then select all objects with CTRL+A.
 - If you get grouped objects, ungroup them until ungroup is not possible anymore.
 - Check for empty objects and deselect them by holding the shift-key while you click on such an object.
 - Group everything which is left selected

- Select all again, deselect the grouped object. Only the empty objects are selected now. Delete them.

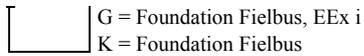
Note: *A FrameScript script is available from Carmen Publishing for deleting empty graphic lines. This requires FrameScript from Finite Matters to be installed in your FrameMaker. See Extensions by API clients on page 1-15 for these resources.*

Printing and presentation issues

Misalignment between text and graphics

Sometimes graphic elements are needed as an overlay to the text on the page (The U shaped line in the example below).

Messsystem Promag 53 (Kompakt-Ausführung)

Promag 53***-*****x


To place the graphic correctly you will use a large zoom level. However, the printed version may still be different and not accurate.

To avoid this effect, change the maker.ini file according to *Display character positions correctly* on page 37.

Accents not displayed in running header



Reason The running header is overlapped by another graphic element - in this case with the top text frame of the first header line. In the figure below the text frames are visualised with a border.



Correction Remove the overlap of the text frame, for example by replacing the two text frames by one of proper height containing both header lines. The separating line must be *moved to front*.



EPS prints badly

If an eps looks pixelated (check with slanted lines) in the printed output, the reason might be:

- inadequate printer driver (or wrong PPD for PS-printer)
- non-PostScript printer

Recommended modifications to FM

Set reasonable default for your work

Zoom factors

To get reasonable zoom factors in your session, adapt the zoom factors to the screen size and resolution. The following is for an 20" display. In section [Preferences]

set to Zoom=28, 36, 50, 74, 90, 125, 200, 353, 500, 1000

When zoomed to 353% a nudge (moving an object by **ALT+arrow** key or ) moves by 0.1mm steps¹⁴.

Dash patterns

The following setting provide finer patterns than the FM default settings. In section [DashPatterns]

```
set 1=Dash, 8, 4
    2=Hidden, 4
    3=Longdash, 16, 8
    4=Dot, 2, 4
    5=Dash-Dot, 8, 4, 2, 4
    6=Dash-Dot-Dot, 8, 4, 2, 4, 2, 4
    7=Chain, 8, 4, 4, 4
    8=Phantom, 20, 4, 4, 4, 4, 4
```

Line widths

The default line widths for graphics are rather coarse. In the section [Preferences]

set (for example) to Penwidths=0.28pt, 0.7pt, 1pt, 1.4pt
or (will display as values converted to pt)
Penwidths=0.1mm, 0.25mm, 0.35mm, 0.5mm

Snap and grid

Be aware, that some of these settings from the section [Preferences] are overridden by document settings.

```
Snap=On
Gravity=Off
DefaultRulerCm=0.1cm
DefaultGridCm=1cm
DefaultSnapCm=0.1cm
```

Template path

If you want to get document templates from a special location, change in section [Directories]

```
from TemplateDir=templates
    Templatesr=templates
to (for example) TemplateDir=D:\_doc-std\Fram
    Templates=D:\_DOC-STD\Fram\FM-templates
```

Smart quotes

Depending on the main language of your document you should define the proper typographic quotes in section [Spelling]. Select the appropriate set from the comment block:

```
; Deutsche anführungszeichen
SmartQuotes=\xe2\xbd\ue3\xbd
```

¹⁴ A nudge is defined as 1pt at zoom factor 100. Hence a factor of 353 nudges by 0.1mm (1 pt = 25.4mm/72 = 0.3527 mm)

Note: After installation of FrameMaker¹⁵⁾ the definition of French quotes (guillemets) is incorrect for the single guillemets. They must be \xdc\xdd .

A more user friendly definition includes the display of the used characters:

```
; Smart Quote Characters
;English      ‘ ’ “ ”
; SmartQuotes=\xd4\xd5\xd2\xd3
;German      , ‘ ’ ” “
; SmartQuotes=\xe2\xd4\xe3\xd2
;French      < > « »          v-- activated
; SmartQuotes=\xdc\xdd\x7c7\x7c8
;Swedish/Finn. ‘ ’ ” ”
; SmartQuotes=\xd5\xd5\xd3\xd3
;Italian     ‘ ’ “ ”
; SmartQuotes=\xd4\xd5\xd2\xd3
```

Modifications to maker.ini

Have FrameMaker closed when modifying maker.ini. It is also good practice to keep a copy of the original file (maker.ini.ori) and make remarks at the beginning of the file about the changes, for example:

```
; 2004-10-12 default zoom factors changed to
; Zoom=28, 36, 50, 74, 90, 125, 200, 353, 500, 1000
; 2006-02-08 Patch b144
```

Paste prefers text

The default for Paste (from none FM files with **CTRL+v**) may create OLE connections (Object Linking and Embedding). To paste the contents rather than the object property, change in section [Preferences]:

```
from ClipboardFormatsPriorities=FILE, OLE 2, EMF, META, DIB,
BMP, MIF, RTF, TEXT
to ClipboardFormatsPriorities=TEXT, RTF, FILE, OLE 2, EMF,
META, DIB, BMP, MIF
```

Note: *ClipboardFormatsPriorities only affects pasting from the Windows clipboard. It does **not** affect the paste operation for content that is coming from a FrameMaker file. To paste without formats within FrameMaker use **Paste Special (CTRL+SHIFT+v) > Text**.*

Default language in ¶ and f designer

In the first section [Frame] set
Language=UKEnglish

Display character positions correctly

In section [Fonts] set
DisplayUsingPrinterMetrics=On

Match colours in FrameMaker and PDF

In section [Preferences] set
GetLibraryColorRGBFromCMYK=None

15 This is an error since FM 5.5

B

Rules of thumb

Overview

In this chapter rules of thumb – methods developed by experience – are collected.

Legibility of printed matter is based on century old typographic tradition. Only recently these findings could be justified by research. They lead to a number of typographic rules.

Whereas FrameMaker provides the mechanics for layout, the user must think about the purpose of his design. Working in a team imposes rules which need not be observed when working alone.

A section gives some ideas about various elements present in scientific publications.

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Form follows function	2
Layout issues	7
Teamwork	9
Types of scientific publications	13
Elements of the publication	15
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Form follows function

Technical, scientific and legal matters are texts which we do not read for pleasure. They are 'must' readings. Hence the author and producer should do everything to enhance readability and comprehension.

Roots of some arcane habits

The main purpose of script is communication. The ideas of the writer should become interpretable or even comprehensible by the reader.

The development of type and writing during centuries lead to certain rules known as «good typography» and good «writing style». The first of these rules refers to legibility, the second to readability.

The invention of the type writer cut back the rich expressions of printed type as they were developed since Guthembergs times. This new device eased writing for many people, but was limited in expression to one size of characters of fixed width. The only possible emphasis was underlining - and, with some effort - s p a c i n g the characters or bolding them by overprinting. In addition, it provided only a limited character set.

Many habits of layout, typing and writing are rooted in this limited device. At the end of the 20th century there are still many people in Switzerland believing that German does not use upper case umlauts or upper case French accented characters. Even in France some people believe this...

The typewriter might also have lead to the numbering of headings to display structure and to refer to items elsewhere in the document. With text processing software or even Desk Top Publishing tools such as FrameMaker there is no need to restrict oneself to the times of type writing: we can use all the well established 'standards' of proven typography: font, type size, italic and bold type for emphasis, living references, and so on.

Form follows function

The basic principle of any design must be that it follows the function of the subject:

- Although gothic chairs with their high back are very nice to look at they are very uncomfortable for the same reason.
- A technical manual using flourishing script and hand made paper conveys the wrong message. It will not be considered serious.
- Although in the old days of scrolls (biblia) the writing was in the same direction as the extension of the parchment, the line length was limited and precious space was sacrificed for ease of reading.

Legibility

It has turned out that some measures need different values depending on the language: English has shorter words and generally shorter sentences than German. This leads to different optimum settings in these languages.¹⁶⁾

Properties of legibility

	The remarks give you an idea of good values of the property.
Line length	About 50 - 70 characters per line. With the rule of thumb to have a 1 cm line length for 1 pt type size this yields 11 cm for 11pt type.
Size of type	Long words (german text) call for larger type (11 pt), In English 10pt is a good reading size. Large pages (A3) need larger type due to larger reading distance. Use larger type for headings (14, 18, 24pt), smaller type for footnotes (8 - 9pt).
Leading (space between lines)	1/5 or 1/4 of type height seems to be optimal (10pt on 12pt). In any case it must be larger than the space between words.
Space between characters	3 - 5% spread in normal text. Standard font settings are too tight. The higher value is needed for sans serif type (e.g. Helvetica: Illness vs Illness)
Space between words	Constant space (left aligned) is better than variable space (justified). To avoid 'rivers' across the typed page careful hyphenation must be applied to justified text.
Proportions of type	x-height about 2/3 of capital heights. Smaller values need larger type size. Larger values need more leading. Low contrast (lines more or less equally thick). Normal (not heavy or thin) serifs.
Alignment	Left adjusted text does not create holes (excessive word space) as justified text might do.
Colour of type	Large type should not be in full black. Create a 'constant level of gray' by colouring type larger than 14pt with 40% black. Use real colour for special highlights (defined purpose) or images.
White space	White space around type create the impression of larger type. 10pt on 12pt it better legible than 11pt on 12.5pt. More than 3 indentation levels can not be memorised. Heavily nested indentations also lead to very narrow text columns the purpose of which nobody can digest.
Typographic signals	Bullets, indentation and space visualise the structure of a text. Avoid too many different signals: limit yourself to 3 types of bullets and keep purpose constant.
Paper	The paper should be really opaque (standard copier paper of 80 g/m ² lets type shine through), not glossy and not absolutely white (which strains the eyes).

16 Our visual system focuses at an angle of about 6°. The spacial frequencies for characters, words and lines of traditional type setting fit well to the physiology of the human eye. See for example: *Object spatial frequencies, retinal spatial frequencies, noise and the efficiency of letter discrimination*. David H. Parish and George Sperling, in *Vision Res.* volume 31, number 6/7, 1991. *The importance of phase in the spectra of digital type* by Ghuzoen Duan and Robert A. Morris, UMASS Boston in *Electronic Publishing*, vol. 2, page 47-59 (April 1989).

Readability

It is very difficult to catch readability or even comprehensibility in facts and figures. For legibility we have a long typographic tradition which only recently was verified by cognitive science.

It is far more difficult to judge the semantics of text and define 'ease of reading' in this area.

Properties for good readability

	The remarks give you an idea of good values of the property. Much of this is based on recent findings of cognitive science.
Character of type	Character matches the content (Sans serif for technical, serif for serious, flourishing and script for informal or enjoyable text).
Size of vocabulary	The basic German vocabulary is about 3000 words. The more words of the text are beyond this, the less it is understandable. Some technical texts use 'controlled language' for this reason.
Abstraction level	Examples and comparisons to daily life are far more understandable than metaphors and abstractions.
Idiomatic words	Special slang, newly invented buzz words or special terms (overuse of scientific terms) make it difficult to understand the text.
Numbering	More than 3 numbering levels can not be memorised and do not help in navigation. In most cases numbering of headings is not necessary for navigation purpose, because variation in type size give better clues on the structure.
References	Footnotes do not interrupt the reading flow as do in-line comments (in parentheses), because it is easy to skip them in first reading. Cross references to title text give a better clue than to title numbers. Based on the title text the reader can decide whether 'to jump' to another location or to continue reading.
Navigation aids	Technical and scientific texts need various access methods to the content, because they are not read the same way as prose. Table of contents present the overall structure, but should not go beyond 3 levels. Present a detailed view in a substructure (e.g. in a chapter). An index must be as rich as possible because the fantasy of the reader always differs from the knowledge of the writer. Think of different indices for certain elements: people, works, actions, time, area...
Placement of images	Keep descriptive text to the right of images. Although mirrored layout looks very nice in the first place, this violates the relation of speech and image in our brain.
Grouping	Use white space and alignment to group items (e.g. in tables). Avoid heavy ruling which is often default for US based DTP systems.

Research on readability

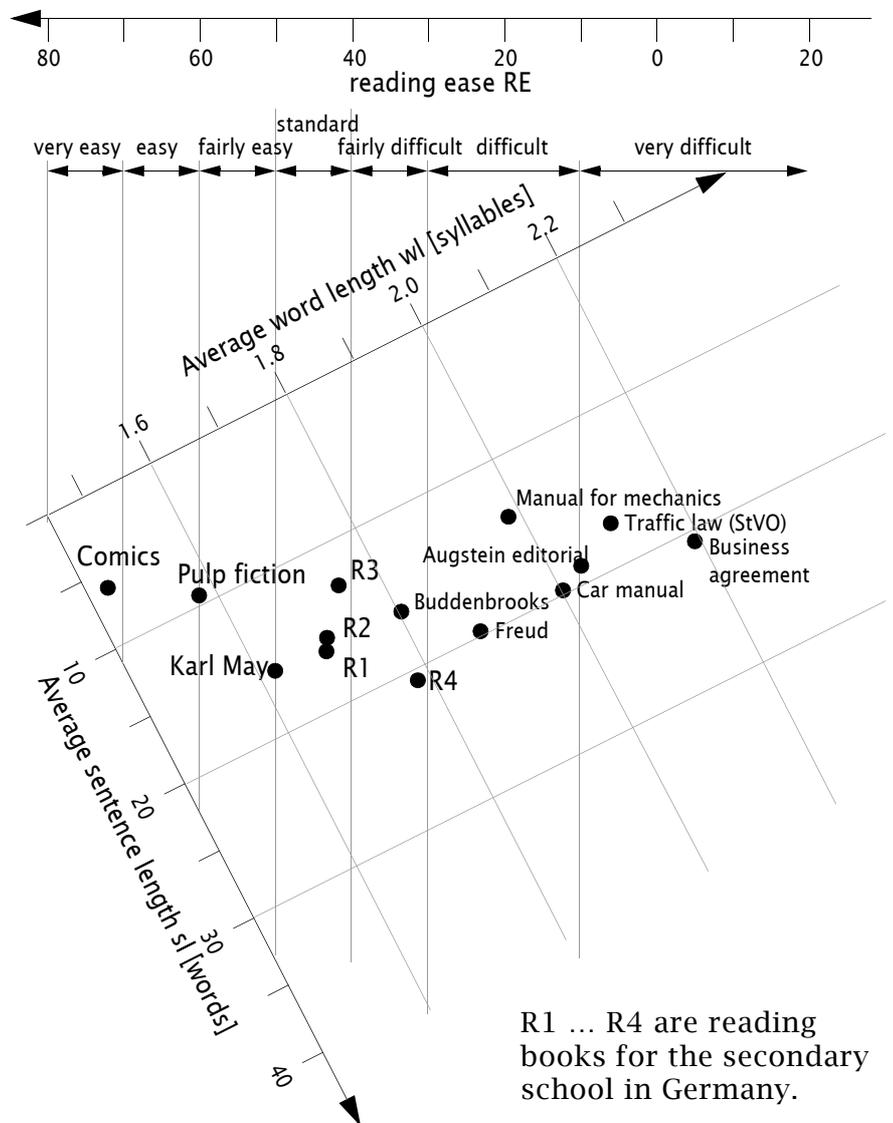
Research by Arend Mihm

The following diagram is based on research summarised in *Textverständlichkeit und gesellschaftliche Lesefähigkeit* by Arend Mihm in *Linguistic und Didaktik*, 1973.

The term *reading ease* (RE) was defined 1948 by Flesch and derived from the measures \overline{wl} (average word length in syllables) and \overline{sl} (average sentence length in words) with the following formula¹⁷), which he verified on an extensive set of text samples read by a great number of people:

$$RE = 206.835 - 84.6 \cdot \overline{wl} - 1.015 \cdot \overline{sl}$$

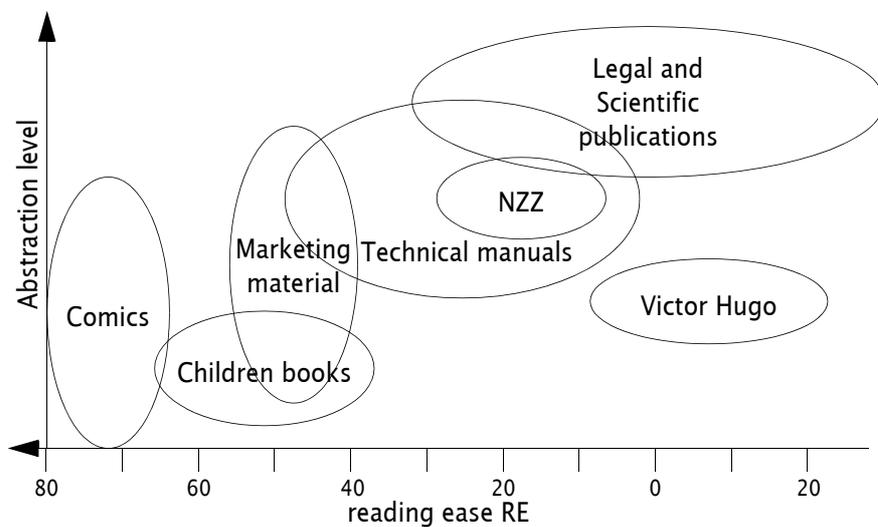
Mihm needed to adapt the figures found by Flesch for German texts, because in this language both the average sentence length and the average word length are larger than in English ($\approx +20\%$).



17 To high a precision demonstrates lack of knowledge on the subject is still a valid insight from my studies at the School of Technology. Although we have here an elaborate formula the input was presumably much less precise...

Personal experience with readability

This diagram is based on the authors experience with various text sorts and tries to cope with the fact that *reading ease* is only one side of the coin. The abstraction level and the size of the vocabulary add another dimension to the subject.



Layout issues

Books

Books are normally smaller than A4 and larger than A5. A very common size is 17 x 24 cm (close to B5).

For books the inner margin is smaller than the outer margin. This gives room to a browsing thumb.

A4 loose leaf publications

For A4 publications the binding normally is inside. The classic 1/9 rule for margins creates much white space, because this rule assumes no side headings.

Margins

The classic rule for margins reduces the text area to 2/3 of the paper size and adjust the margins to these values:

Margin	Relation	For A4 [cm]	for 17 x 24 [cm]
Top	1/9 of paper height	3.3	2.7
Bottom	2/9 of paper height	6.6	5.4
Inner	1/9 of paper width	2.3	1.9
Outer	2/9 of paper width	4.6	3.8
Text area	2/3 of dimension	14 x 19.8	11.3 x 16

Running headings are inside the text area, but the pagination is outside.

These margins are good for text areas which are filled with text. The margins are too large for layouts using side headings, such as technical and scientific publications.

Layout with side heads

Layouts with side heads use about 1/3 of the text width for the side heads and 2/3 for the common text. This creates a proper line length for the ordinary text.

Margin	For A4 [cm]	for 17 x 24 [cm]
Top	2.0	1.5
Bottom	1.7	1.7
Inner	2.0	1.7
Outer	1.0	1.0
Room for side head	5.6; gap 0.6	4.0; gap 0.4
Line length	11.8	9.9

Both running headings and pagination are outside the text area.

Mirrored layout

Although a mirrored layout (side heads always on the outer side) look more pleasing on first sight, this confuses the rela-

tion between image and text for small images in the side head area.

Use a mirrored layout for nice books, but not for technical and scientific publications.

Running headers and footers

Running header repeat the information from the headings on the page.

The running header on the left page always repeats a higher level heading (e.g. 1-heading) than the running header on the right page (e.g. 2-heading).

Running footers with information from the page contents are present, for example, in dictionary style layout.

Tables

Both technical and scientific publications use tables much more than standard texts.

Layout rules for tables

- Both start and end of the table must be clearly visible and distinguishable from the running text. A good method is to have the heading row shaded (up to 10%) and the footing row (or end of table) be indicated with a line.
- Group rows either with additional white space or ruling.
- Avoid too much ruling. Most ruling can be omitted when proper alignment of the columns is used.
- Ruling defaults of US based DTP programs are too heavy for European eyes. A thin rule uses 0.3 pt (and not 1 pt as in the US).
- Both heading and footing rows must be repeated on each page of a table which spans several pages. FrameMaker does this automatically.
- Harmonize column width for tables which are not separated by much text. If each table uses different row proportions the page image becomes very cluttered.
- For very wide tables rotate the table (or the whole page) counter clockwise. Care must be taken to text which is rotated in the cells or the text area: it must stand normal in the rotated page (and not top down!).
- Arrange table titles always at the same side (above or below) of the tables. If you need a special table construct for titled images (FrameMaker does not provide titled anchored frames), arrange the title of tables above and the title of images below.
- If no list of table titles is created, titles may be omitted, because the tables are normally anchored in the text where they belong to and the heading row gives enough information for the contents of the table.

Teamwork

Teamwork requires more working rules than working in solitude. The rules must be set up and observed by all team members. Of course it is best to have one person responsible to manage the rules - the team responsible.

Team responsible

Tasks of the team responsible are:

- Collecting wishes concerning layout and styles
- Maintain the template directory
- Document the template (layout, catalogues)
- Keep the templates up to date
- Maintain a project dictionary
- Distribute changes

Directory structure for a project

As it is often	What would be better
<pre> /project-directory arbeiten_d.fm arbeiten_dv7.fm einführung_d.fm firlefananz.gif graphic1.xyz graphicz.xyz introduction_e.fm </pre>	<pre> /project-directory /de arbeiten.fm einfuehrung.fm handbuch.book /graphics_d firlefananz.gif /de_v7 arbeiten_dv7.fm /en introduction.fm working.fm /graphics graphic1.xyz graphicz.xyz </pre>

- Do not use umlauts, blanks and other dangerous characters in file names (which may be valid on your current platform) - think about case dependency of file names!
- Do not use chapter numbers in the file names - the order may change during the development of the document.
- Do not mix versions (and/or languages) in one directory.
- Keep graphics language independent. Either place circled numbers in the graphic to be referenced in the text or overlay the graphic in FrameMaker with callouts etc.
- Keep reference data (reports, sources, original text) in a separate directory.

Locking files in a network

FrameMaker creates a file *name.lck* for each document it opens (*name* is the file name of the document). This lock document is placed in the same directory as the source file.

Even if you are not a single person working on any project, keep this preference ON; it does not affect your work outside a team:

File > Preferences: Network File locking.

Source code maintenance system

Extensive file control with access rights (e.g. read only) can only be maintained with a source control system. The support provided by FrameMaker is too weak in these cases.

With FrameMaker 7 Adobe has introduced a special form of source code maintenance system: FrameServer. This supports central distribution of files with check out - check in procedures.

Fonts in a mixed environment

- Always set **File > Preferences...** *Remember missing font names*
- Minimise your trouble with commercial printing by embedding fonts completely into your PDFs.

Note: *If your printer refuses to accept TrueType fonts in your document, change the printer! This one lives in the last century.*

FrameMaker is one of the very few applications which supports font integrity between Macintosh, Windows and UNIX. This is done by means of two tables in the `maker.ini` file. This is tedious work even for experts, because fonts are handled very differently on these platforms.

- Font mapping for Windows font names
- Unknown to known font mapping

Template library

FrameMaker treats any document as template when this is located in a particular directory which is defined in the `maker.ini` preferences.

When opening a template with **File > New...** a copy of the template file is created automatically.

Style planning

For a team project, the planning of layout and style is even more important than for any documentation project:

- Provide (at least during development of the document) the following information on each page:
 - full file name
 - date of modification
- Which styles for paragraphs and highlights are needed? Use names, which allow easy recognition of the purpose and not the appearance (1 heading rather than Big Heading). See also *Names for styles* on page 2
- Think early about your numbering scheme for headings, tables, figures, formulas, chapters etc. Do you really need a numbering system in the time of live cross references and hypertext? At which level do numbers restart? Should tables and figures be numbered independently of headings?
- What types of tables are needed? Set up a collection of wide and narrow tables and specify their ruling and shading. Define tables by appearance only for general styles. Be aware of the limitations of the table catalogue (it does not keep all what you might wish).
- What layout will be needed for the pages? FrameMaker support an 'unlimited' number of master pages for a document. Do you need special graphical elements in the layout, such as lines above and below paragraphs? They will be placed in the reference pages of the template.
- What formats for cross references will be needed? FrameMaker starts with a set of these which may not be what you need.
- If you plan to use the built in graphics tools, think about line widths and arrow tips. User defined arrow tips can not be kept between sessions!
- Can you place 'canned text' in variables? Candidates are product names, company names, copyright notes etc.
- Do we use project specific graphics only? General graphics (e.g. clip art) may reside in locations which are not available at the final stage of the document (commercial printing...). You will need to copy them.

Maintaining consistent use of styles is one of the main issues in document team work. FrameMaker support this with the capability to import style and layout definitions from other documents.

When initiated from a book file, the styles and layout definitions are imported to all files of the book.

It is therefore important to develop styles only in one files of a project and propagate them via the book mechanism to all files of the project.

Local styles

Using local styles (such as bolding a word, giving a paragraph an individual appearance) must be avoided as much as possible. In any case do not use styles which are not in the catalogue - there is little chance to find and maintain these elements!

If special styles are needed in a limited area of a project, use named styles with the chapter-number in the style name. For example, z1-figure-top. This would be a special style in chapter 1. The z keeps the style separate to the others. This method keeps things apart even if styles are accidentally propagated to other chapters.

Maintain a style guide

Even for small projects it is good practice to have a list of all styles available in one document. This displays the name of the style and its appearance. Sophisticated style guides list all properties of the style and where they must / may be used.

Simple style list

bodytext: Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat..

Q **In-narrow-list** is used for definition lists with short terms. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat

Island **lw-wide-list** is used for definition lists with longer terms. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat

Popocatepetl **lww-verywide-list** is used for very long terms. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy

This is a 3heading

Character formats are *1highlight*, **2highlight**, computer, ddd-symbols: X_l™

name and dingbats: abcdefghijklmn

Boiler plate elements

Collect well thought out elements in a special document for easy copy and paste. Such elements may be:

- Tables with sophisticated layout (straddled cells, special ruling and/or shading)
- Figure tables with diverse arrangements of graphics or photos.
- Special characters from exotic fonts

See *Figures with legends* on page 17 for examples.

Types of scientific publications

Scripts

IMHO scripts can be set up similar to the handouts presented here. Very often more than one person works on such a paper which will introduce style differences as well as different method to achieve the same affect. Hence guidelines about the formats, layout and methods are needed for this work. Nevertheless from time to time a complete cleanup of such documents is necessary.

Thesis

At the time being I do not have much insight into this - need input from ETH people.

Dissertation

	A dissertation (at least at the ETH) consists of these parts:
Cover	The cover repeats the front page
Preface	Page numbers in roman numerals <ul style="list-style-type: none"> ▪ Front page repeating the text of the cover ▪ Dedication and probably a motto (citation) ▪ Acknowledgments
Preliminaries	Page numbers in roman numerals) <ul style="list-style-type: none"> I Table of contents II Abbreviations III Summary IV Zusammenfassung
The contents	Arabic page numbers. The structure headings may vary, but this is typical: <ul style="list-style-type: none"> 1 Introduction 2 Literature review 3 Experimental 4 Results and discussion 5 Conclusions 6 References

Paper for publication

Most publishers have their own rules how to present the various elements of the paper:

- Literature references are strictly regulated

- Format of images and file types are defined
- Drawings (line types, line widths etc.) provide only little variation.
- Colours are welcome only for photographs, not in layout
- etc.

Templates for scientific texts

FrameMaker comes along with templates for outlines only:

Harvard outline

This outline provides 7 levels with ample indentation. In level 5 you have only half the page width available for text, in level 7 about 1/3!

The numbering is very mixed - it uses all styles from upper case roman to lower case characters with parentheses.

Outline, Numeric

This outline supports six paragraph levels. The levels use arabic numbers and indentation.

Outline, Small

Use this template to create a simple outline that uses bullets and dashes to indicate a paragraph's level. 6 levels of paragraphs are supported.

Elements of the publication

Design

Before you start it is good to look at basic design and typographic principles, such as *Form follows function* on page 2.

Layout

Layout very often is based on a book format or A5. This determines the amount of space available. In particular, side headings are not used much (in contrast to technical publications).

Body text

To cope with footnote references and small in line formulas it is usual to have a wide line spacing. Use only few character formats and explain their use at the beginning (e.g. after Abbreviations: Typographic conventions)

Heading levels

Usually 3 heading levels are numbered and the fourth one is not numbered. In an A5 layout the numbers run into the text space. In A4 layout it is convenient to set the numbers outside the text space.

If tables, figures and formulas are not numbered independently from heading levels, you set up a matrix (see *Hierarchical numbering* on page 3-10) to get correct numbering.

Tables

Tables are numbered and in most cases the table title is arranged above the table. Only few authors set the table with different font than the body, although this gets tight in an A5 layout. Ruling is preferred over shading, because copies are done easier in this case.

In Switzerland heavy ruling is unusual, in particular if you print to a high resolution device. In most cases it is not necessary to place vertical rules, because the text boundaries itself guide the eye.

Figures

Figures are numbered. The legend may extend to multiple lines. Various forms have been found for this element.

For greater flexibility it is recommended to place callouts (numbers, arrows etc.) not directly into the image, but overlay the images with FrameMaker graphics.

Small figures may be combined to clusters (e.g. 4 cells in a table).

Drawings

Drawings in figures are mostly done outside FrameMaker, because very often these are graphics based on data.

Pay attention to line styles, fonts and font size. It is good practice to create graphics in the needed size to avoid any scaling (which damages the font size). Use the same fonts as used in the document. Stick to one font-type (TrueType).

Images

Images are mostly photographs. TIFF is not a good choice for this form of images. JPG is more adequate. However, some print shop insist on TIFF images.

When creating and storing images, do this in the highest possible resolution. When working in FrameMaker you can switch off the display of images, which may cause large build-up

time for pages (**View > Options:** uncheck **Graphics**). Switch the display of images on again for placing callouts etc.

When producing a PDF from your paper you adjust the parameters according to the publication process (see chapter 10).

Footnotes

These may or may not be used. Some people prefer to collect the notes at the end in a separate chapter and handle them as ordinary reference.

Bibliography

Whether to use a special tool such as EndNote (see *Bibliography with EndNote 5* on page 7-20) depends on the nature of your references. If you can not rely on existing data bases there is no use of EndNote. A simple table (see *Bibliographies* on page 7-16) will do the job.

Lists of authors etc.

Some publications require lists of

- authors
- tables
- figures
- etc.

FrameMaker gives you great support for these items (see *Arbitrary lists* on page 9-15).

But this is only possible if you follow a good scheme for paragraph formats, cross reference formats and character formats. Do not highlight locally or use 'Word-style' formatting for paragraphs - this can not be accessed to generate things.

Formulas

FrameMaker has a very good formula editor, although it needs some skill to be handled well. Keep in mind that in FrameMaker a formula (or equation as Frame calls it) is mathematical construct, not just an image (as for example in MS Word).

If you need to place a comment directly in the formula, use the method described at *Physical dimensions and other strings* on page 11-7.

If you have a very large number of formulas in another system (e.g. Maple) consider to import the formulas as images. In this case use a high resolution to generate the image, because in many cases you just get a bitmap.

Figures with legends

It is good practice to have a document with 'boilerplate' text and other elements available. The following pages give you some of the needed elements which you can copy.

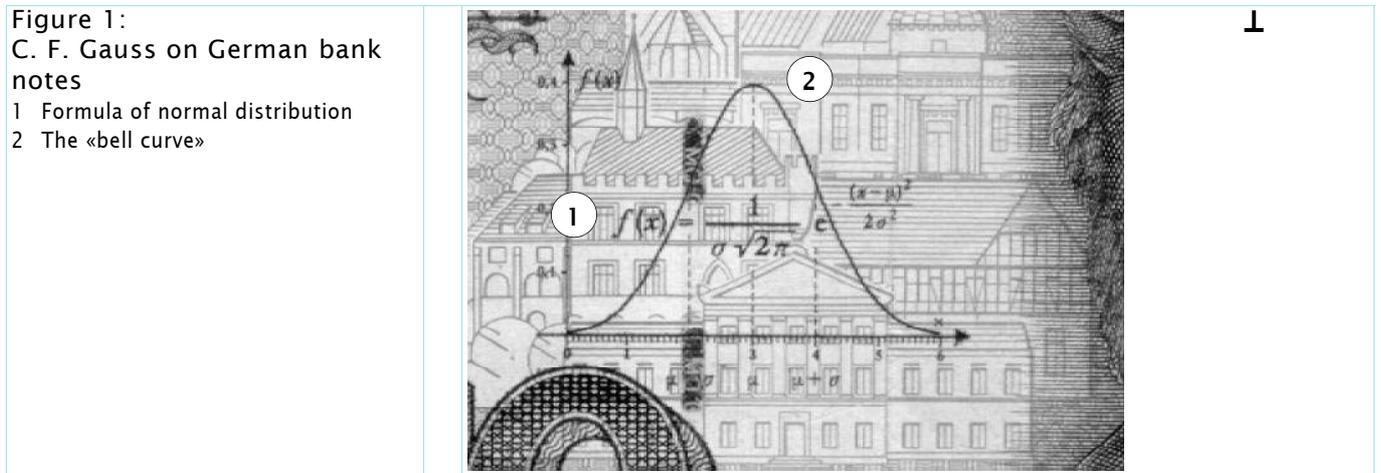
You may install the shareware plug-in AutoText by Silicon Prairie Software (www.kagi.com/spssoftware/) to have ready access to any FrameMaker object (table, text, graphic, etc.). Be aware that predefined keyboard short-cuts (such as CTRL+t) may conflict with FrameMaker short-cuts.

Note: *To be able to create a «list of figures» you need to have reasonable text in the figure heading. Hence it is not recommended to have an empty figure heading and start immediately with (probably numbered) legend items after the figure number.*

Figure with title in side head room

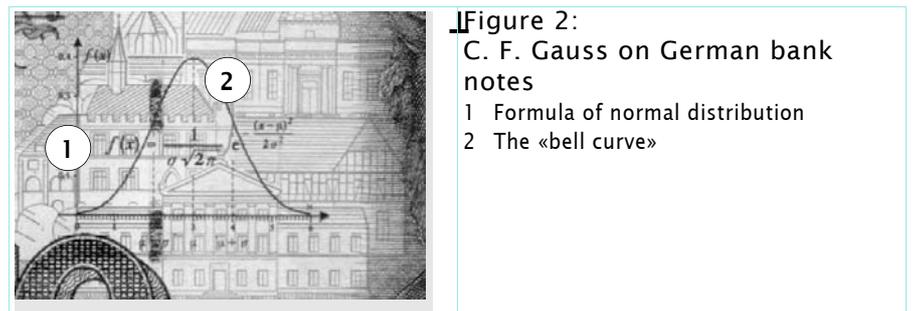
Here you see the standard method in technical documentation for callouts: numbers, which are explained in the legend. Text in the figure is avoided to ease modification and translation.

To see the construction in FrameMaker, the table is outlined with borders and the anchored frames are filled with gray.



Arrangement within text column

This type of figure table (2 table columns) uses only the area of the text column



2007-06-22

E:\FM-course\handout_70\rulesofthumb.fm

D+D D

Figure cluster

To avoid separation of the image from the title row, set Orphan Rows (Table designer, category Basic) to 2.

For large clusters of images this may not be sufficient: Set **Table > Row Format > Keep with next** (or previous).

Images in distinct table cells

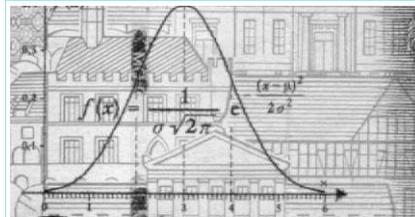


Figure 3: With no figure legend at all - just the figure title

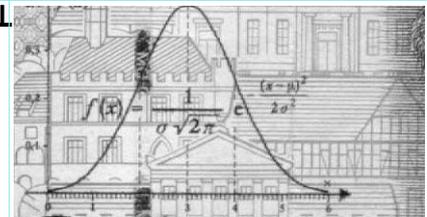


Figure 4: With figure legend
Figure legend for longer explanations of the figure contents.

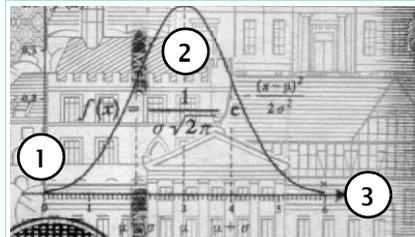


Figure 5: Using figure-legend

- 1 Start of the mischief
- 2 Climax of the mischief
- 3 Back to normal again

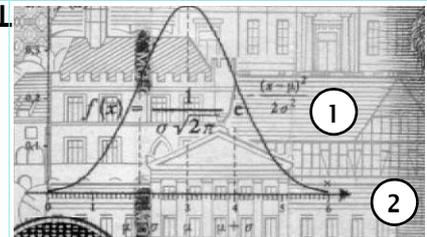


Figure 6: Legend text and list

- This is the introductory text
- 1 The famous bell curve with the formula
 - 2 Background image is taken from an engraving of Nuremberg

The default numbering sequence in a table is Row first (as seen above). You can change this in Table designer, Basic category.

Images combined in cell

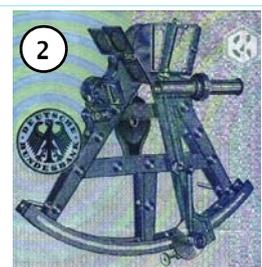
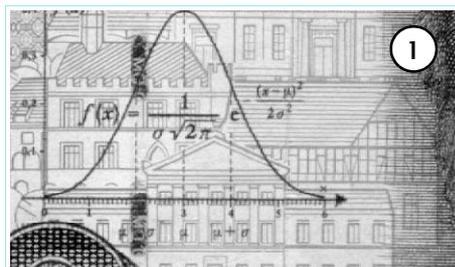


Figure 7: Key developments by C.F. Gauss

- 1 The Gaussian normal distribution is one of the most common distribution functions, especially in error theory. The function has many names, including de Moivre distribution.
- 2 Instrument for triangulation. A sophisticated form of a sextant.

Paragraph formats used for the figures

ftn-fig-title-numbered Figure title, sets legend number to 0.

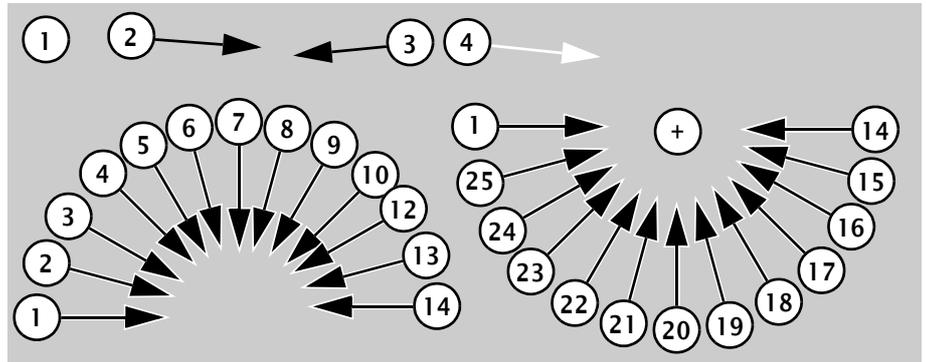
ft-fig-text Legend without numbering. Automatic follower of ftn-fig-title-numbered.

legx-legend-nx Legend with numbering.

Graphic overlays

Figure 8: Numbers and arrows for image overlay

- 1 Arrows in the top row can be ungrouped and rotated when grabbed at the tip
- 2 Combined arrows (black on white) can not be rotated any more, hence the proliferation of items.
- 3 For length adjustment of arrows: ungroup and stretch arrow
- 4 After positioning, select the arrow, the number and the circle and group them



You can select and change the number also in grouped state. You just need to be able to select it with the mouse (zoom in for easy working).

Fonts

If your printer refuses your document because you use TrueType fonts, change the printer immediately. It lives in the previous century. The TrueType font definitions were jointly specified by Apple and Microsoft¹⁸⁾ and finally led to the OpenType font definition, which is a container format for PostScript fonts and TrueType fonts.

Contact your favourite print shop as early as possible also to get the preferred PDF job-options for generation of your PDF. Always generate the PDF with complete fonts included (no subsetting).

Special symbols

It may be cumbersome to enter special symbols in FrameMaker (see *Symbols and dingbats* on page A-5). So it is a good idea to place also the rarely used in the boiler plate file, especially if they are located in an exotic font:

Symbol	Ω Σ • ≤ ≥
D+DD Symbols	© ↘ ▲ ☞ ⚡ ⚡ ⚡ ⚡ ⚡

¹⁸ 1990 Apple was tired about spending 30% of its revenues for font licenses to Adobe and hence developed the alternative together with Microsoft. This bowed the neck of Adobe to reveal the Type 1 font definition.

Bibliography

Visible reference items

To get access to the reference items [...] with the cross reference mechanism these items must be distinct paragraphs (see also *Bibliographies* on page 7-16).

References in a table

[Daube 1989]	Daube, K., <i>Aufbau des OBRZ Run time Systems</i> , in <i>Technisch-wissenschaftliches Rechnen am MVS System</i> . 1989, OBRZ AG: Zürich. p. Chapter 400.50.10.
[Garneau 1990]	Garneau, D., ed. <i>National Language Support Reference Manual</i> . January 10, 1990 ed. National language Information Design Guide, ed. IBM. Vol. 2. 1990, IBM National Language Technical Centre: Toronto, CDN.
[LaBonté 1989]	LaBonté, A. <i>A New Data Type for National Language?</i> in <i>SEAS Anniversary Meeting</i> . 1989. Amsterdam, The Netherlands: SHARE European Association.

References in run-in-paragraphs

[Daube 1989]: Daube, K., *Aufbau des OBRZ Run time Systems*, in *Technisch-wissenschaftliches Rechnen am MVS System*. 1989, OBRZ AG: Zürich. p. Chapter 400.50.10.

[Garneau 1990]: Garneau, D., ed. *National Language Support Reference Manual*. January 10, 1990 ed. National language Information Design Guide, ed. IBM. Vol. 2. 1990, IBM National Language Technical Centre: Toronto, CDN.

[LaBonté 1989]: LaBonté, A. *A New Data Type for National Language?* in *SEAS Anniversary Meeting*. 1989. Amsterdam, The Netherlands: SHARE European Association.

Invisible reference items

Some publications require that the bibliography does not contain the repeated references. For example, the bibliographic list may contain:

Acree, T. E., Barnard, J. and Cunningham, D. G. 1984. A procedure for the sensory analysis of gas chromatographic effluents. *Food Chemistry*, 14: 273-286.

And the references should be [Acree et al, 1984].

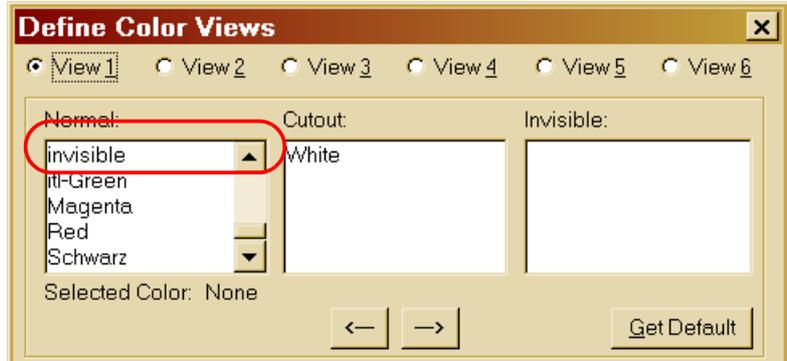
This can not be achieved by cross references to markers, because there is no building block <\$markertext> available in body pages.

Solution

Colour definition

The solution is to hide the reference item in the bibliography list. The item is coloured with «invisible».

- 1 In **View > Color > Define...** specify a special colour for your reference items, for example *invisible*. Use a colour such as magenta or pink which clearly separates from the real colours of your document.
- 2 In **View > Color > Views...** make the colour visible:



Paragraph format

Use a distinct paragraph format for your reference items in the bibliography table, for example, *bib-ref*. This format uses the colour *invisible*.

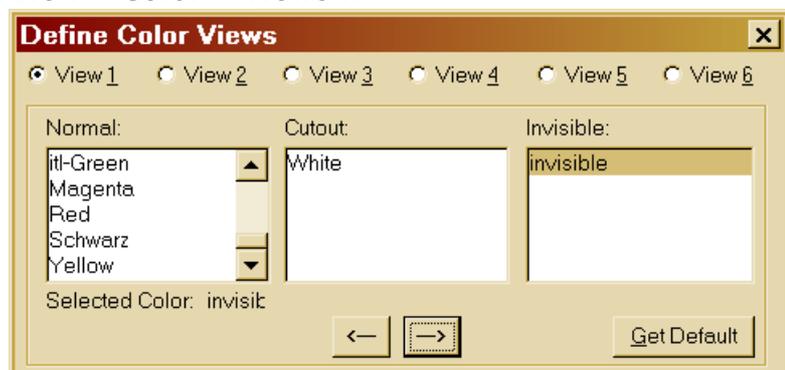
Acree et al, 1984	Acree, T. E., Barnard, J. and Cunningham, D. G. 1984. A procedure for the sensory analysis of gas chromatographic effluents. <i>Food Chemistry</i> , 14: 273-286.
Grosch, 1993	Grosch, W. 1993. Detection of potent odorants in foods by aroma extract dilution analysis. <i>Trends in Food Science & Technology</i> , 4 (3): 68-73.
Karathanos et al, 1996	Karathanos, V. T., Kanellopoulos, N. K. and Belessiotis, V. G. 1996. Development of porous structure during air drying of agricultural plant products. <i>Journal of Food Engineering</i> , 29: 167-183.

References in the text

The text uses cross references to the reference items:
 Extract dilution techniques, such as CHARM [*Acree et al, 1984*] or AEDA [*Grosch, 1993*], provide means to even evaluate the relevance and impact of a single compound within the entire aroma profile.

PDF creation and printing

For printing and saving as PDF hide the reference items with **View > Color > Views...**



This does not affect the cross references, because the text is not excluded from the document (as conditional text would do).

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Miscellaneous

Overview

Plain text can be imported and formatted according to some rules. In particular, it is possible to convert a TAB delimited text to a table.

Importing objects from other applications uses a filter mechanism, which is still not fully reliable for Word documents and Excel tables. The reason might be the ever changing format of MS office data.

A section provides general information about FrameMaker and some internal mechanisms.

Contents

Importing methods	2
Importing methods in detail	4
Application of importing methods	6
FrameMaker specifics	8
File names	11
Document properties in MIF	12
FrameMaker principles and philosophy	16

Importing methods

FrameMaker offers various methods of importing text and graphics. The most reasonable method depend on various factors:

Method	Applicable to
Import filter	Graphics and plain text in distinct files
Copy / paste	Text and graphics from Office applications;
OLE	Avoid this method

Import filters

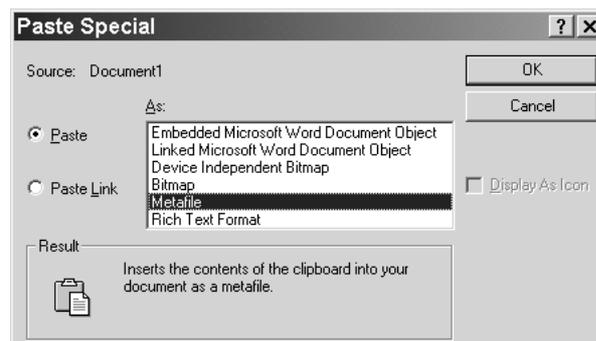
With **File > Import > File...** FrameMaker activates import filters which are third party developments. Some file formats are well defined and stable (eps, tiff, txt), but most are proprietary and not well defined. Word for example is not compatible with itself ... On the other hand functions in one application can not easily mapped to functions in another application because of the different object model (e.g. frames in Word vs. frames in FrameMaker).

Another obstacle are naming conventions or user definitions. FrameMaker users are adept to the catalog concept and hence use (in most cases) consistent naming for paragraph and character formats. The great majority of MS Word users are not aware of the capabilities of the product and hence use Word as a heavily overpowered typewriter.

Note: *Importing from Word may¹⁹⁾ leave CR characters (\x0D) and other illegal characters (e.g. \x01) in the file. These restrict an FM search to the paragraph ending with CR. You can find them only by searching backwards from the end of the flow. Clean the file by saving as MIF, opening the MIF, saving as FM,*

Copy and paste

The paste buffer can contain various forms of a copied object depending on the nature of the object and the creating application. Using just **copy** fills the paste buffer with forms which are specific to the creating application and the setup of which. When using **paste** the target application will take a default format or you specify which format to take by using **paste special**.



19 This actually depends on the filter type and FM version.

Using **copy special** (if available) fills the paste buffer with a specific form (for example an image in tiff format or text in rtf = Rich Text Format). In this case a **paste** will place only this specific form.

FrameMaker default for paste

The FrameMaker default format for pasting is defined (on Windows) in the maker.ini file. For more easy working the changes according to *Paste prefers text* on page A-37 are recommended.

Paste special in FrameMaker

When pasting a graphic this might provide the formats bmp (Bit Map), dib (Device Independent Bitmap) or EMF (Enhanced Metafile).

When pasting a textual object, this might provide emf, rtf (Rich Text Format) or text (plain text).

Object Linking and Embedding

Object Linking and Embedding provides a link to the source application. What you see on the screen and will be printed in FrameMaker is an image of the application window.

Note: *On the Macintosh (or UNIX) no such thing exists.*

Depending on the source of the object (same computer, other machine) the image may be just a bitmap. When transferring objects between Windows machines, the object seems to bear a WMF (mixed vector and bitmap) image.

Warning When planning to use the document on various computers, for example, send to a print shop, avoid OLE at all. The receiver of the document both must have access to the file and the same applications installed - which is often not the case.

Insert an object

- Select the object in the source application (e.g. Excel) and copy it to the clipboard.
- In FrameMaker paste it into an anchored frame (if you just paste it to the current cursor location, a default frame is created).
- When double clicking on the object, the original object window appears on the FrameMaker screen and the menus and buttons are from the source application (Excel). The data can be edited now.
- To close the application window click somewhere outside the object window. **Do not use File > Save or File > Close**, as this will close the FrameMaker document also.

Importing methods in detail

Text in Source applications

Although the various filters which FrameMaker provide are of high standard, they can not be accurate. Hence it is best practice, to

- 1 Provide the author(s) a template using the same paragraph and character styles as the final FrameMaker document.
- 2 Since most MS Office users are not familiar to templates even with education they will fall into old habits and use individual markup. Hence You will need to clean the document in the source application. A set of macros may help you especially for multiple input.
- 3 Remove special formatting such as Word frames and remove all graphics. Break down large documents into manageable chunks.
- 4 Use this / these cleaned documents for import to FrameMaker.

Note: *You will need to judge points 1) and 2) and decide to work completely on plain text which you format in FrameMaker.*

Graphics in source applications

Graphics in source applications (e.g. MS Word) may be OLE objects, imported or copied external files or application specific graphics. Depending on the nature handle them differently:

OLE objects

See *Object Linking and Embedding* on page 3.

Copied into the document

A copied file has lost its relation to the source. You do not have a clue about the original size or resolution in case of a bitmap.

- 1 In the source application copy the image
- 2 In FM use **Edit > Paste Special** and select the most appropriate format. If a vector format is available (eps, wmf, emf), use this (with preference to eps)

Linked to the document

To see whether a file is copied or linked, switch the Field view ON in the source application. A linked file is displayed as something like this:

```
{INCLUDEPICTURE "G:\\Graphics&images\\!temp\\test.wmf"
\\* MERGEFORMAT \\d}
```

Copy the referenced file (G:\Graphics&images\!temp\test.wmf) to an appropriate directory in your FrameMaker project and include the file by reference into FrameMaker.

Application specific graphics

To handle graphics created directly in the source application, try to export the graphic to a file in a common format (at best: eps).

If this is not passible (as with Word graphics), use the copy and paste method (See *Copied into the document* on page 4).

Last resort

None of the above may work in certain circumstances. In this case use PDF as an intermediate format. If the image is a vector image, then the result will be a vector image. Otherwise you get a bit-map.

- 1 Create a PDF. If PDFWriter or PDFMaker seems to get stuck use Print to PS (using the Distiller Printer) and then distil to PDF.
- 2 Open the file in Acrobat (the full product, not just the Reader).
- 3 Crop the page to the size of the image.
- 4 Save the page as eps with preview.
- 5 Import the eps in FrameMaker by reference.

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Application of importing methods

Importing Word files (text)

These rules are based on the work of FredRidder@Dialogic.com.

- 1 In the first step remove all graphics, even if they are imported by reference. Handle images completely separate from text.
- 2 Good adherence to the Word style sheet. Local format overrides are nothing but trouble. If necessary, write Word macros to enforce as much style conformance as possible before attempting to import.
- 3 Remove as much «special» formatting as possible by redefining the Word styles in a special «export» template. In particular, redefine any styles that have auto numbering or bullets in Word so that you don't wind up with duplicate tabs or bullet characters in your Frame files.
- 4 Ensure exact 1-to-1 correspondence between Word style names and Frame style names. This allows you to import *content only* from Word files, leaving all the formatting stuff behind and redefining all the styles in Frame. This sounds like the harder way of doing things, but it works better in the long run because there are a number of format issues that are simply handled too differently in the two tools allow direct translation. (One good example is space before and space after paragraphs, which is additive in Word but not in Frame.)
- 5 Remove any Word frames, that is, resolve them to ordinary text before importing.
- 6 Always import by using **File > New** to start a new Frame document and then **File > Import > File** to convert and copy the Word content into Frame.
- 7 Always select the «Reformat Using Current Document's Formats» option in the «Import Text Flow by Copy» dialogue to apply your clean Frame styles and leave all the Word formatting behind.
- 8 Break large Word files into chapter-size or section-size chunks before importing to Frame. One of the biggest reasons for migrating from Word to Frame is Frame's ability to reliably build large books from smaller files, and the best time to do the chunking is *before* importing into Frame rather than after. In file importing, smaller is always better. (Yes, I'm afraid that size *does* matter...).

Importing a Word graphic

Word graphics may be of all the kinds described in *Graphics in source applications* on page 4. Use the methods proposed there.

Importing an Excel table

MS Excel (or FrameMaker) produced errors when importing sparse arrays (not completely filled table areas). This error is no more present with FrameMaker 6 and Excel 2000.

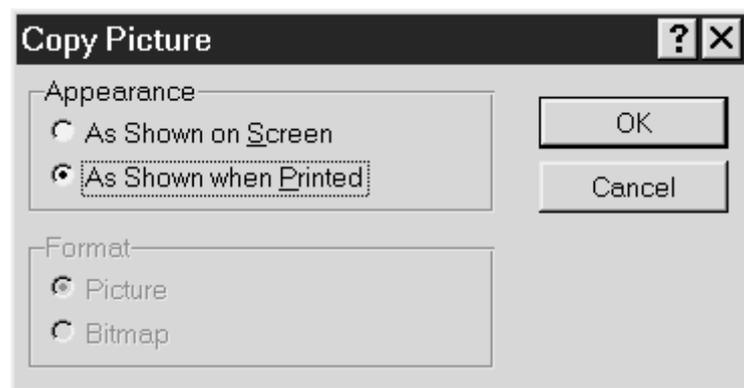
To import an Excel table (or part of):

- 1 In Excel select the table area to be copied
- 2 Copy to the clipboard
- 3 In FrameMaker use **Edit > Paste Special...** and select **text**.
- 4 Convert the tabbed paragraphs to a table with **Table > Convert to Table...**
- 5 Select an appropriate Table format and format the rows according to the needs.

Importing an Excel graphic

To import a graphic from Excel into FrameMaker:

- 1 In Excel select the graphic (chart)
- 2 **SHIFT-Edit > Copy picture...**



- 3 Select **as shown when printed** to get best results
- 4 In FrameMaker use **Edit > Paste Special...** and select **wmf**.

Importing a Powerpoint graphic

- 1 In PowerPoint select the graphic or graphic elements.
- 2 Copy to the clipboard
- 3 In FrameMaker Paste (a wmf will be pasted)

Note: *If you select text elements (e.g. large headings) these will not be copied. Also backgrounds will not be copied (they can normally not be selected)*

FrameMaker specifics

FrameMaker is available on the following platforms (operating systems)

Windows	Macintosh	UNIX	LINUX
Windows 3.1 (up to FM 4)	System 7.x (up to FM 5.1)	IBM AIX	Only 'unofficial' LINUX port existed for FM 5.5.6
Windows 95 (up to FM 5.6)	System 8.x (until FM x.x)	HP_UX	
Windows NT 4.0	System 9.x (until FM 7.0)	SUN Solaris	
Windows 2000 Windows XP	Platform abandoned after FM 7.0 March 2004	Only Sun Solaris continued with FM 7.1, others abandoned March 2004	

Platform differences

Property	Windows 3.x, 9x, NT4, 2K, XP	Macintosh	UNIX
User interface	Windows, child windows, buttons, drop down lists, tabs in dialogues. Multi document interface (MDI)	Windows, child windows, buttons, drop down lists. Formatting bar is part of document window.	Windows, child windows, buttons, drop down lists. Most dialogues behave like palettes.
Keyboard short-cuts	Adapted to Windows	Adapted to MacOS	Some keyboard short-cuts
	Escape sequences are platform independent, but adapted to UI-language		
File format (line-ending)	CR - LF	LF	CR
Character coding	ANSI + extensions (OEM)	Mac specific (Mac Roman) (→ FM internal coding)	ISO Latin-1
Help system - version < 6 - version 6 - version 7	Frame hyper document Winhelp HTML	Frame hyper document Mac Help HTML	Frame hyper document X-windows help HTML

Starting with version 5.5 the FM-files (binary) are platform-compatible, hence MIF no more needed for platform-transfer.

Maker Interchange Format - MIF

Main features of this file format are:

- preserve the document structure
- is independent of character coding (uses only 7-bit ASCII)
- is extensible (upward compatible)

Any FrameMaker version can import MIF. When opening an FM 6.x MIF in a 5.x Frame version, unknown items are skipped - MIF is even downwards compatible!

Saving a file as MIF cleans out some ambiguities which still accumulate with many changes in a document.

FrameMaker vs. word processing and DTP

Looking at the developments in document processing applications reveals various approaches (looking at the 1980's):

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DTP

- Quark Xpress emulated²⁰⁾ dedicated and complex typography equipment that required trained operators in print houses.
- Aldus (now Adobe) PageMaker emulated a layout (paste-up) artist's workspace accessibly.
- MacWrite emulated a typewriter (magnetic-card operator was still a profession).
- Microsoft Word emulated MacWrite with bells, whims, and bugs.
- FrameMaker emulated dedicated technical or scientific word-processing systems that served publishing professionals printing book-length documents.

Any comparison between these applications must keep the (originally intended) purpose and users in mind²¹⁾.

	Word for Windows (6 ... 8)	FrameMaker > 5.12
Platforms	Windows, Mac (not same functions)	Unix, Mac, Windows
User interface	Flexible and mostly intuitive, adaptable	Sometimes clumsy due to platform independence
Template	New document is copy; template can be updated from document styles and macros. Name *.dot. Document can not be updated from template	New document is copy; updates document at any time (various aspects of document). Any FM document is a template.
Extensibility	Powerful macro language (many syntax changes in early versions)	API client FrameScript and many other specific API clients
Book functions	Master document (very unreliable); master document = Σ all documents	Well thought out; little automatism missing
Outline view	Full featured	API client Enhance
Layout of pages	First, even, odd; header and footer area, columns for body	Any number of master pages, even mixed orientation; any # of frames
Styles	Paragraph, character	Paragraph, character, table, lines
Side headings	Anchored frames (very unreliable)	Standard definitions
Tables	Heading not repeated; sorting and calculations	Heading repeated on pages; sort (FM 5.5); calculations by API clients and scripts
Variables	Fields, global variables in master document	System and user variables, may be formatted
Graphics (direct)	Located in hidden layer, positioning unreliable	Features sufficient for technical documents
Anchored frames	A very unreliable feature	The name of the game
Import graphics and text	Default: copy ; paragraph and character formatting; update of references kills formatting	Default: reference ; paragraph formatting; update keeps formatting (ref.)
Language	Associated with paragraph or character format	Associated with paragraph or character format
Index	At any location (field)	Generated document, very flexible
Table Of Contents etc.	At any location (field), arbitrary lists possible with some effort	Generated document, very flexible, arbitrary lists with same functionality

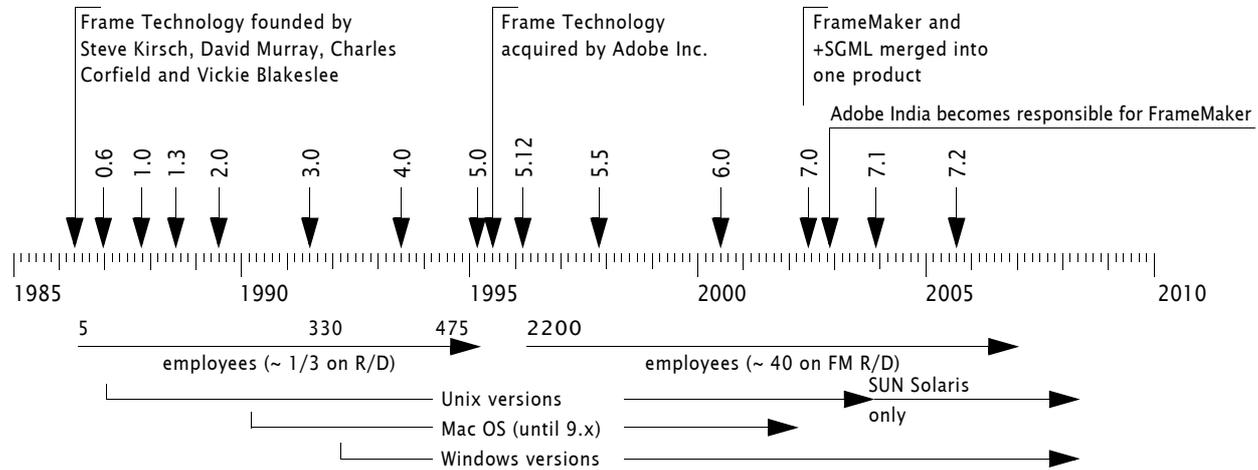
20 You may substitute the word emulated by «was inspired by».

21 Many of these remarks are still valid for Word 2000 and even 2003

Product history

You find a more or less complete history about the development of FrameMaker on the author's web site on www.daube.ch.

FrameMaker time line



File names

document.fm standard document name
 document.fm.lck File of length 0 to lock additional open.
 document.auto.fm autosave copy → **File > Preferences**
 document.backup.fm backup copy (before new edit starts)
 document.emg.fm emergency copy (some crashes)
 documentxxx.fm generated file (for suffixes xxx see below)
 document.book generated book started with «document»
 document.mif Maker interchange format.

Name suffixes

The following suffixes are default

Type of document	English	German	French
Table of contents	TOC	IVZ	TDM
Index	IX	SIX	IX
List of Figures, Tables	LOF, LOT	AVZ, TVZ	LDF, LDT
List of paragraphs, (alphabetical)	LOP (APL)	EAL (AEAL)	LDP (LAP)
List of Markers, (alphabetical)	LOM (AML)	ML (AML)	LDM (LAM)
List of References (text insets, images, fonts, unresolved x-refs etc.)	LOR	LR	REF
Standard Index, Index of Authors, Subjects, Markers, References	IX, AIX, SIX, IOM, IOR	SIX, AIX, TIX, MIX, RIX	IX, IXA, IXT, IDM, IREF
list of formats/ index of formats	LFT, IFT	FL, FIX	FOR, IFOR

Note: *The defaults for the suffices (TOC, IX etc.) depend on the UI language. These can be changed when generating the files. However, names of building blocks (for example, for system variables) also depend on the UI language and can **not** be changed.*

Temporary files

On start of FrameMaker some files are created in the temporary directory (in Windows defined by the environment variable TMP), for example FRM9A.tmp. These are removed at close of FM.

Crash files

If FrameMaker crashes with an error message, such as



a dump file is created in the \$FMHOME directory:

h:\adobe\framemaker\en\Framelog_99.11.05_09.44.39.txt

In other crash cases additionally the temp files are copied to the \$FMHOME directory, e.g. formulas.fm.2EB. You may need these to send them to Adobe for error tracking.

Document properties in MIF

View only documents

Any document can be locked for view only (no editing possible) with the command **ESC, F, I, k**. This lock is permanent and can not be unlocked, if the view only statement is present in the MIF file of this document (see *Lock document permanently* on page 12).

Note: *To be able to edit this document further, always keep the MIF version (text file) of the document to be able to remove the view only statement.*

Unlock document

To unlock a view-only document, enter the sequence **ESC, F, I, k**

Unlocking of a permanently locked document is not possible.

Save as View Only

With **File > Save As ...** and selecting **View Only x.x (*.fm)** the file can be saved as viewable only without applying the ESC sequence.

Lock document permanently

The View Only MIF statements described in this section must appear in a Document statement. These statements have no effect in an unlocked (editable) document.

To disallow unlocking, open the MIF file and change the statement found in the <Document section:

```
<DViewOnly No> to
<DViewOnly Yes> and add statement
<DViewOnlyNoOp 0xF00>
```

The file is locked when opened in FrameMaker. However, the document read from the disk by FrameMaker is still in text format and can therefore be unlocked by someone with write permissions to the MIF file by reversing the change.

Locked for everybody

- 1 Change the statement mentioned above to
<DViewOnly No ><DViewOnlyNoOp \0xF00 >
- 2 open the edited MIF file in FrameMaker, and
- 3 save the file in View Only format.
- 4 The following message appears:
*This file cannot be opened for editing after you save it in View-Only format. Save a backup file in Normal (editable) format?
Yes No Cancel*
- 5 If you select **Yes**, the file is immediately locked and cannot be unlocked. The file is saved in binary format to disk, and cannot be restored to an editable state.

Warning: *There is **no** procedure for unlocking such a document (even Adobe can not help in this case)! If the copy command is still available for a document the contents of the document can be pasted into another document.*

Document control statements

You can use MIF statements to change the appearance and behaviour of the document window in the following ways:

Statement overview

Statement	Value ^a	Explanation
DViewOnly	No	document can be edited
	Yes	document is view only
DViewOnlyXRef	GotoBehavior	X-refs behave like gotolink
	NotActive	Disable hypertext in X-refs
	OpenBehavior	X-ref links behave like openlink
DViewOnlySelect	Yes	
	UserOnly	Disable highlighting destination link
DViewOnlywinBorders	No	Disable selecting text
	Yes	Display scroll bars
DViewOnlywinMenubar	No	Suppress scroll bars
	Yes	Display menu bar in Unix
DViewOnlywinPopup	No	Suppress menu-bar display under Unix
	Yes	Allow popup hypertext cmd
DViewOnlywinPalette	No	Disable popup hypertext cmd
	Yes	file behaves as document
DViewOnlyNoOp	0x313	file behaves as palette
DViewOnlyNoOp	0x322	Disable cutting or clearing
DViewOnlyNoOp	0x322	Disable copying
DViewOnlyNoOp	0xF00	Disable unlocking the document

a. Default for normal document is highlighted

Sources

Dan Emory: *FrameMaker Palettes* [pdf on the net, 1999]
<http://www.faqs.org/faqs/frame/faq/part2/>
 MIF reference *Setting View Only document options*

Disable user actions

You can disable specific commands in a View Only document. For example, a hypertext author might disable copy and print commands for sensitive documents.

To disable a command, you must supply the hex code, called an fcode, that internally represents that command in a FrameMaker product. For example, you can disable printing, copying, and unlocking the document by supplying the following statements:

```
<DViewOnlyNoOp 0x313> # Disable printing
<DViewOnlyNoOp 0x322> # Disable copying
<DViewOnlyNoOp 0xF00> # Disable unlocking the document
```

Warning: *There is no procedure for unlocking such a document! If the copy command is still available for a document the contents of the document can be pasted into another document.*

Document window menu bar

Suppress (No), Enable (Yes)

<DViewOnlyWinMenubar No>

This statement has no effect in the Macintosh and Windows version of a FrameMaker product because those versions have an application menu bar rather than a document window menu bar.

Display of scroll bars and border buttons

Suppress (No), Enable (Yes)

<DViewOnlyWinBorders No>

Selection in the document window

Suppress (No), Enable (Yes)

<DViewOnlySelect No>

You can normally select text and objects in a locked document by Control-dragging in UNIX and Windows versions or by Command-dragging in Macintosh versions. Specifying <DViewOnlySelect No> prevents all selection in a locked document.

Context menus

Suppress (No), Enable (Yes)

<DViewOnlyWinPopup No>

This statement has no effect in Macintosh and Windows versions.

A *document region pop-up menu* is a menu activated by the right mouse button. For example, in UNIX versions of a FrameMaker product, the Maker menu and Viewer menus can be accessed by pressing the right mouse button. If the DViewOnlyWinPopup statement has a value of No, the background menu does not appear when the right mouse button is pressed.

Make window behave as palette

<DViewOnlyWinPalette Yes>

A *palette window* is a command window, such as the Equations palette, that exhibits special platform-dependent behaviour. In UNIX versions of FrameMaker products, a palette window can only be dismissed; it cannot be closed to an icon. In Macintosh versions, a palette always remains in front of the active window.

In Windows versions, a palette floats outside the main application window and **cannot be unlocked**. To edit the palette, you need to reset the DViewOnlyWinPalette statement to No in the MIF file before opening it in a FrameMaker product.

Using active cross-references

A locked document automatically has active cross-references. An active cross-reference behaves like a hypertext goto link command; when the user clicks on a cross-reference, a FrameMaker product displays the link's destination page. By default, the destination page is shown in the same document window as the link's source.

Behaviour goto link

You can use MIF statements to turn off active cross-references and to change the type of hypertext link that the cross-reference emulates. (By default, cross-references emulate the goto link behaviour.)

Behaviour openlink

To make cross-references emulate the openlink command, which displays the destination page in a new document window, use the following statement:

```
<DViewOnlyXRef OpenBehavior>
```

Use this setting to allow users to see both the source page and the destination page.

Disable active cross-references

To turn off active cross-references, use the following statement:

```
<DViewOnlyXRef NotActive>
```

Control with DViewOnlySelect

Use this setting to emulate the behaviour of FrameMaker versions < 6. You can use the DViewOnlySelect statement to control whether active cross-references highlight the marker associated with destination text.

Value	Effect when clicking on a cross-reference
Yes	Highlight the marker associated with the destination text.
UserOnly	Default: No highlighting of the marker. However, the user can select text in the locked document.
No	No highlighting of the marker. The user cannot select text in the locked document.

FrameMaker principles and philosophy

FrameMaker development started in the UNIX environment, from which the following principles stem:

- 1 Keep it small and simple, but allow for easy aggregation.
In UNIX general purpose utilities can be concatenated via the standard input/output mechanism.
- 2 Names are case sensitive. The roots of this is the C language. Hence not only items in the file system, but also most object-names handled by a program are case sensitive.

Impact on FrameMaker

- 1 Object names (names of paragraph formats etc.) are case sensitive. A style name **Body** is not the same as **body**.
- 2 Various tasks are not handled in the core of FrameMaker but in separate processes:
 - Tables
 - Sorting of tables
 - Formulas (Equations)
 - SGML structure

As a result of this the integration in some cases is not as smooth as wanted by the user (e.g. table footnotes are handled independently of text footnotes).

- 3 Input to FrameMaker can be generated from other processes, hence the formatting process does not need user interaction or user judgement.

This requires that text features (e.g. TABs) can be handled without looking onto the screen. TABs are hence absolute, not relative as in text processing software.

- 4 No macro language is built into FrameMaker. But since the beginnings of FM automating was performed by processing the MIF form of files. For example, Data Base Publishing solutions generate MIF which is then formatted in FM.

In addition, since the beginnings the Frame Developer Kit was available to build plug-ins on the various platforms. Since about 1997 the script language **FrameScript** is available, which allows scripts to do nearly the same as FDK programming allows.

- 5 Since FrameMaker was ported to various platforms (UNIX → Mac → Windows) there was need for a common ground in the user interface. Also hardware (cpu, RAM, screen) was expensive in the beginning. Hence FM does not waste resources and on the other side has not a tweaked GUI.
- 6 FM has no hidden intelligence as some largely used programs. It does not work automatically in the background. You need to start such processes as updating the page numbering or define TAB positions explicitly.
- 7 Also FM has bugs although it belongs to the class of very stable programs.