

Exercises

Besides stand-alone exercises you will successively create four templates:

tpl1.fm paragraph, character and table catalogue

tpl2.fm layout added

tpl3.fm cross references added

tpl4.fm added for second course:¶ and f formats

The result of the first course is a FrameMaker book with 3 chapters and a Table of Contents.

Set up the environment for the exercises on the workstation in the classroom (on the Windows desktop only!) or on your laptop (in any directory of your liking) as follows:

\exercises	
\input	From the installation files
\output	From the installation files
\MyStuff	Your personal directory to save your work

The following exercises cover both the courses *FrameMaker introduction* and *FrameMaker for scientific publications*.

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1 Manipulate text

- 1 Open `\Input\txt_manipulations.fm` and save it in your personal directly with name `01.fm`
- 2 Change the sequence of various numbered words (for example 150computers)
- 3 Reverse the sequence of the paragraphs
- 4 Search for the numbered words using Wildcard¹ ON, pattern “[0-9] [0-9] [0-9]”)
- 5 Experiment with the search pattern: add an *, then add a blank, then add a | (located at key 7)
- 6 Delete the numbered words (use search and replace)
- 7 Undo / redo the last operation (FM until 7.1 knows only 1 undo level)
- 8 Delete the second paragraph (select a paragraph by triple clicking it)
- 9 Move the bold text in *Fourth paragraph* to the end of the paragraph.
- 10 Delete the second lower case l in some words (difficult to select with mouse, use arrow keys)
- 11 Apply spell checking starting after the heading² below (read in the handout)
- 12 Hyphenate the word “super-cali-fragi-listic-expialidocious” at the specified positions. Why will it not be recognised, although put into the private dictionary?
- 13 The word *network* in the *Fourth paragraph* should not be hyphenated (insert `ESC , n , s` at the beginning of the word (German FM: `ESC , k , t`)).
- 14 Save your work

Note: Some hints for Mac users can be found in the handout on page A-19.

1.1 FM behaves differently than Word ...

First paragraph: Although the main realm of this network is the corporate internal network (LANs and WANs) the role of the Internet is growing. Hence CBBI is also responsible for all tasks related to the connection of the corporate network with the global Internet.

Second paragraph: Atraxis is connected to other Internet service providers and hence is part of the world wide Internet. Atraxis grants access to both academic and commercial institutions.

Third paragraph: The main feature of the Atraxis Internet service is the connection via the corporate internal network. Your PC is not connected directly to the Internet, but to the corporate network, which in turn is connected to the Internet.

Fourth paragraph: The Internet is more than just a network of 150 computers – **it is really a network of networks spanning the entire globe**. Beyond that, the Internet is also a network of services and resources, a library, a database, and a community of people from all walks of life ready to answer questions, listen, and share.


Fifth paragraph: Supercalifragilisticexpialidocious Supercalifragilisticexpialidocious Supercalifragilisticexpialidocious Supercalifragilisticexpialidocious Supercalifragilisticexpialidocious Supercalifragilisticexpialidocious Supercalifragilisticexpialidocious Supercalifragilisticexpialidocious Supercalifragilisticexpialidocious Supercalifragilisticexpialidocious.

1. Deutsch: Jokerzeichen. Das Muster gilt ohne die Anführungszeichen!

2 Quick and 'dirty' formatting

- 1 Open `\Input\fmt_quickie.fm` and save it in your personal directory with name `02.fm`
- 2 The main heading shall be 14pt Arial, bold, centered.
- 3 All other paragraphs are 11pt Arial, left adjusted.
- 4 Set **Space above** to 6pt (you need the Paragraph Designer for this)
- 5 Indent the second and third paragraph by 2cm (use the ruler)
- 6 Make the fourth paragraph italic
- 7 Save your work

2.1 Formatted text

- 
- Handle for left indent (first line)
 - Handle for hanging indent (second to last line)

Klassifizierung der Daten

Die Datenbasis umfaßt drei Klassen von Daten:

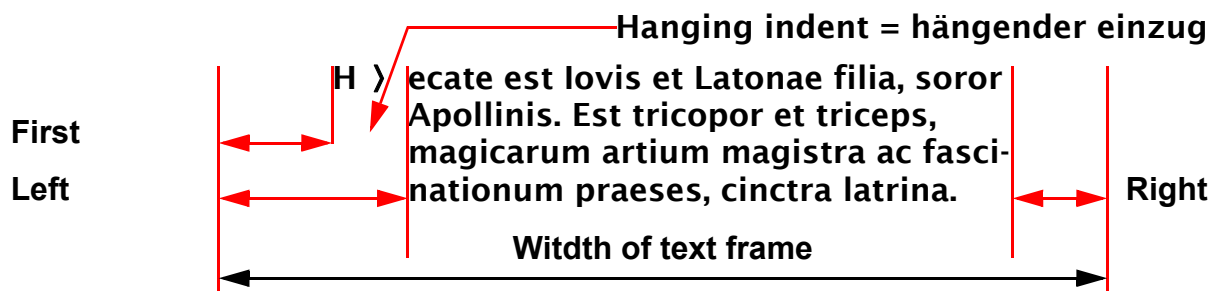
Permanente Daten

Permanente Daten beschreiben unveränderliche Merkmale des Systems oder der Vermittlungsstelle. Es handelt sich in der Regel um Initialisierungsdaten. Sie enthalten z.B. die maximale Länge von Datentabellen oder Zustand-Anreiz-Verknüpfungen.

Der Zugriff auf die Datenbasis ist nur an definierten Schnittstellen über spezielle Zugriffsprozeduren möglich. Den Anwenderprogrammen bleibt dabei unbekannt, wie die Daten innerhalb der Datenbasis gespeichert sind (Information hiding). Das hat u.a. den Vorteil, daß die Anwenderprogramme von Änderungen der Datenorganisation unberührt bleiben.

Die Datenbasis wird zentral im Koordinationsprozessor (CP) verwaltet. Daneben sind Kopien bestimmter Daten auch in den Anschlußgruppen (LTG) und in den digitalen Teilnehmerleitungseinheiten (DLU) vorhanden. Die Steuerung für Netz der zentralen Zeichengabekanäle (CCNC) enthält eine vom CP unabhängige Datenbasis. Ein Abbild der gesamten Datenbasis (CP und CCNC) befindet sich zur Sicherheit auf Magnetplatte

2.2 Terminology



3 Tabulate text

1 Open `\Input\tabulation.fm` and save it in your personal directly with name `03.fm`

2 Use the forming bar (**View > Formatting Bar**)

3 Format the sample file table accordingly:

Anzahl right adjusted (flush left)

Artikel left adjusted (flush right)

Stückpreis adjusted to the decimal symbol

Gesamtpreis adjusted to the decimal symbol

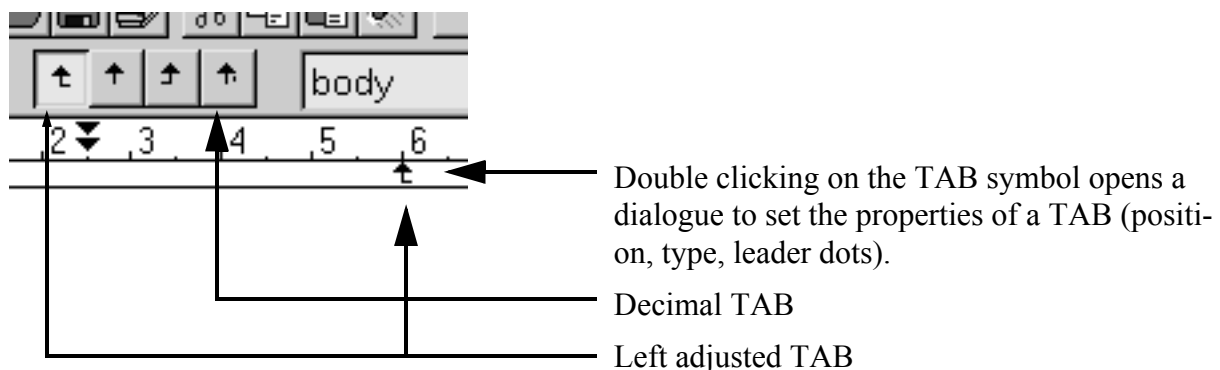
The words in the heading shall be adjusted visually pleasing:

4 Save your work

3.1 Result of formatting

Ruler	▲	▲	▲.	▲.	Tab types and pos.
>	Anzahl>	Artikel>	Stückpreis>	Gesamtpreis	
>	45>	Ordner>	2.0>	90.0	
>	5>	Hefte>	0.90>	4.50	
>	100>	Füller>	2.99>	299.	
>	3>	Regale>	399.0>	1197.0	

3.2 Hints



Tabulation is *absolute* in FM, hence behaves differently to the *relativetabulation* of text processing software, such as Word. There are no *default positions* for TABs in FM.

4 Set up paragraph catalogue

- 1 Open `\Input\fmt-setup.fm` and save it in your personal directly with name `tpl1.fm`
- 2 Define all style names (set up a paragraph style with the name from the paragraph text and apply this style to the paragraph)
- 3 Define all properties for the respective style names (use **Update All** in the **Paragraph Designer**)
You may wish to apply a certain property (e.g. Font Family) to a group of selected paragraphs (use **Apply**)
- 4 Save your work.

	Basic properties				Default Font			Pagination		Numberg.		
Paragraph format name	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	body	Arial	24	bold	Across all columns and side heads	yes	<n+>\t		
2heading	24pt	1.5	1.5	body		18		In column		<n+>\t		
3heading	11pt	1.5	1.5	body		14		Side head ...		<n+>\t		
body	5.5pt				Times New Roman	11	italic	In column	no			
citation	11pt	1.0	1.0						no			
n1_numbered_1	5.5pt	0.5	0.5	nx_num...					yes	<n=1>\t		
nx_numbered_x	5.5pt	0.5	0.5						no	<n+>\t		
lb_bulleted_list	5.5pt	0.5	0.5							\b\t		
tt_table_title	12pt	2.5	2.5		<n+>\t							
th_table_head												
tc_table_cell	4pt				Arial narrow	14	bold			no		
						12						
					10							
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Common properties for all paragraph styles:

Language: Schweizerdeutsch

Indent First: 0

Alignment: left

4.1 Numbering scheme for titles etc.

¶-format	Numbering property (watch the spaces inside <...>)
1heading	H:<n+>< =0>< =0>< =0>\t
2heading	H:<n>.<n+>< =0>< >\t
3heading	H:<n>.<n>.<n+>< >\t
tt-table-title	H:Table <n>.< >< ><n+>\t

4.2 Set up Character catalogue

Character 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	Courier New	as is	as is	as is	none
name	Arial	12pt	bold	regular	none
variable	as is	as is	regular	italic	as is
bullets	WingDings	as is	as is	as is	none

4.3 Bullet symbols

	Wingdings (TT)	Zapf Dingbats (T1)	Remarks
●	l (lower L)	l (lower L)	<p>1 In dialogue boxes, no „CTRL+q“ sequences can be entered. Here the hex notation \x is necessary (e.g. \xf1 for the cedilla, which provides - when formatted with the font Wingdings - the desired symbol ✓).</p> <p>2 For most character formats its essential to set only one property. Set the dialog to „As is“ with Commands > Set all entries to as is. and then set the desired property.</p>
■	n	n	
◆	u	u	
❖	v	v	
○	m	m	
□	q	q	
✓	, (cedilla), \xf1	4	
☞	F	+	

5 Format table with heading and title

- 1 Open `\Input\tables_1.fm` save it in your personal directly with name `05.fm`
- 2 At the end of this document insert a table of style A
- 3 Format the table according to the following sample using the styles provided in the paragraph catalog.
- 4 Staddle heading and body cells according to the sample
- 5 Rotate the first column counter clockwise (including the subheading)
- 6 You will need the **Paragraph Designer** to align text vertically in a cell (tab “Table Cell”)
- 7 Apply a Custom Ruling (**Table > Custom Ruling & Shading**) to the straddled cells of the table body according to the sample below (**Ruling Style Thick**)
- 8 Save your work

Table 5.1 Text for table title

head		head		
head	head	head	head	head
			Vertically centered txt in this cell please.	

5.1 Hints

- ❖ The context menu (right mouse button) provides many table functions
- ❖ To center a cell vertically: **Paragraph Designer > tab “Table Cell”**
- ❖ To start a row ,on next page‘: **Table > Rowformat**
- ❖ To specify a row hight: **Table > Rowformat**
- ❖ To add a row after the current one: Enter **CTRL+RETURN**
- ❖ To select an entire row: **CTRL+double click** near the right/left border of the cell
- ❖ To select an entire column (including the heading cells): **CTRL+double click** in the middle of the cell
- ❖ To select the entire table: **CTRL+triple click** anywhere in the table

6 Set up tables

- 1 Open your template **tp1.fm** and at the end add a paragraph «Tables» and format it with **2heading**
- 2 For each of the sample tables add a paragraph (**bodytext**) and insert a table of format A (**Table > Insert Table...**) with 1 Heading Row, the appropriate number of Columns, 4 Body Rows and no Footing Rows.
- 3 Adjust the appearance to the examples below using the **Table Designer**.
- 4 Format the paragraphs table heading row with **th-table-head** and the cell paragraphs with **tc-table-cell**.
- 5 Store the table in the table catalogue with the name provided in the table titles below (e.g. **framed_1**) (use command **New Format**)..
- 6 Save your template as **tp12.fm**

6.1 Table formats

Table 6.1 framed_1: 5 x 3.2 cm

Table 6.2 framed_2: 1, 6, 2, 5, 2 cm

Table 6.3 shaded: 5 x 3.2 cm, heading row shaded 10%,

first cell				
	second row			
		third row		
			fourth row	fifth column

Note: In the table above no ruling is used except the horizontal lines **top**, **bottom** and **separator**. The dotted (gray) lines only demonstrate the cell structure.

7 Import text and format table

- 1 Create an empty document from your template `tp12.fm` and save it in your directory with name `07.fm`
- 2 Import (**by copy**) `\texts\tab_import.txt` **by copy, as table**
- 3 Convert to a table with 1 (empty) heading row (select your favourite table format)
- 4 Add title 'A Windows 95 log'
- 5 Insert the title texts into the heading cells.
- 6 Apply paragraph formats for table (**th_...**, **tc_...**, **tt_...**)
- 7 Adjust the column widths to make the table use the full text area width (16 cm). Reasonable proportions are the widths 4, 3, 7 and 2 cm.
- 8 You may wish to apply a zebra pattern to the body rows (shading 5%)
- 9 Save your work

Table 7.4 A Windows log

Date / time	Operation	Comment	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
Wed 98-07-01 16:23:14	Starting		
Wed 98-07-01 16:29:20	Application failed	Windows 95	Shut down
Wed 98-07-01 16:34:15	Start (hang)	; Termination not possible => HW reset;	
Wed 98-07-01 18:15:06	Testing	try again	Shut down
Wed 98-07-01 18:23:52	Starting		
Wed 98-07-01 18:34:42	Testing	icon in user.exe coloured to determine source of startup-icon	Shut down
Wed 98-07-01 18:39:59	Starting		
Wed 98-07-01 18:41:30	Application failed	Well, the icon in the start-button comes from user.exe... but not all is ok yet	Shut down
Wed 98-07-01 18:46:47	Start (hang)	; Termination not possible => HW reset;	
Wed 98-07-01 19:00:06	Ordinary close	Shut down	

8 Import and format Excel table

- 1 Create an empty document from your template `tp12.fm`
- 2 Save the current file as `08.fm`
- 3 Import (**by copy**) `\texts\inventory(excel9).xls` **by copy**
- 4 Press **Convert** at the dialogue **Unknown File Type** (with **Microsoft Excel** selected)
- 5 Press **Import** at the dialogue **Import Text Flow by Copy** (leave settings as provided)
- 6 You get a table, but no chance to select the table format. You may also encounter a console message concerning nonavailable fonts.
- 7 Both the paragraph where your cursor for the import was and a new one with the table anchor gets the format `Body*`. Format them with your known body.
- 8 Place the cursor in the table and open the **Table Designer**. You will notice a new format name `Table`.
- 9 Select table format `framed_1` and press **Apply**.
- 10 The imported table did not use the heading row(s). You need to convert the first row into a heading row:
 - Select the cells of the first row and copy them into the buffer
 - Delete the first row (**Remove Cells from Table**)
 - Place cursor in the now first row and select **Table > Add Rows or Columns > Add Row(s) to Heading**.
 - Paste the copied cells into the heading row and apply the desired format **th-table-head**.
- 11 Apply format `tt-table-title` to the empty table title and set an appropriate title.
- 12 Adjust column widths to your liking and apply proper formatting to the body cells.
- 13 You notice incomplete text in some cells of the first column: the maximum hight of the row is not set. Select the first column and remove this restriction with **Table > Row Format...** and setting the minimum to 0 and the maximum to 5cm.
- 14 Save your work

8.1 The imported and formatted table

Table 8.1 Inventory at the start of self employment

	date	# ob- jects	unit price	price (new)
PC pentium: 16MB, 1GB, tape, CD-ROM, sound-card, SCSI, keyboard, mouse	Dec-94	1	8,000	8,000
21" screen colour	Aug-95	1	3,500	3,500
Modem	Dec-94	1	500	500
Printer HP: 10MB, duplex, large bin	Feb-95	1	6,000	6,000

Table 8.1 Inventory at the start of self employment

	date	# ob- jects	unit price	price (new)
FAX / phone / answering	Jun-95	1	500	1,000
Scanner	Feb-92	1	2,000	2,000
Macintosh IIsi, 17MB, 21" BW screen, 15" colour screen, Syquest cartridge	Feb-92	1	5,000	5,000
Bookbinding: hot-melt-glue, drill, spiral binding	Feb-92	3	800	2,400
Paper cutter (goillotine)	Jan-82	1	1,500	1,500
Desk (2 drawers)	Feb-85	1	800	800
Plates on desk and drawers	May-95	5	100	500
Shelves metal and plywood	May-95	12	40	480
Office materials, paper, toner, writing etc.	Jan-95	50	25	1,250
Office drawers for small materials and paper	Apr-93	5	120	600
Books, special literature	various	280	80	22,400
CD-ROM with data (not SW)	Feb-95	10	120	1,200
PC software (Frame, MS-Office, utilities, Visual Basic, PageMaker, Designer, Robohelp, Administration...	Mar-95	10	1,200	12,000
Mac software (Frame, Word, Excel, PageMaker, Illustrator, Photoshop, ...)	Feb-92	8	1,200	9,600
Storage media (diskettes, tapes, cartridges)	May-94	20	50	1,000
Fonts	Mar-93	10	400	4,000
Spare for near future	Dec-95			1,270
Sum				85,000

9 Importing graphics

- 1 Create an empty document from your template **tp1.fm** and save it in your directory as **09.fm**
 - 2 At the end of the line with a file-name import this graphic with **File > Import > File**.
 - 3 Select a reasonable size by specifying an appropriate resolution for bitmap formats (jpg, tif, gif).
 - 4 You get a surrounding anchored frame with default properties automatically.
 - 5 Resize the frame with the eye to 16cm width and 4cm height and specify it left adjusted (**Special > Anchored Frame**).
 - 6 Copy the eye image and then paste it into the same frame into the top right top corner.
 - 7 Enlarge the left image by setting the resolution to 72 dpi. The image will be cropped at the bottom by the anchored frame.
 - 8 Save your work
- Import Input\graphics\auge.jpg



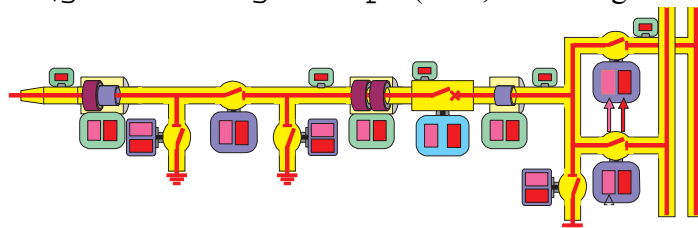
Import Input\graphics\hadron321.tif

and for the scalar component

$$\begin{aligned}
 Im\delta\Pi^{(0)} = & \frac{(m_1 - m_2)^2}{q^2} \frac{N_c}{4\pi} \frac{g^2}{8\pi^2} C_2(F) \left(\frac{\bar{q}^2}{q^2} \right)^2 \times \\
 & \times \left[u^2 \left(\mathcal{B}(u, u_1, u_2) - \ln \frac{1+u}{1-u} \right) - \frac{3}{8}u + \frac{45}{8}u^3 + \right. \\
 & + \left(\frac{3}{16} + \frac{34}{16}u^2 - \frac{13}{16}u^4 \right) \ln \frac{1+u}{1-u} + \frac{(m_1 - m_2)^2}{q^2} u^4 \ln \frac{1+u}{1-u} + \\
 & \left. u^3 \left(\frac{3}{4} \frac{m_1 + m_2}{m_1 - m_2} \ln \frac{m_1^2}{m_2^2} - 3 \right) - \frac{(m_1^2 - m_2^2)}{2q^2} u^3 \ln \frac{m_1^2}{m_2^2} \right]
 \end{aligned}$$

where the function $\mathcal{B}(u, u_1, u_2)$ is common to all currents and given by

Import Input\graphics\gis-switchgear.eps (60%, frameheight 30 mm, image at bottom)



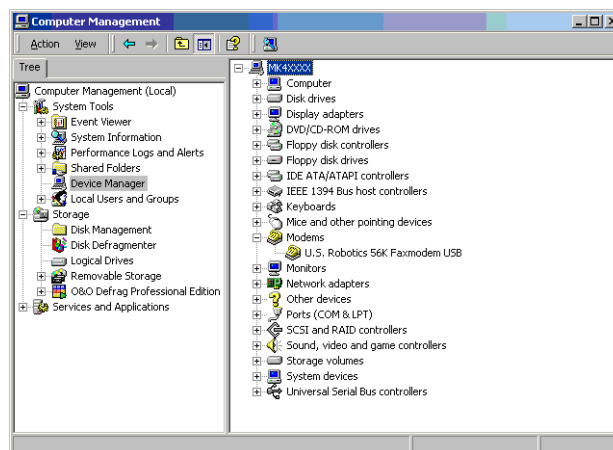
Importing graphics

Some PNG files add a huge number of colour definitions of the form RGB xxx,xxx,xxx to the colour catalogue.

This file (`\Output\Graphics\photo_1.png`) does not alter the colour catalogue:



This file (`\Output\word\Graphics\24-pict5.png`) adds lots of these colour definitions:



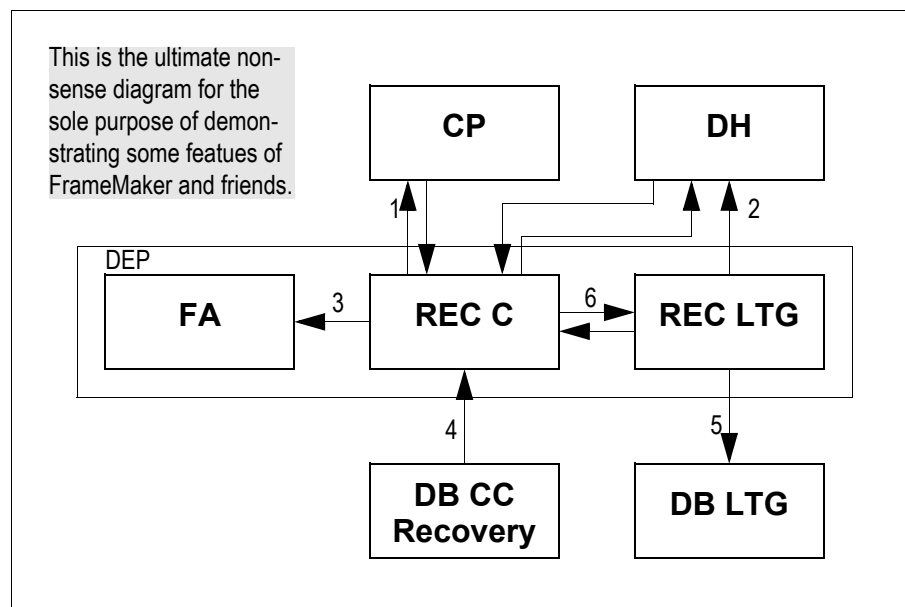
You can not get rid of these pseudo colour definitions. Not even the script **Remove unused Colours** by Klaus Müller really removes them from the colour catalogue.

The difference of these two files is only the pixel depth:

- ❖ With 8 bit pixel depth (256 colours) you get the problem
- ❖ With a full colour PNG (24 bit pixel depth, 16 million colours) FM works fine.

10 Create a graphic with Frame tools

- 1 Create an empty document from your template `tp1.fm` and save it in your personal directory as `10.fm`.
- 2 Create a paragraph style `fig-text` with the same properties as `tc_table_cell`, but centred and other things you might like.
- 3 Remember that a graphic should be set up within an anchored frame (size about 12 x 8cm) to float with the text.
- 4 Apply a border of minimum thickness to the frame.
- 5 For the text inset use a text frame and apply a shade of 10% black to it. Format this text with `fig-text`.
- 6 For the short reference texts you may use the graphic text tool (A) or also small text frames with no border
- 7 Group everything inside the frame to avoid accidentally moving items.
- 8 Save your work.



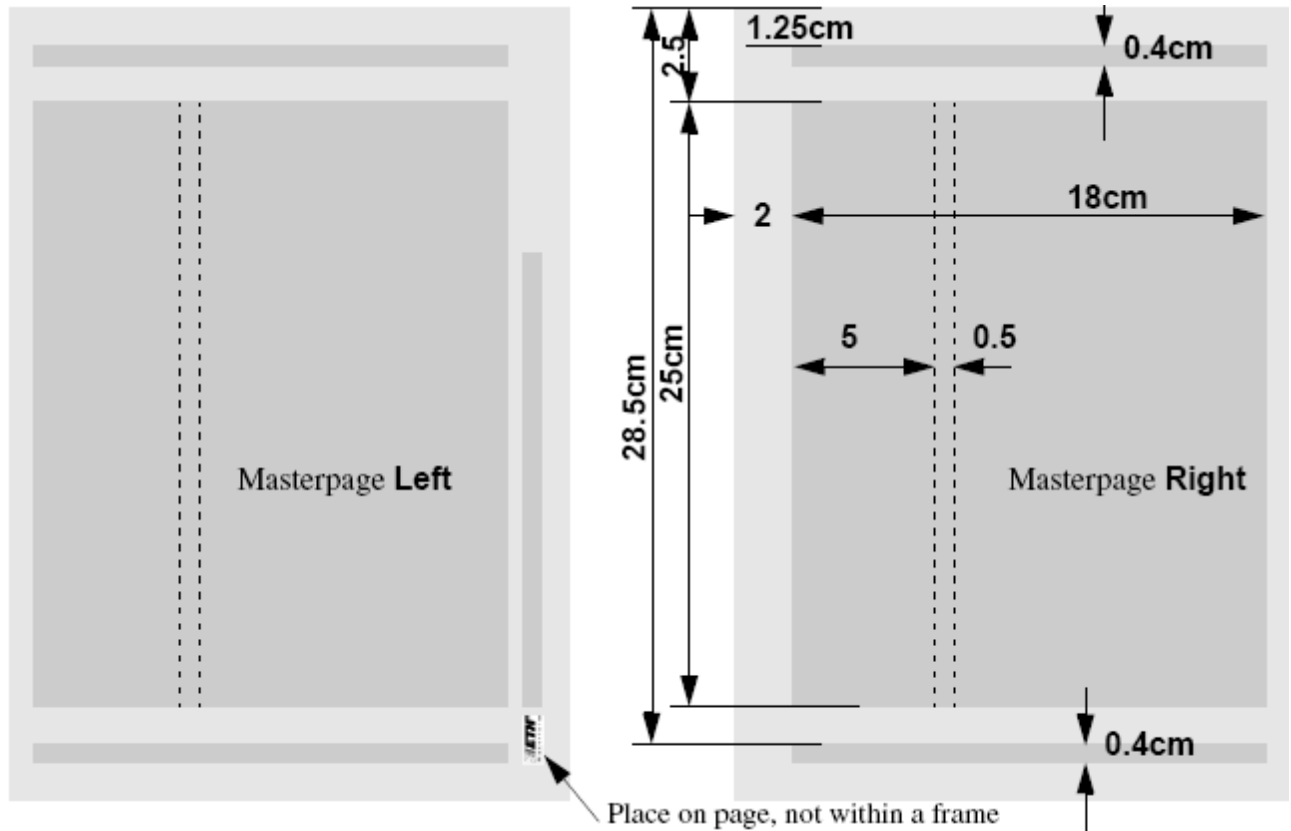
10.1 Hints

- ❖ Set the appropriate grid spacing for the snap function (**View > Options > Grid Spacing**). 1mm is a good choice.
- ❖ When using the **Text Line** tool you can only apply character formats, for example, name.
- ❖ You may wish to define a character style `fig-text` with font properties of the paragraph style `tc-table-cell`.
- ❖ Use **Alt+Arrow** to move an object pixel by pixel, **Shift+Alt+Arrow** for 6pixels.
- ❖ Also short texts can be placed in (small) Text Frames. This provides the greatest flexibility for formatting.

11 Layout for the sample book

- 1 Create an empty document from your template `tp1.fm` and save it as `tp12.fm`

11.1 Set up the layout



11.1.1 Layout for double sided document

- 2 Start with a one-sided document (right page) with the measures shown above.
- 3 For the main flow (A) define **Room for Sideheads** = 5 cm and **Gap** = 0.5 cm
- 4 Define the header and footer areas
- 5 Set paragraph styles in all frames on the master page to `body`.
- 6 Specify the document as double sided (**Format > Page Layout > Pagination**) → this creates a **Left** master page
- 7 Mirror the margins for the **Left** master page

11.1.2 Graphic on left master page

- 8 On the Left master page arrange a text area (4 mm high), oriented from bottom to top on the inner margin. Start the frame horizontally and rotate...
- 9 To get the logo image on the page, click outside any frame on the page, then **import by copy** `\graphics\ifp_logo_18x42.tif` with a resolution of 400 dpi; rotate the image and adjust its position.
- 10 Save your work as `tp12.fm`

11.2 Refine the layout

11.2.1 Modifications to paragraph styles

- 11 Add a ¶-format `z-header` (based on `body`). You may wish to define another `fontsize` for this format.
- 12 Add a ¶-format `z-footer` (based on `body`). Define a right TAB position 18 cm. You may wish to define another `fontsize` for this format.

11.2.2 Running footers

Footers on both master pages

- 13 Apply format `z-footer` to the paragraph in the footer frame
- 14 Place the page number (a system variable) on the outer margin. Set up the page number in the form

`<$chapnum> - <$currpagenum>`

Footer on the Left master page

- 15 Place the full file name (building block `<$fullfilename>`) on the inner margin.

Footer on the Right master page

- 16 Place the current date in the ISO format (`yyyy-mm-dd`) on the inner margin. Build this format based on the system variable `Modification Date (short)` with the building blocks

`<$year>-<$monthnum01>-<$daynum01>`

11.2.3 Running headers

Header on both master pages

- 17 Apply format `z-header` to the paragraph in the header frame.

Left master page

- 18 Insert system variable `Running H/F 1` and change the definition form `[Heading1]` to `[1heading]`.

Right master page

- 19 Insert system variable `Running H/F 2` referring to `2heading`.

11.2.4 Additional work

- 20 Define user variables `author` and `institution` with adequate contents and apply the character format `1highlight` to you second name. Add a non-highlighted term (for example, location).
- 21 Place the variables into the vertical area, separated by a comma or semicolon.
- 22 Save your work (`tp12.fm`)

11.3 Hints

- In variables, crossreferences etc. character formats are represented as `<formatname>`, for example `<1highlight>`.
- In variables, cross reference formats etc. the building block `<Default ¶ Font>` can be replaced by the shorter `</>`.

12 Create the book chapters

- 1 Copy the complete directory `\Input\book\` to your personal directory.

12.1 Create the first chapter

- 2 Create an empty document from your template `tp12.fm` and save it in your book-directory as `lressourcen.fm`
- 3 Import (**by copy**) `\book\lressourcen.txt` as text and apply the formats (styles) to the paragraphs according to the following scheme:

Line starts with	Format this paragraph as
\$, \$\$, \$\$\$	Heading level according to the number of \$ There is only one 1 heading per file / chapter
--	bulleted or numbered list
The following will be demonstrated one at a time	
---	Table
##	Footnote reference. The corresponding footnote text follows
# ... #	Footnote text
???	Format this with ¶ format citation
!! ... !!	Cross reference to a footnote

- 4 Convert the paragraphs between

```

--- table ---
--- end of table ---

```

to a table and format accordingly. Use 1 heading row for the conversion.
- 5 Delete the line introducers -- with the Find/Replace dialogue using *wild cards* and the pattern `^--`.

12.1.1 Final work

- 6 Place some cross references to 3 heading elsewhere in the chapter. Use a reference format
`<$paratext> auf Seite\ <$pagenum>`
- 7 Create the cross reference to an existing footnote. You may need a character format `super` defining superscripting.
- 8 Insert the graphics into the table (`\book\thumb1.tif` etc.)
- 9 Place the photo as background images (or if you want, with a run-around property) at the beginning of the text.
- 10 Import your changes (cross-reference) to the template (`tp12`) and save the template now as `tp13.fm`

13 Create a book from 3 chapters

- 1 Chapters 2 and 3 (`2thema.fm`, `3loesung.fm`) are ready for use to avoid too much squirrel work. Copy these files to your personal directory.
- 2 Define a book (**File > New > Book**) based on chapter 1 (`1ressourcen.fm`)
- 3 Add chapters 2 and 3 to the book.
- 4 Save the book as `umwelt.book` into your book directory.
- 5 For each chapter set up correct numbering (chapter number, page numbering, paragraph numbering...)
- 6 Update the book (to renumber the items) and verify the chapter numbering.
- 7 Redesign the format `citation` in the first chapter with some graphic elements above and below and distribute the new format to your chapters and template files.
The graphic elements are in named graphic frames on the reference page.
- 8 Distribute all formats via the book to all chapters.

13.1 Create Table of Contents (TOC)

- 9 Add a TOC at the beginning of the book (**Add > Table of Contents ...**). There is no contents yet in this file.
- 10 Specify the 3 heading levels to be used for building the TOC.
- 11 Update the book to generate the TOC file

13.1.1 Modify the presentation of the TOC

- 12 For all `xxxTOC` paragraphs styles define a right tab at 8.7 cm with a dot leader.
- 13 Place a `TAB` character into the definition lines on the reference page TOC in front of the `<$pagenum>`
- 14 Update the book to generate the TOC file

13.1.2 Further possible modifications

- 15 Insert the heading numbering in front of the heading (use building block `<$paranumonly>`)
- 16 You may want to insert additional `TAB` between numbering and heading text.
- 17 Vary *Space above* and *indentation* for the `xxxTOC` paragraph styles to group items.

13.2 Finally

Zip your work into file and send it by e-mail to yourself or place the exercises on a memory stick (input + output approx 14 MB).

→ You have successfully mastered the course *FrameMaker Introduction*.

Congratulations!

14 Expand paragraph catalogue

Open your template **tp13.fm** to expand both the paragraph catalogue and the character catalogue.

	Basic properties				Default Font			Pagination		Numberg.
Paragraph format name	space above	indent left [cm]	tab L [cm]	next paragraph	font	size [pt]	weight	pagination	keep with next	Numbering (for headings)
4heading	14pt	2	2	body	Arial	12	bold	RunIn	yes	see matrix below
for-formula	12pt			body		12		In Column	no	
fig-figure-title	12pt	2.5	2.5	body		14		In Column	no	

14.1 Numbering the additional elements

4heading Although in real life this level would not be numbered, we continue the structure of 1heading, 2heading, 3heading.

for-formula is numbered at the *end of the paragraph*, the number surrounded by parantheses and derived from the number of 1heading. No fix line spacing!

fig-figure-title is numbered similar to the table title, but of course the constant text is “Figure.”

14.2 The matrix of the expanded numbering scheme

New elements to be insrted into existing formats are set in bold.

¶-format	Numbering property							
1heading	H:	<n+>	< =0>	< =0>	< =0>	< =0>	< =0>	< =0>\t
2heading	H:	<n>	<n+>	< =0>	< =0>	< >	< >	< >\t
3heading	H:	<n>	<n>	<n+>	< =0>	< >	< >	< >\t
4heading	H:	<n>	<n>	<n+>	<n>	< >	< >	< >\t
tt-table-title	H:Table	<n>	< >	< >	< >	<n+>	< >	< >\t
for-formula	H: (<n>	< >	< >	< >	< >	<n+>	< >)
fig-figure-title	H:Fig.	<n>	< >	< >	< >	< >	< >	<n+>\t

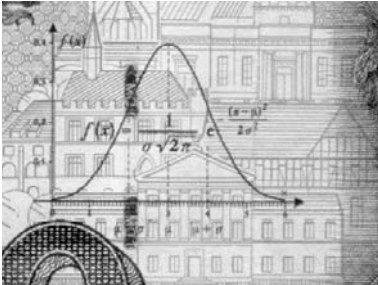
14.3 Expand the character catalogue

To handle formuals (equations) FrameMaker needs a character format `EquationVariable` (English FM) or `GlgVar` (German FM). This has the same properties as the already defined `variable` format, but it must be present in the character catalogue. Set it up!

Character format name	font	size	weight	angle	language
EquationVariables	as is	as is	asis	italic	as is

Save your work in your personal directory as **tp14.fm**

15 Create and manipulate formulas



$$f(x) = \frac{1}{\sigma \sqrt{2\pi}} e^{-\frac{(x-\mu)^2}{2\sigma^2}}$$

15.1 The Gaussian Bell curve

On the first issue of the 10 DM banknote C. F. Gauss and his famous formula are displayed.

- 1 Open `\Input\formulas.fm` and save it in your personal directory with name `15.fm`
- 2 Set up the formula in the paragraph below using the equation palette.
- 3 Set up the formula in the other paragraph and use as much keyboard input as possible. The following will help you.

Function / symbol	short-cut
New large equation	ESC, m, l (lower case L)
Shrink wrap equation	ESC, m, p
General function	<code>\function</code>
Greek characters	<code>\sigma</code> <code>\pi</code> <code>\mu</code>
Square root	<code>\sqrt</code>
Power, exponent	<code>^</code> (accent circumflex) ^a

a. On a Swiss keyboard this is a 'dead key', you need to press `^` followed by SPACE to get the character.

15.1.1 Develop the formula using the keyboard:

```
ESC m l
f ( x SPACE SPACE SPACE =
1 / \sigma ENTER
* \sqrt ENTER
2 * \pi ENTER
SPACE SPACE SPACE SPACE * e
SPACE SPACE ^ - ( x - \mu ENTER
SPACE SPACE SPACE SPACE /
2 * \sigma ENTER ^ 2
```

The Gaussian Bell curve:

$$f(x) = \left(\frac{1}{\sigma \sqrt{2\pi}} e \right)^{-\frac{(x-\mu)^2}{2\sigma^2}}$$

15.1.2 Hint

To remove the large parentheses:

Select the construct including the parentheses, then type ESC m r p

What's wrong if the formulas overlaps the text paragraphs?

15.2 Formula from a CERN paper

In 1984 CERN issued a paper *Hadron Properties from QCD Sum Rules* which was printed using the IBM Document Composition Facility² with the Script Formula Formatter. It turned out that this paper with a huge number of formulas was a crash test for the IBM program...

The left part of these formulas are all equally wide - we can align them with the alignment function for graphics.

$$C_G^V = \frac{1}{12Q^4}(-1 + 3J_2 - 2J_3)$$

$$C_G^P = \frac{1}{24Q^2}(5 + 6J_1 - 15J_2 + J_3)$$

$$C_G^S = \frac{1}{8Q^2}(-1 - 2J_1 + 3J_2)$$

$$C_G^{A'} = \frac{1}{3}C_G^S$$

$$C_G^A = \frac{1}{4Q^4}(1 - J_2)$$

15.2.1 Hints

- ❖ Set up an anchored frame (10 x 5 cm, left)
- ❖ Enter the formulas either using the keyboard or the equations palette.
- ❖ Some formulas can be developed from others. Use copy and paste and then modify the pasted formula.
- ❖ Adjust the formulas to a vertical line and distribute them vertically with even space.
- ❖ For the term left to the equal sign you need both a superscript (ESC, m, ^) and a subscript (shortcut not working on CH keyboards) to the base character.
- ❖ Copying a formula (or part of) requires selection of its content, not selection as a graphic object. For pasting a formula the target must be a selected question mark.

15.2.2 Formulas in same frame

$$C_G^V = \frac{1}{12Q^4}(-1 + 3J_2 - 1J_3)$$

$$C_G^P = \frac{1}{24Q^2}(5 + 6J_1 - 15J_2 + J_3)$$

$$C_G^S = \frac{1}{8Q^2}(-1 + 2J_1 + 3J_2)$$

$$C_G^{A'} = \frac{1}{3}C_G^S$$

$$C_G^A = \frac{1}{4Q^4}(1 - J_2)$$

2. DCF uses a technique called Generalised Markup Language, developed by Charles Goldfarb, the father of SGML. SGML in turn inspired Tim Bernes Lee to develop HTML on these grounds.

15.3 Copying and pasting

This picture³ shows two formulas which are nearly identical. The only noticeable differences are the primes.

- ❖ Define an anchored frame of 11.8 x 7 cm
- ❖ Develop the first set of formulas (the left part). At the end of a formula line enter ESC m b s for a line break (the cursor jumps to the next line only after entering something).
- ❖ Select the four formulas as graphic object and create a copy to the right.
- ❖ Change the contents of the right hand formulas:
- ❖ Remove a prime: select it, press Backspace twice.
- ❖ Add a prime: select the base character and enter the grave accent.

LORENTZ geht in seiner Arbeit von der Forderung aus, daß die Grundgleichungen der Elektrodynamik in allen Koordinatensystemen, die sich gegeneinander geradlinig und gleichförmig bewegen, die gleiche Form haben müssen. Auf diese Weise gelangt er zu dem heute als allgemeingültig angesehenen System von Gleichungen, mit dessen Hilfe die charakteristischen Größen von Koordinatensystemen, die sich gegeneinander geradlinig und gleichförmig bewegen, transformiert werden können. Wir geben hier im einzelnen nur die verhältnismäßig einfachen Transformationsgleichungen für die Raum- und Zeitkoordinaten zweier sich gegeneinander mit einer konstanten Geschwindigkeit v bewegender Bezugssysteme an:

$$\begin{aligned}
 x' &= \frac{1}{\sqrt{1-\beta^2}}(x-vt), & x &= \frac{1}{\sqrt{1-\beta^2}}(x'+vt'), \\
 y' &= y, & y &= y', \\
 z' &= z, & z &= z', \\
 t' &= \frac{1}{\sqrt{1-\beta^2}}\left(t-x\frac{v}{c^2}\right), & t &= \frac{1}{\sqrt{1-\beta^2}}\left(t'+\frac{v}{c^2}x'\right).
 \end{aligned} \tag{1}$$

15.3.1 Formulas in same frame

$$\begin{aligned}
 x &= \frac{1}{\sqrt{1-\beta^2}}(x-vt) & x &= \frac{1}{\sqrt{1-\beta^2}}(x'-vt') \\
 y' &= y & y &= y' \\
 z' &= z & z &= z' \\
 t' &= \frac{1}{\sqrt{1-\beta^2}}\left(t-x\frac{v}{c^2}\right) & t' &= \frac{1}{\sqrt{1-\beta^2}}\left(t'-x'\frac{v}{c^2}\right)
 \end{aligned}$$

3. Source: Christian Gerthsen, Helmut Vogel: *Physik, Ein Lehrbuch zum Gebrauch neben Vorlesungen*. 17. Auflage, Springer 1993.

15.4 Break up long formula

The following formula 3.21 from the Hadron paper is awfully long and must be broken down into lines.

and for the scalar component

$$\begin{aligned}
 Im\delta\Pi^{(0)} = & \frac{(m_1 - m_2)^2}{q^2} \frac{N_c}{4\pi} \frac{g^2}{8\pi^2} C_2(F) \left(\frac{\bar{q}^2}{q^2} \right)^2 \times \\
 & \times \left[u^2 \left(\mathcal{B}(u, u_1, u_2) - \ln \frac{1+u}{1-u} \right) - \frac{3}{8}u + \frac{45}{8}u^3 + \right. \\
 & + \left(\frac{3}{16} + \frac{34}{16}u^2 - \frac{13}{16}u^4 \right) \ln \frac{1+u}{1-u} + \frac{(m_1 - m_2)^2}{q^2} u^4 \ln \frac{1+u}{1-u} + \\
 & \left. u^3 \left(\frac{3}{4} \frac{m_1 + m_2}{m_1 - m_2} \ln \frac{m_1^2}{m_2^2} - 3 \right) - \frac{(m_1^2 - m_2^2)}{2q^2} u^3 \ln \frac{m_1^2}{m_2^2} \right]
 \end{aligned}$$

where the function $\mathcal{B}(u, u_1, u_2)$ is common to all currents and given by

- ❖ Insert manual line breaks at the places demonstrated by the picture above.
- ❖ Align lines 2 and 3 of the formula with the operators right to the equal sign. (Set Manual: ESC, m, a, s)
- ❖ You will notice that lines 2 and 3 are automatically aligned after inserting the manual alignment point behind the equal sign.

15.4.1 Formula before breaking up

$$Im\delta\Pi = \frac{(m_1 - m_2)^2}{q^2} \frac{N_c}{4\pi} \frac{g^2}{8\pi^2} C_2(F) \left(\frac{\bar{q}^2}{q^2} \right)^2 \times \left[u^2 \left(B(u, u, u) - \ln \frac{1+u}{1-u} \right) - \frac{3}{8}u + \frac{45}{8}u^3 + \right.$$

15.4.2 Formula after breaking up

$$\begin{aligned}
 Im\delta\Pi = & \frac{(m_1 - m_2)^2}{q^2} \frac{N_c}{4\pi} \frac{g^2}{8\pi^2} C_2(F) \left(\frac{\bar{q}^2}{q^2} \right)^2 \\
 & \times \left[u^2 \left(B(u, u, u) - \ln \frac{1+u}{1-u} \right) - \frac{3}{8}u + \frac{45}{8}u^3 \right. \\
 & \left. + \left(\frac{3}{16} + \frac{34}{16}u^2 - \frac{13}{16}u^4 \right) \ln \frac{1+u}{1-u} + \dots \right]
 \end{aligned}$$

16 Bibliography with EndNote

- 1 Install the D+DD utility FM+EN and start it.⁴
- 2 For EndNote use the reference data base `Input\ref_lib\nla.enl`
- 3 Use bibliographic output style `IEEE`
- 4 Check set up of **EndNote** for use with FrameMaker (Citation Markers with curly braces).
- 5 Open `Input\endnote.fm` and save it in your directory as `16.fm`
- 6 Insert citations to the following references at the end of the sample paragraphs using copy in **EndNote**, Paste in FM by **CTRL+Y** (not **V**)⁵:
 - De viris illustribus
 - A New Data Type for National Language?
 - Veni vidi vici
- 7 At the very end of the sample book insert a heading to add the bibliography after it
- 8 Run the utility FM+EN according to the documentation
- 9 Copy the generated bibliography from Word and save your work.

16.1 The paragraphs

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna [1].

Aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exercitation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo [2].

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 duis dolore te feugait nulla facilisi [3].

16.2 Generated/copied bibliography

- [1] P. D. H. Müller, *De viris illustribus*, 9 ed. Hannover: Carl Meyer (Gustav Prior), 1925.
- [2] A. LaBonté, "A New Data Type for National Language?," presented at SEAS Anniversary Meeting, Amsterdam, The Netherlands, 1989.
- [3] K. Bartels, *Veni vidi vici*, 5 ed. Zürich: Artemis Verlag, 1981.

4. A more simple method can only be used until EndNote 8. Starting with version 9 EndNote is UNICODE compliant and hence can not work directly with FrameMaker which is not UNICODE capable.

5. The inserted temporary citations must look like `[[Daube, 1989 #6]]`, not like `{Daube, 1989 #6}`.

17 Convert FM to HTML

- 1 Open **Input\html-text.fm** and save it in your directory as **17.fm**.
- 2 Save As HTML with **File > Save As... > HTML (*.htm)**
- 3 Open the generated files (**17.htm**, **17.css**) in your browser.
- 4 Modify the generation by entering proper values into the reference page **HTML** in the **Headings Table**. Modify existing entries with **File > Utilities > HTML Setup**.
- 5 Save your work
- 6 Now generate the HTML again.
- 7 Open the generated files (**17.htm**, **17.css**) in your browser

17.1 The test input

This is just something with a copyright symbol © and a registered symbol ®.

And let's place a footnote here⁶ and this is superscripted.

17.1.1 Details to step 4 above

You need to look after every FrameMaker paragraph or character tag, because the default mappings may be very strange.

Table 17.1 Set up the mapping table

FrameMaker tag	HTML element
citation	Block Quote
numbered list items	List Item
2highlight	Strong Emphasis
bullets	THROW AWAY
computer	Code
name	Strong Emphasis
variable	variable

Here is a citation of some length. Here is a citation of some length. Here is a citation of some length. Here is a citation of some length.

How displays a **name**, *highlight1* and the computer **highlight2**?

17.1.2 Options for images

In the dialogue HTML Options you can set the image file format for to be converted into (GIF, JPEG, PNG). Files already in any of these formats

6. This is just a footnote to show how it works

will not be converted. This conversion applies also to FrameMaker internal graphics.

Click the checkbox **Copy Referenced Files**, if you want to include referenced images in the directory where the generated HTML will be saved.

17.1.3 Some other items

Referenced images are copied only on demand (setting options). Copied images will be converted to PNG (or else according to options set).



17.1.4 Numbered list

The numbers will not be displayed in Opera 8 and Firefox 1, but in IE 6.

- 1 first item of numbered list
- 2 second item in numbered list
- 3 third item - the last one.

17.1.5 Bulleted list

Bullets will not be displayed in Opera 8 and Firefox 1, but in IE 6.

- ❖ first bullet with some long text to show the wrapping in the HTML environment. some long text to show the wrapping in the HTML environment. some long text to show the wrapping in the HTML environment.
- ❖ second bullet. A short one.

17.2 The generated HTML

The generated HTML file may look strange to HTML coders, but it serves the purpose in many cases.

- ❖ Uses a style sheet which tries to mimic the appearance in FM
- ❖ Is cluttered with many doubled items (e.g. `` rather than `` only)
- ❖ Every paragraph is identified (`Set up th...`)
- ❖ The default generation with the export filter can be used as a quick & dirty solution, but the export with tools such as WebWorks Publisher is much better.

18 Reference to footnote

Open `Input\footnote-refs.fm` and save it as `18.fm` in your own directory.

- 1 Add to the text below at ‘xxx’ at the end of the third paragraph a reference to footnote 2:
- 2 The reference should look similar to the ordinary footnote references.
- 3 Add another reference to the second footnote at ‘yyy’. Define a format containing the page-number

18.1 Hints

- ❖ Name the new reference formats `footnote-ref` and `footnote-ref-page`.
- ❖ You need to set up a character format `super` or `superscript`
- ❖ You may abbreviate the building block `<Default ¶ Font>` to `</>`

18.2 Sample text

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.⁷

Lorem ipsum 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.⁸

Et tam neque pecun modut est neque nonor et imper ned libidig met, consectetur adipiscing elit, this stuff? Bis nostrud exercitation ullam mmodo consequat. Duis aute in voluptate velit esse cillum dolore eu fugiat nulla pariatur⁷.

At vver eos et accusam dignissim qui blandit est praesent luptatum delenit aigue excepteur sint occae. Et adipiscing elit, set eiusmod tempor incidunt et labore et dolore magna aliquam. Ut enim ad minim veniam, quis nostrud exerc^{8 on page 28}.

7. This is the first footnote on this page and many more may follow

8. This is the second footnote to which you should create additional references in the text.

19 Index for sample book

- 1 Have your sample book (**umwelt.book**) open and all chapters where you will insert the index markers.

19.1 Index markers

- 2 In the chapters of your sample book, set up index markers to get entries for following words:
umwelt, biologie, konferenz, symposium
- 3 Place the index markers both in chapter 1 and 2 at any place you like, but distribute the markers across pages.
- 4 Duplicate some entries on successive pages.
- 5 Add markers defining synonyms:
umweltschutz => ökologie
symposium => konferenz
- 6 Add markers defining second level entries:
fauna / fische, fauna / landtiere, lebensraum /
berge, lebensraum / flachland, lebensraum /
gewässer

19.1.1 Hints

- Look up the marker syntax in the handout

19.1.2 Index generation

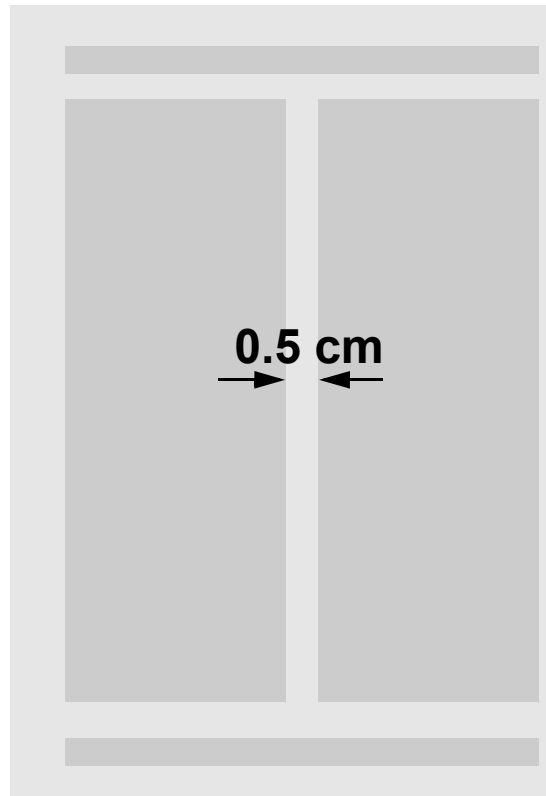
- 7 Add the index to the book (**Add > Standard Index...; Add**).
This places a file name in the FM book (but this does not yet exist).
- 8 **Update** the book (this will generate the index)
- 9 From the book enter the index file (**umwelt.IX.fm**) and save it. You may not be satisfied with the default presentation.

19.2 Modify index presentation

- 10 In the index file modify the masterpages `Right` and `Left` to be double column, no margin area, gap between columns 5 mm.
- 11 Modify the index generation on the reference page `IX` to get a presentation similar to this:

index entry level 1	17
index entry level 2	23
- 12 Format the separating characters (`GroupTitlesIX`) to be sans serif, 14 pt and set space before to 12pt.
- 13 Switch back to the Body pages
- 14 Got to the book file and update the book.
- 15 Look at the index file and save it.

19.3 Masterpage Right



19.4 Reference Page IX

SeparatorsIX	1, 2-3
GroupTitleIX	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><\$alphabetics>
IgnoreCharsIX	----
Level2IX	Level2IX
Level1IX	Level1IX
ActiveIX	openObjectId <\$relfilename>:<\$ObjectType> <\$ObjectId>
IndexIX	<\$pagenum>

19.4.1 Hints

- Watch the paragraph tags of the various lines on reference page IX.
- The line containing building block <\$pagenum> must be preceded by a TAB character to get the leading dots in front of the page numbers.
- Lines Level1IX and Level2IX need right adjusted tab positions.
- Line Level2IX needs a paragraph format with indentation.
- If you want an m-dash for grouped page-numbers, modify line SeparatorsIX accordingly.

20 Automatic assignment of masterpages

In chapter 2 of the sample book (`umwelt.book`) we want to place large photographs. These should be larger than the whole text frame on the standard pages.

In a special masterpage we define a different layout to take the large images. The assignment of this master page shall be automatic by a trigger paragraph.

20.0.1 Set up special master page

- 1 Create a new master page named `big-picture` on the base of the `Left` master page, but with different properties:
 - No heading and footing
 - The main text frame is 20cm wide, 28 cm high and its distance from left is 0.5 cm, from top 1 cm
- 2 Create a new paragraph format named `image-anchor` based on `bodytext`, with the following changes:
 - Start on new page
 - No space above and below
 - Font size 3pt
- 3 Insert such a paragraph at an appropriate place in the chapter and anchor a “Frame below current line” which is 27.5 cm high and 19.9 cm wide.

***Note:** Don't panic, the paragraph with the anchor will be alone on a page and the frame will be on the next page.*

- 4 Import (by reference) an image into the anchored frame and resize the graphic to fill the frame.

***Note:** You can not see the right border of the anchored frame, because it will be outside the paper width. This is due to the currently improper master page. Hence you need to resize the image numerically to the width of the frame.*

- 5 Copy the paragraph with the anchor (which now includes the frame and the image) to two other locations in the document.

20.0.2 Set up automatic assignment

- 6 Now set up the automatic assignment of the new masterpage with **Format > Page Layout > Apply Masterpages ...** and press **OK** in the first message.
- 7 Provide **OK** also to the next message which announces the creation of a new mapping table. You will not see any changes in the document yet.
- 8 Open the Reference pages and go to `MasterPageMaps`. The mapping table is still empty. Fill in the following data:

UnstructMasterPageMaps

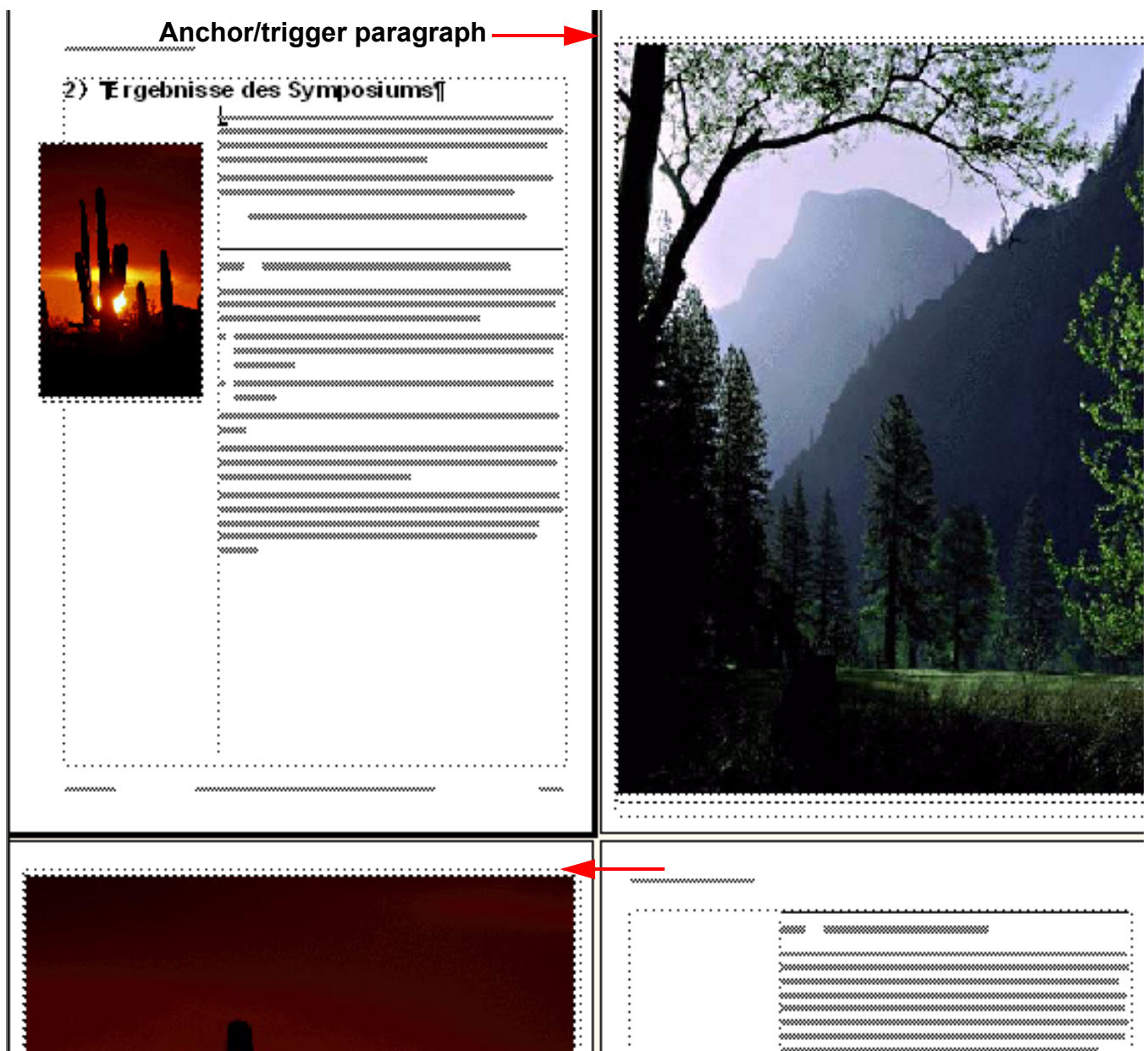
Book Update (Yes or No): Yes

Paragraph Tag Name	Right-Handed Master Page (or Single-Sided Master Page)	Left-Handed Master Page	Range Indicator (Single, Span pages, Until changed)	Comments
<code>image-anchor</code>	<code>big-picture</code>	<code>big-picture</code>	<code>Single</code>	

- 9 View the Body pages and **Format > Page Layout > Apply Masterpages ...** Press OK at the message "*All Masterpages will be re-applied ...*"
- 10 Depending on the speed of your machine You will see some flicker on the screen and some activity in the status line: finito.

20.1 Result

The result should look like `Output\2thema-grosses-bild.fm` :



21 Import from Word

Look at the Word example `\Input\text\Word-2003.doc`. You will diagnose the following:

- ❖ Only styles `Heading 1/Überschrift 1` and `Normal/Standard` is used for headings, running text and lists. Hence there is ample local formatting!
- ❖ Pictures are inserted directly into the document with two methods: imbedded picture (inline shape) and shape.
- ❖ The table of contents is a field. Note that the lines are hyperlinks.
- ❖ Switching on View Formatting Marks (**Tools > Options > View**) reveals lots of empty paragraphs ...

Although all advice for Word import state to clean out the Word file first, we will do the work in FM. For a detailed procedure see the handout appendix C.

21.1 Create a FrameMaker version

- 1 Set up an empty document from your template `tp13.fm` and save it as `21.fm`
- 2 In Word select everything (**CTRL+A**) and copy to the buffer.
- 3 In FrameMaker do not just paste, but use Paste Special and select Text. This inserts just the text with the format of the current paragraph.
- 4 Delete all the empty paragraphs and save the document.
- 5 Walk through the text and join obviously split lines (line breaks sometimes are converted to paragraph breaks). Check for other inconsistencies (e.g. empty paragraphs starting with blank).
- 6 Apply the appropriate paragraph formats. At the lists you will have superfluous numbering or dashes as well as superfluous TABs.
- 7 Set a TAB stop at a reasonable position for the 'TOC' lines. You may wish to create a new ¶ format `contentsline` for this.
- 8 Replace the page numbers in the 'table of contents' with cross references to the headings and an appropriate cross reference format. You may wish to create a cross reference format `Page #` for this.
- 9 Remove the superfluous numbering and dashes in the lists.
- 10 In Word select a picture, copy it and paste it into a graphics application (for example, PaintShop Pro or PhotoShop), save it as a graphic file (photo: jpg; line art: tif; screen shot: png) to your document directory. Do this with all the pictures.⁹
- 11 Insert the pictures into the FM document by reference (not copy) at the appropriate locations and apply the call-out in picture 2.

9. The first 2 images are inline shapes. You will get only 256 colours from them! You will find that images number 1 and 3 are useless - you will not transfer them.


- 12 Check spelling, check appearance and finish your work. Of course our available paragraph formats do not fit well to the task, so you may wish to modify appearance or define additional formats.
- 13 Save your work.

21.2 Hints

- 1 A quote from the FrameMaker mailing list:
After the import, before you try retagging, you may want to save to MIF and open that file in FM. It's pretty well documented that Word's hidden control characters often survive an import and can cause all kinds of "inreresing" and unexpected behavior. So I think that would be my starting point.
- 2 To remove all empty paragraphs use the wildcard pattern `\p\p` and replace it (repeatedly) with `\p`.
- 3 Find the Word numbering with the wildcard pattern `^[0-9] .\t`
- 4 Find the dashes in the list with wildcard pattern `^-_` (`_` is a blank)..

21.3 Result

Compare your result with `Output\word.fm` and `word-fm.pdf` :



Service Information
MK4, MK6

Number: MK46 / 001
 Date: August 14, 2006

ACTION RECOMMENDED!

SMI – MK4 and MK6

Re.: Installation of Remote Access HW upgrade Kit

This document describes the mechanical and electrical installation for the modem into an MK4 or MK6 minilab

Related documentation
Description of Remote Access MKxx / 002

Necessary tools
Stadard service tools

Preconditions

- 1 Customer must provide a direct analog phone connection (not ISDN, not via local phone exchange). The phone number must be delivered to the service representative.
- 2 Customer must have signed the legal contract about Remote Access to the machine.

Scope of delivery
The upgrade kit P/N 380411 consists of the following parts:

#	Items	Description	Part number
1	USB FAXmodem 56K (V.92) U.S. Robotics		12.00.16
1	Velcro ribbon L400 B30 black with buckle (not used for MK 6)		11.79.87
1	Marking set for modem and LAN cable		37.89.47
1	Modem cable JR12 6P/6C 1:1 3.0m		11.83.10
1	Connector RJ12 6P/6C, straight		11.83.11
1	Bag PE 200X340		97.90.48

Order
The upgrade kit P/N 380411 can be ordered according to the service contract which will contain the price of the upgrading kit. Please place your order at the attention of
 Swiss Imaging Technologies AG
 Barbara Bollmann
 e-mail : barbara.bollmann@smi-grp.com
 Fax : +41 44 842 22 82

Sincerely yours
 Product Support
 Swiss Imaging Technologies

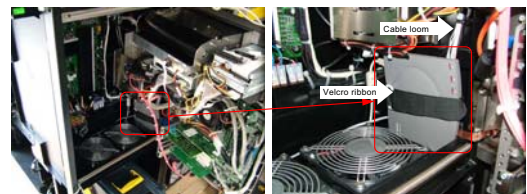
Enclosures
 Appendix A : Installation on MK4 (2 pages)
 Appendix B : Installation on MK6 (2 pages)

MK46-001en-HWRremoteAccessUpkit.fm

Appendix B (2 pages)

Installation on MK6

- 1 Run down the machine by pressing the green button on the front panel.
- 2 Wait until the computer has been powered off.
- 3 Switch off the machine at the main switch.
- 4 Open the side panel to get access to the caminet below the computer.
- 5 Place the modem according to the following pictures.



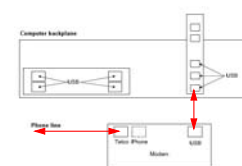
- 6 Fasten the modem with the Velcro ribbon (P/N 11.79.87) to the cable loom.
- 7 There are two types of modems. The older version has 3 sockets and the new version has : with 2 sockets on the rear.



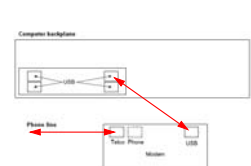
At the modem with 3 sockets the one labelled **Phone** is not used.

- 8 Depending on the PC configuration different connections must be established:

PC with Card-Reader upkit



PC without Card-Reader upkit



- 9 Test at the customer site:
Dial the phone number of the machine: the modem must emit a whistling sound.
If the test fails, see Error handling below.

22 Typographic issues

What's wrong (or at least bad practice) ?

Text sample	Issue	
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 magistra ac fascinationum praeses, cinctra latrantium canum turma; noctu stans in triviis vel prope sepulcra et ubi loca sunt caedibus contaminata.	1	
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 magistra ac fascinationum praeses, cinctra latrantium canum turma; noctu stans in triviis vel prope sepulcra et ubi loca sunt caedibus contaminata.	2	
<i>The Hotplate 401 must be operated only under environmental conditions as specified in the technical data for the ambient. The exhaust must always be in operation. The device must be switched off in case of malfunctioning exhaust.</i>	3	
Es ist nicht zu umgehen, dass solche wörter manuell getrennt werden müssen, da abenteuerliche buchstabenkombinationen an silbengrenzen vorkommen.	Es ist nicht zu umgehen, dass solche wörter manuell getrennt werden müssen, da abenteuerliche buchstabenkombinationen an silbengrenzen vorkommen.	4
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 caedib.	5	
Diese drei Grenzen sind bei der Korrektur der Myopie im Vergleich zur Korrektur der Hyperopie unterschiedlich zu gewichten. Die Korrektur der Myopie ist ein seit vielen Jahren bekanntes Verfahren und soll demzufolge zuerst beleuchtet werden. In Abbildung I ist der maximal erreichbare Visus gegenüber der Pupillengröße dargestellt. Es zeigt sich, daß in einem für physiologische Bedingungen ausreichenden Spielraum von 2 bis 4 mm Pupillengröße der theoretisch maximale Visus zwischen 2,0 und 4,0 liegt. Die retinale Auflösung würde wahrscheinlich einen Visus von maximal 2,5 - 3,0 erlauben. Bei Pupillengrößen von 2,5 mm und weniger wird die maximale Auflösung jedoch durch diffraktive Effekte, das heißt durch Beugungserscheinungen, die das Licht am Pupillarsaum erfährt, begrenzt. Bei Pupillengrößen oberhalb von 4 mm unterstützt der Stiles-Crawford-Effekt (= geringere retinale Sensitivität für schräge Strahlenbündel aus den Randbezirken der Pupille) das Erkennen kleiner Muster, so daß theoretisch sogar ein Visus größer als 3,0, das heißt höher als die anatomische Auflösung der Retina, denkbar wäre. Aufgrund der optischen Brechfehler höherer Ordnung der transparenten Medien beträgt jedoch der maximal erreichbare Visus bei Emmetropie und einer Pupillengröße von mehr als 2 mm ungefähr 2,0. Dieser maximal erreichbare Visus wird durch Brechfehler nachhaltig beeinflusst. Bei einer Abweichung von der Emmetropie von 1 dpt beträgt der maximal erreichbare Visus bei 2 mm Pupillengröße noch 1,0, bei 4 mm Pupille nur noch ungefähr 0,6. Diese Diskrepanz zwischen maximal möglichem und tatsächlich erreichtem Visus ist bei größeren Brechungsfehlern wie beispielsweise 5 dpt noch wesentlicher ausgeprägter, indem der maximale Visus bei 2 mm Pupille nur 0,125 und bei 4 mm Pupille nur ungefähr 0,09 beträgt. Mittels Korrektur der ...	6	

22.1 Possible answers to the questions

- 1 Lines are far to long.
A rule of thumb states: line length in cm is approximately equal to font height in pt. That is, for a 10 pt font use 10 - 11 cm wide lines.
- 2 Too small font size for running text.
In German this is called Konsultationsgrösse, which means that small font sizes should only be used for text being consulted optionally (such as footnotes or marginal remarks), not for ordinary reading
- 3 Inadequate font
Technical text requires a 'technical' appearance. A script font is good for a diary or poems.
- 4 Rivers and blanks
Narrow columns and/or long words without decent hyphenation will create an ugly presentation of justified text. Especially German with the long compound words require careful treatment of the hyphenation. Otherwise you will get words like the famous Urin-stinkt (Ur-instinkt). In general, prefer flush right (left adjusted) text over justified text. It presents even word spacing.
- 5 Font with small ascenders
Fonts with a small difference of caps height and x-height (the height of the lower case items) can not be read fluently. It will become difficult to distinguish between i and l and others. Prefer a font with good proportions.
- 6 This text is a nightmare, although it was written by a famous Swiss ophthalmologist in Bern. I was requested to translate it into English. The greatest issue was to understand the German... See my interpretation on the following page (the full text spans 4 pages).

22.2 Interpretation of the German text from page 35

Summary

Present knowledge regarding the physiological-optical, biomechanical and technical limitations of refractive laser surgery of the cornea recommends limits of maximum correction of myopia (6 dpt if done by PRK, 10 dpt if done by LASIK), hyperopia (5 dpt) and corneal astigmatism (3 dpt). Individual factors may increase or decrease these limits in selected cases. Major refractive corrections may not be achievable on the cornea alone but may involve the entire optical system of the eye.

OPHTHALMO-CHIRURGIE 13: 139-145 (2001)

Most refractive eye diseases can be corrected or at least reduced with refractive laser surgery. There are, however, three basic limitations:

- 1 Physiological-optical limits:
 - minimal size of ablation zone which differs between day and night
 - depth of the ablation zone (which is correlated to the size)
 - configuration of the ablation zone (e.g. multizone ablation).
- 2 Biomechanical limits:
 - Reduction of mechanical stability of the cornea which may lead to iatrogenic keratectasia
- 3 Technical precision of the ablation:
 - Hydration of cornea
 - Induced elastic vibrations
 - Eye movements of the patient during laser treatment

Size of the ablation zone and scotopic width of the pupil are the most important limiting factors for maximum sight in the dark

Pupil size varies naturally from 2 to 4 mm. Hence the theoretically maximum visual acuity will be 2.0 to 4.0. The retinal resolution probably could provide a maximum visual acuity of 2.5 to 3.0. With pupil diameters of 2.5 mm or less this maximum resolution is limited by diffractive effects. These are produced by inclinations of the light at the pupillary rim.

With pupil sizes larger than 4 mm the Stiles-Crawford effect (reduced sensitivity of the retina for oblique rays) supports the perception of small patterns. This effect results in a theoretical visual acuity larger than 3.0 (higher than the physiological resolution of the retina).

Due to the nonlinear effect of high order refractive errors of the transparent media, theoretical and manifest visual acuity are not correlated:

	emmetropia	1 dpt		5 dpt	
pupil diameter	> 2.0 mm	2 mm	4 mm	2 mm	4 mm
maximum possible visual acuity	2.0	1.0		0.125	
real visual acuity			approx. 0.6		0.09

By means of refractive laser surgery the optical conditions of the eye are intended to be corrected towards emmetropia. However, the ablation zone is of major importance. Using a common ablation zone of 4 mm diameter visual acuity of 2.0 may be reached at emmetropia. If the pupil is dilated (common in scotopic conditions), the zone of full refractive correction and the transition zone overlap. Hence the manifest visual acuity decreases at pupil sizes greater than 4 mm (see yellow line in fig. 2).

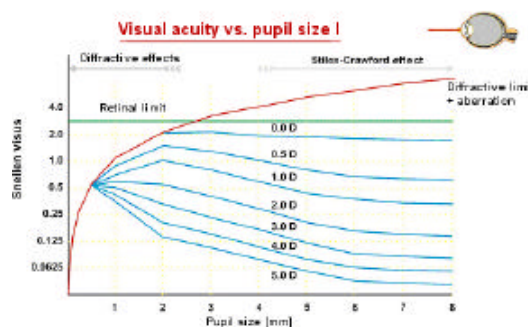


Fig. 1: Physiological-optical limits of the maximum possible visual acuity at ideal conditions. The maximum possible visual acuity varies as a function of the pupil size. It is supported by the Stiles-Crawford effect and limited by the maximum retinal resolution, diffractive effects and aberrations of lower and higher order.