FrameMaker 6.0 E

Course / workshop

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D+D

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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 dialogs is emphasised by an exclamation sign to distinguish the button names from menu names. For example, **OK!**
Keyboard-input	Shortcuts often require key sequencis. 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 correctly`.
Placeholders	Placeholder which must be replaced by user specified text, are displayed in italics, for example, *filename*.

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 *Course Materials to ETH courses*. User name and passwort are only provided to people attending the courses. You may write this down here:
User - name	`fm-kurs`
Password	
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.

Contents

Please note:

The course *Introduction to Framemaker* does not cover all topics presented in this course material. The course *FrameMaker for Scientific Publications* also does not cover all topics. Some of the topics are presented only on special occasions (ad hoc courses).

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1

Working environment

Overview

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

Customization is possible, but not to the extent of other Windows applications, because FM tries to keep consistency between platforms.

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

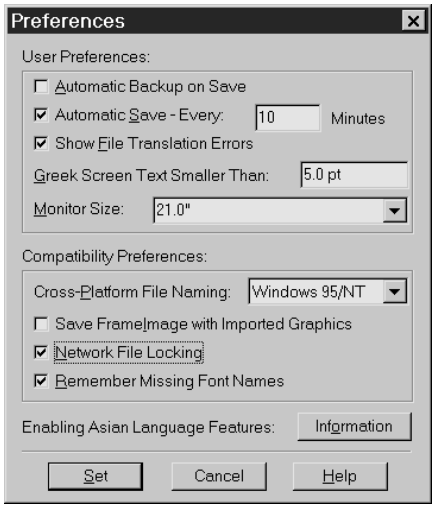
Working environment

Some discipline required ...

- **Only one UnDo level in FrameMaker!**
- Avoid direct formatting 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 (*Short-cuts* on page A-2)

Preferences

Preferences for the current FameMaker session



Set the program preferences with **File > Preferences**. Compared to other applications the capablities are a little bit thin:

- ❒ Set **Automatic Backup on Save** if you want to keep a copy of the orginal state of the documents.
- ❒ **Automatic Save every (10) Minutes** is a good insurance against system crashes. FrameMaker *saves very fast*!
- ❒ **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 uses (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.
- ❒ **Network File Locking** is a must for files residing on a net. 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.

Preferences for the current document

With **Format > Document ... > Text options** you set properites of the whole 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.
- ❒ 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 charac-

ters require special notation (see *Control characters in the text* on page 3).

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).

Customising Framemaker

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

- The menus and their contents (see)
- The size of the default page (which is the really empty one)
- File locations (e.g. dictionaries can be shared between FM versions)
- Font mapping
- Pen widths, dash patterns
- Smart quote characters
- Minimum styles (paragraph, character, table) for new documents are located in a special template.

Control characters in the text

These characters have no width (exception: the non-breaking space). It is nearly impossible to select them with the mouse (see *Non-width characters* on page A-15).

§	End of text flow / end of table cell	¬	Suppress automatic hyphenation
¶	End of paragraph (‚contains' the style definition)	¬	Optional hyphen
⟩	Tabulation symbol	T	Marker (index, cross reference,...)
⟨	New line (hard return)	⊥	Anchor (table, frame)
␣	Non-breaking space	|	Formula aligned manually

Table 1: Control characters in the text

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

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

Help and documentation

FrameMaker Help

Version 6 of Framemaker introduced the platform dependent help system. On Windows this is WinHelp, which provides:

- Same contens as manual (excempt the pictures).
- General search function.
- Font size depends on system settings
- Display disappears when you change to the document (no “keep on top” function. To have it adjacent to your document, reduce the window size of FrameMaker.

Documentation

Vendor supplied

- Same manual for all platforms
- Quick Reference Card
- Online-manuals for special themes. These are no more referenced in the Help menue. They are located in the $FMHOME/Online-Manuals directory. [1)]

Third party

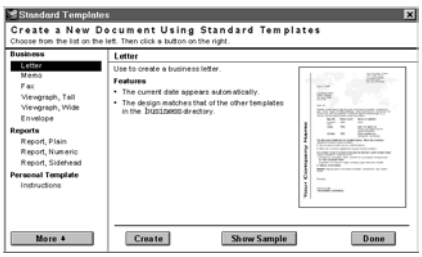
- Gulbins/Obermayr: Desktop Publishing mit FrameMaker 5.5 (3. Auflage 1998), ISBN 3-540-64717-1 (version for FM 6 in preparation)
- Mitschke, Ute / Schulze, Bernhard: FrameMaker 6.0; In der Praxis anwenden und beherrschen; mit CD-ROM; ISBN 3-8273-1736-3; CHF 108.00 (erscheint ende 2000).
- See www.books.ch and search for ‘framemaker’.

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).

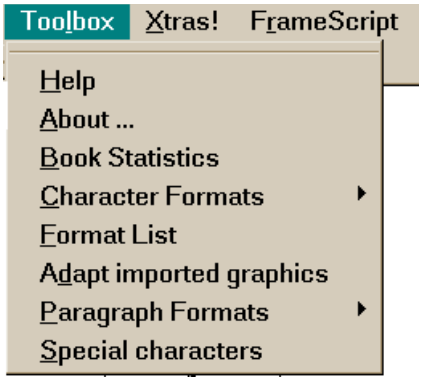
To use a sample template



- ❒ **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.

1 $FMHOME is the symbolic name for the installation directory of FrameMaker. This may be, for example, `H:\adobe\FrameMaker.6en`

Extensions by API clients



API clients add to the functions of FrameMaker and integrate themselves into the menus. Some book function APIs are now superseded by FM version 6.

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.

End-notes 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 Nach ansicht vieler die besten import/export filter bei 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/spsoftware/

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

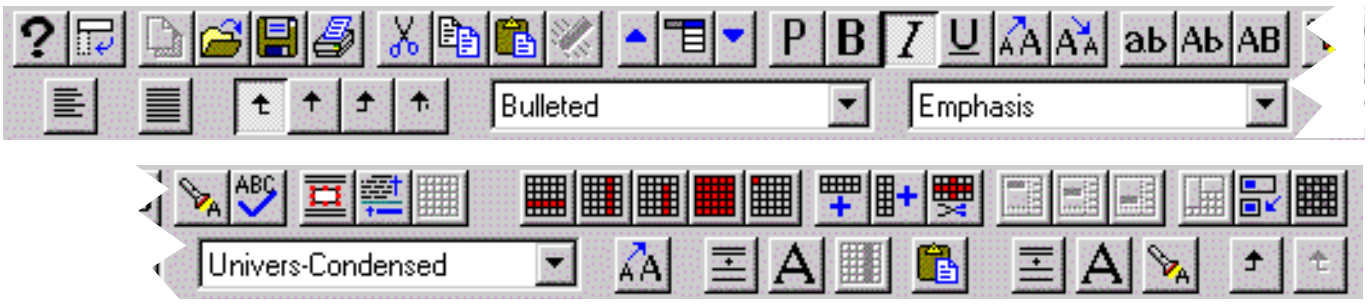
RTF and HTML from MIF Export von FM (MIF) nach word RTF, HTML und winhelp mit mif2go von www.omsys.com

Style management, special character palette Systec toolbox: www.systec-gmbh.com/toolbox

Script (macro) language The full featured macro language FrameScript has access to all FM command (even non-menu items): www.framescript.com

Extensive script collection Rick Quatro provides FrameScripts for many tasks.

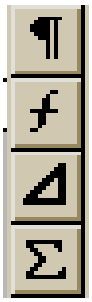
Modified tool bars Shlomo Perets from www.microtype.com provided this tool-bar:(which requires a screen resultion of at least 1024 x 768)



Palettes and catalogues

Tool palette

The Tool palette is located to the top right of the FrameMaker window



click to open the Paragraph catalogue

click to open the Character catalogue

click to open the Graphic Tools Palette

click to open the Formula palette

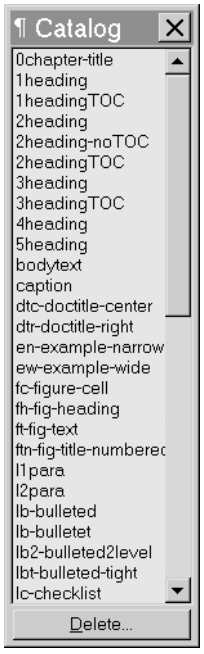
Catalogues

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

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

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

Paragraph catalogue



Character catalogue

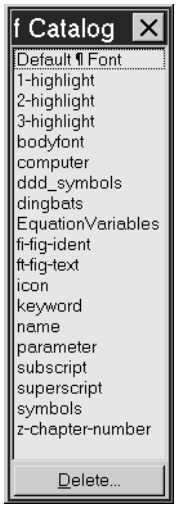
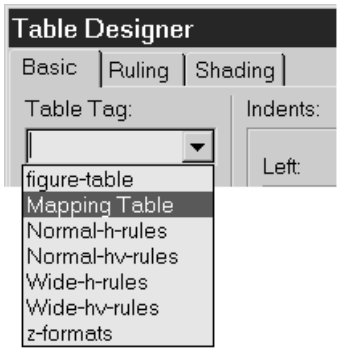


Table catalog

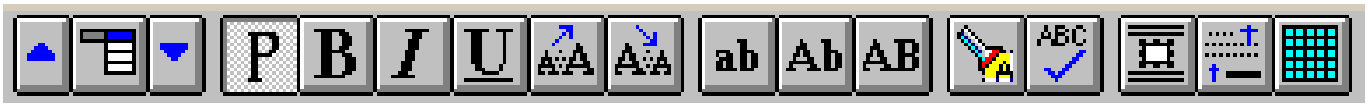


Quick access bar (tool bar)

Common commands and Quick fFormatting Bar

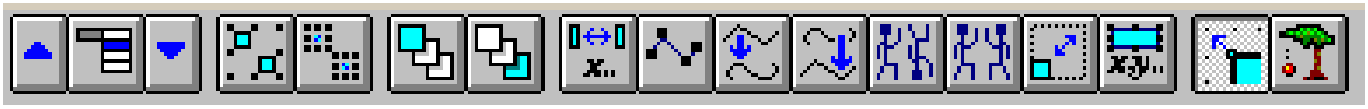
On the **Macintosh** the Quick Formatting Bar belongs to the document window - not to the main FrameMaker window.

Edit text



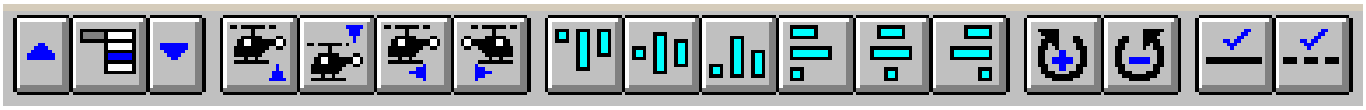
Plain text
Bold
Italic
Underlined
Increase size 1pt
Decrease size 1pt
to Lower case
Initial capitals
to Upper case
Find / change
Spell check
insert anchored fr.
insert Footnote
insert Table

Graphic commands



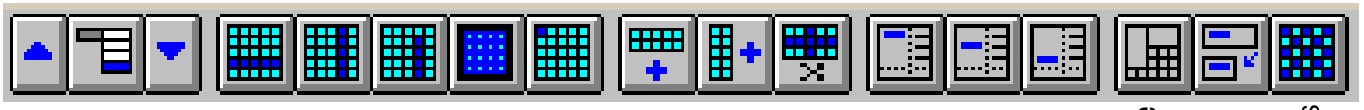
Group
Ungroup
to Front
to Back
Distribute
Reshape
Smooth
Unsmooth
Flip up/down
Mirror left/right
Resize
Object property
Snap
Gravity

Edit graphics



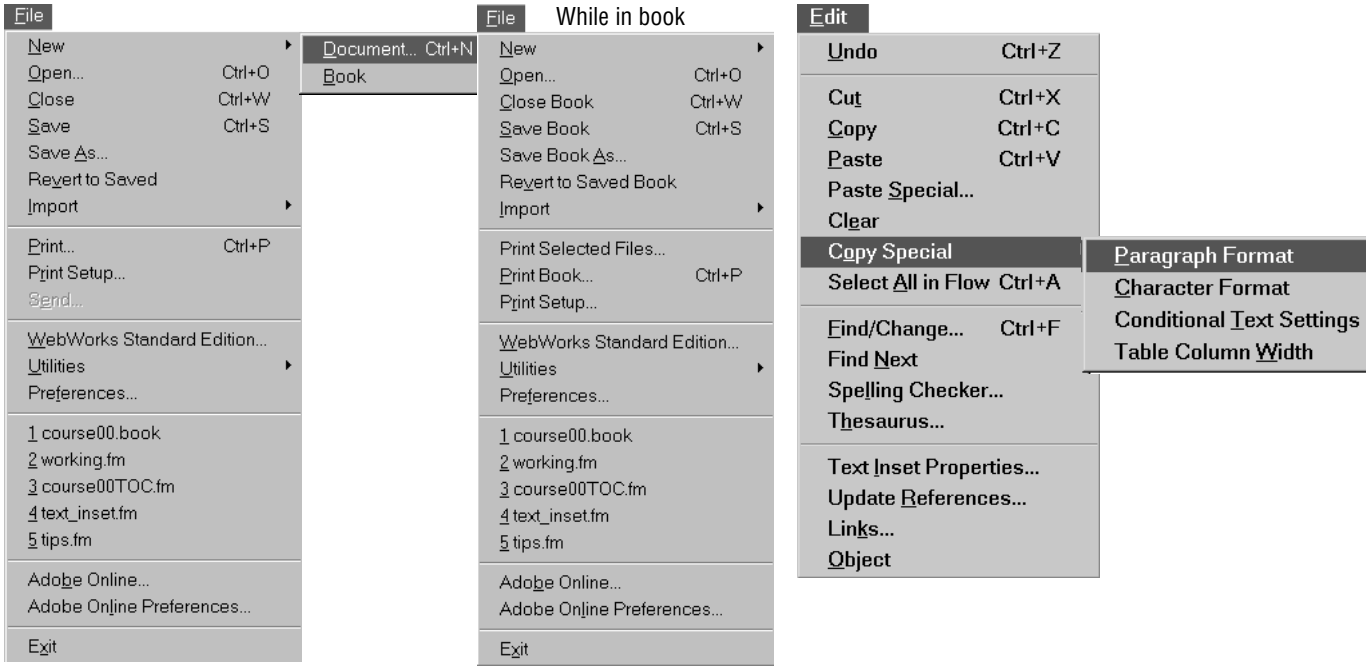
move up 1pt
move down 1pt
move left 1pt
move right 1pt
align top
align centre vert.
align bottom
align left
align centre horiz.
align right
rotate clockwise
rotate anticlockw.
solid line
dashed line

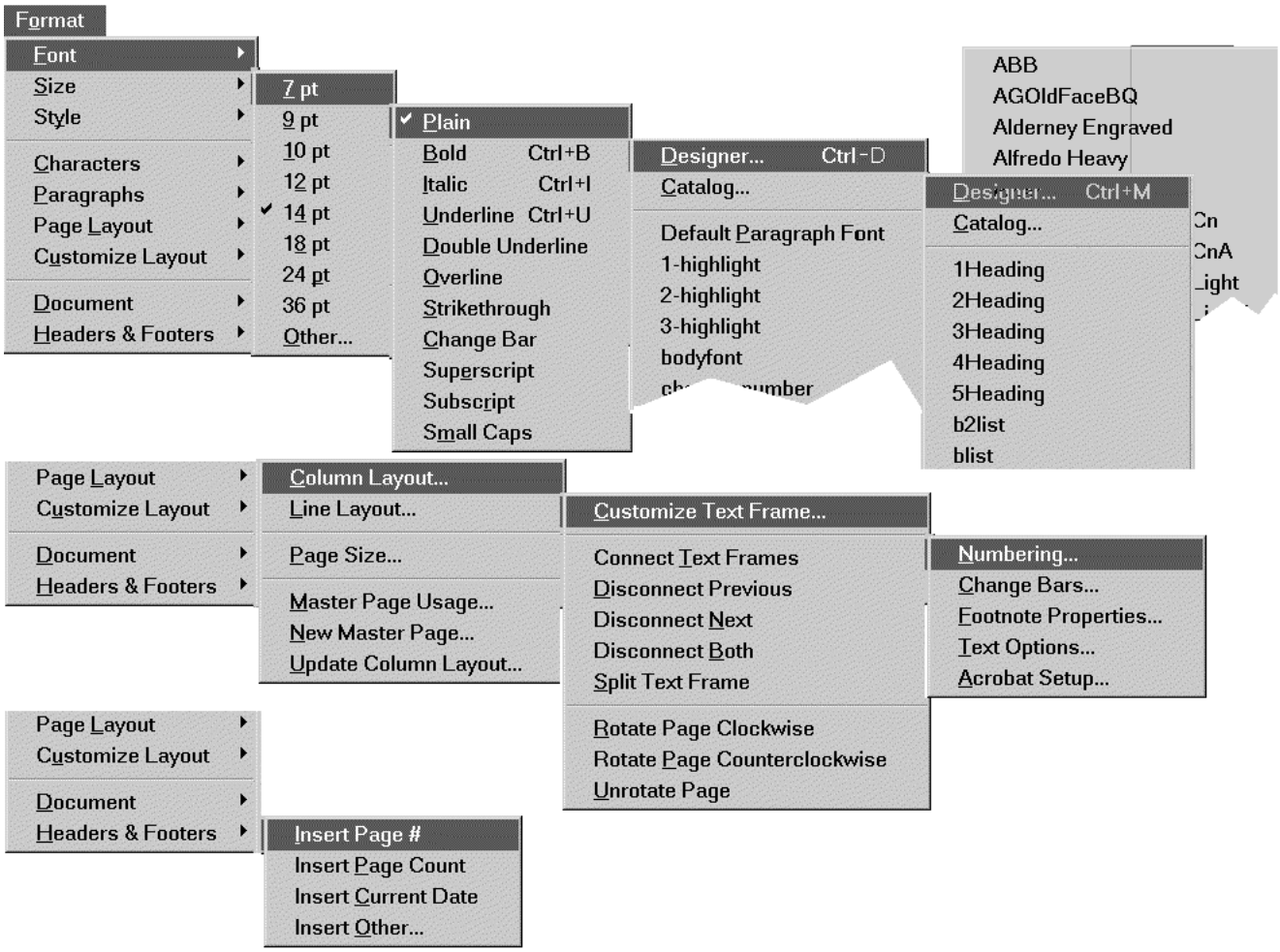
Edit tables

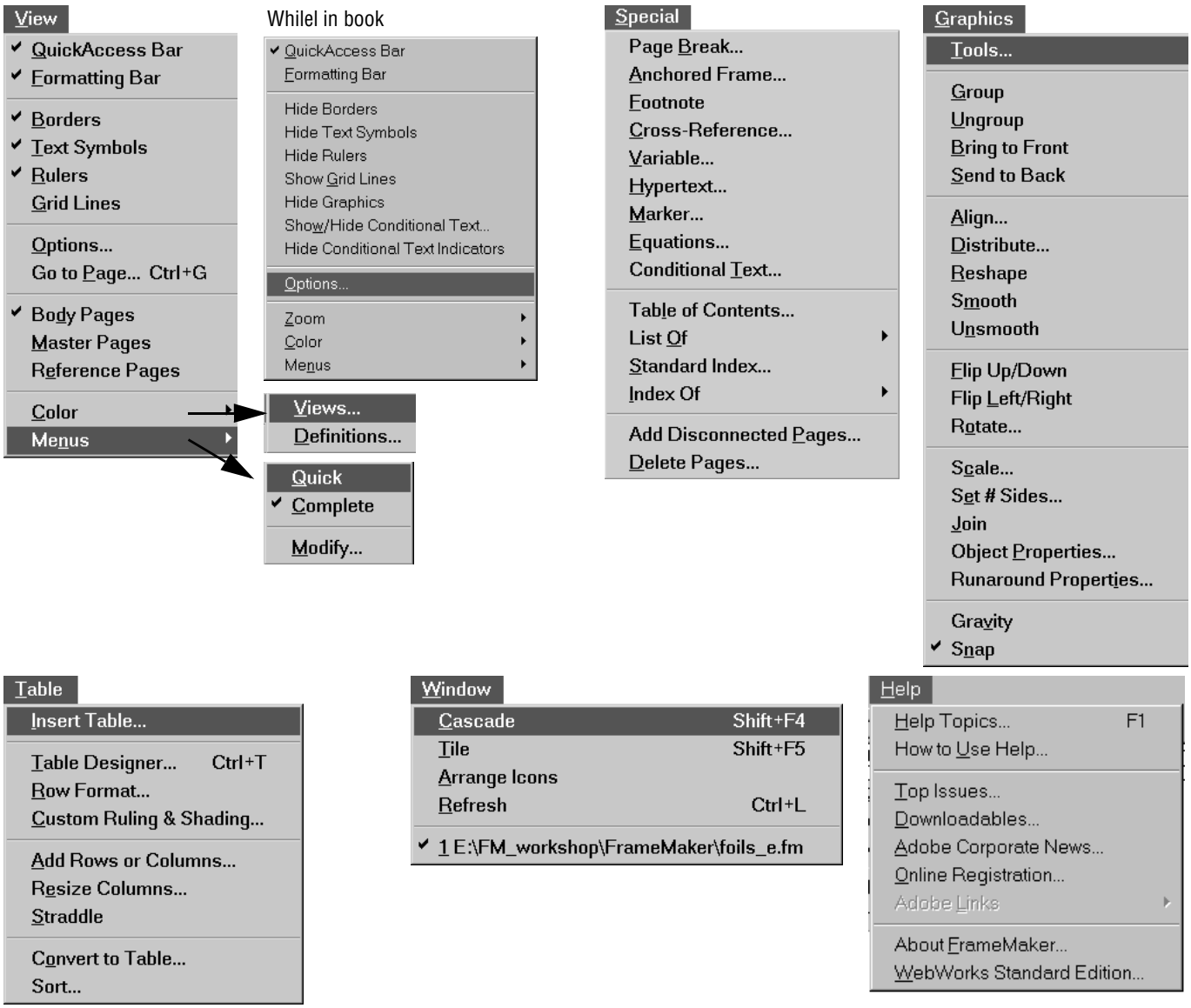


select row
select column
select body cells
select table
go to top left cell
add row below
add column right
cut row / column
top align in cell
centre align in cell
bottom align in cell
straddle / unstraddle
shrink wrap cells
custom rules/shades

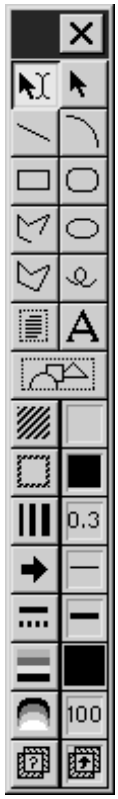
Menus and palettes






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
Whilel in book
QuickAccess Bar
Formatting Bar
Hide Borders
Hide Text Symbols
Hide Rulers
Show Grid Lines
Hide Graphics
Show/Hide Conditional Text...
Hide Conditional Text Indicators
Options...
Zoom
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\FrameMaker\foils_e.fm
Help
Help Topics... F1
How to Use Help...
Top Issues...
Downloadables...
Adobe Corporate News...
Online Registration...
Adobe Links
About FrameMaker...
WebWorks Standard Edition...

Graphic objects



Intelligent cursor (dep. 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 colour	Apply area fill colour
Define line fill colour	Apply line fill colour
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

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.

Text handling

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

1 Place the cursor in front of the first character to be selected

2 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

❒ Triple clicking in a paragraph selects it including its style definition (which is 'located' in the terminating paragraph mark (¶).

Select contents only

❒ 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*.

Selecting tables and parts of

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-16

Select a column

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

Select a row

❒ Hold the CTRL key 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.

Selecting a text frame

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

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).

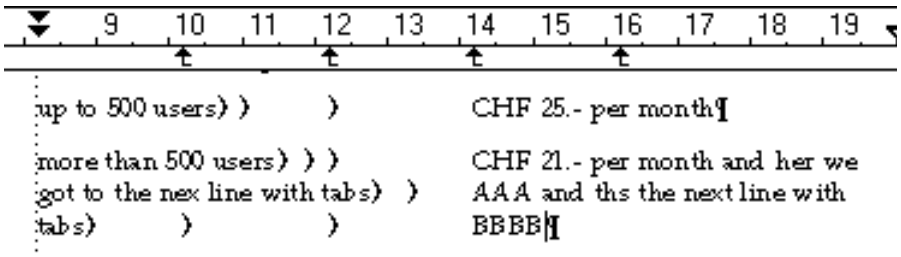
Example

The lines in the picture are of type 'body' with tabs stops set at 2, 4, 6 and 8 cm.

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:

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 tabmark appears on 2 + 6.2 +2 = 10.2 cm on the ruler.



Tabs in contunuation lines

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

Superflous 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.*

Smart spaces

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

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.*

Find/Change with pattern matching

Especially when to clean imported text it is convenient to search for a pattern, for example “figure, followed ba TAB at the beginning of a line” to remove all manually numbered lists.

See *Wildcard-characters for Find dialogue* on page A-3

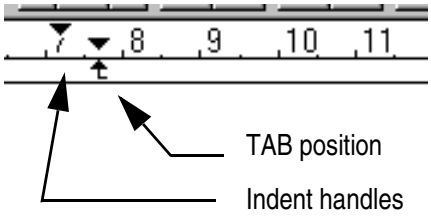
Copy format of one paragraph to another

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.

Local formatting with the ruler



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

1 Place the cursor in the paragraph you want to format

2 With the upper indent handle adjust the left (and the right) indent of the first line of the paragraph.

3 With the lower indent handle you set the ‘hanging indent’ for lines 2 to n of a paragraph (for lists etc.)

4 Double click on the TAB position to get a dialogue to set the properties (type of tabulation, position etc.)

Replace text with a variable

You use variables for items such as product names, author names, document version etc. to be able to change them globally

To replace text by a variable:

1 Copy the text you are replacing to the paste buffer

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

3 In the Find/Replace dialogue paste the copied text into the Find field and select **By pasting** form the list **Change.**

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

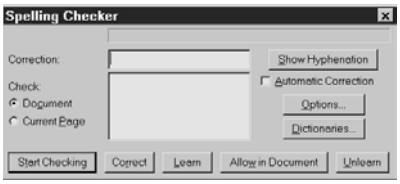
5 Go back to the document where the text is still selected. Replace it with the variable, then copy the variable into the paste buffer.

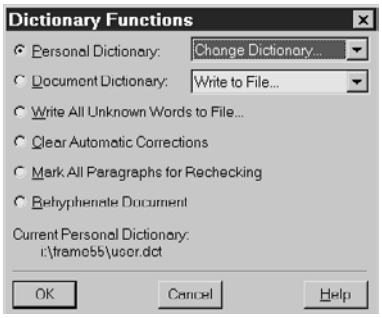
6 With the Find/Replace dialogue Find the next occurance of the text (if you have images in the document, this may take some time) and replace it by pasting the variable from the paste buffer (CTRL+V).

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

Hyphenation and spell checking

Set up and use a project dictionary





- ❒ **Edit > Spelling Checker**
- ❒ Select **Dictionaries**. The current dictionary is displayed at the bottom of the dialogue.
- ❒ Activate **Personal Dictionary** and select **Change Dictionary** from the drop-down list, **OK**.
- ❒ For a new (or existing) project dictionary, define the appropriate path and file name (extension `dct`) and **Use!** it.
- ❒ Back in the Spell check dialogue: start checking or leave the dialogue.

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

Change hyphenation of a word

- ❒ **Edit > Spelling Checker**
- ❒ Enter the word for which the hyphenation is to be changed.
- ❒ Select **Show Word's Hyphenation**
- ❒ Clear all hyphenation points (-) which you do not want.
- ❒ To avoid hyphenation of a word at all, place a - at the beginning of the word.
- ❒ **Learn** (the word is stored in the personal dictionary and the new hyphenation is active immediately).

Optional hyphenation

Avoid hyphenation of a word

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

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

Place an option hyphenation point

- ❒ Place the curser in the word, where you want to support optional hyphenation
- ❒ Enter CTRL+minus (Windows) or command+minus (Mac)

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

Non breaking hyphen

To avoid a hyphen in a compound word to fall to the end of a line, use the non-breaking hyphen ESC, -, h (English FrameMaker) or ESC, -, w (German version).

Optional hyphen is not honoured?

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

Apply new hypenation to existing document

- ❒ **Edit > Spelling Checker**
- ❒ Select **Dictionaries**
- ❒ Select **Rehyphenate Document, OK!**

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.
- Ellipses (...) and more dots are considered correct. Two dots are considered an error.

Format of spelling dictionary

Project and private dictionaries (e.g. `user.dct`) are plain ASCII files. You may prepare such a dictionary in advance (a little bit cumbersome for German words with umlauts or even French) or modify an FM generated dictionary (e.g. modify the hyphenation points).

Special characters such as umlauts are represented with the FrameMaker internal coding (`\x86 = Ü, \x9f = ü etc.`):

```
<MakerDictionary 2.0>
-\x86ber-g\x8ange
-AutoSelect
\x80nderun-gen
\x86ber-pr\x9f-fung
Abtrag-arms
Baum-woll-farbe
Pro-gram-mier-men\x9f
Sam-mel-st\x9arungs-signal
```

Suppress hyphenation

Entries in the dictionary starting with a - are not hyphenatated.

3

Page layout

Overview

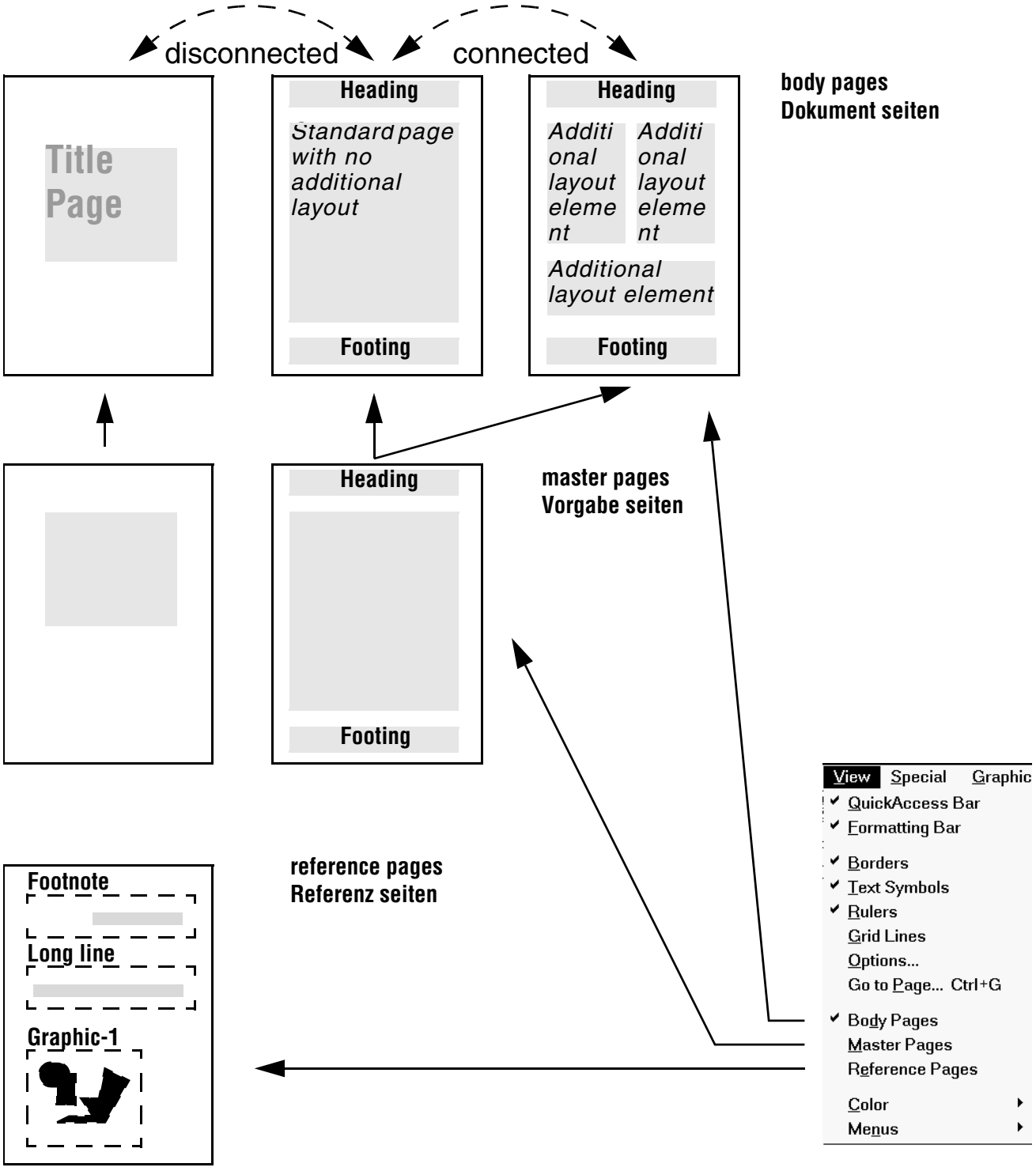
This chapter describes the ‘layers’ of a FrameMaker document: body pages, master pages and reference pages.

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.

Layout of pages

Hierarchy of pages



- Heading/footing frames can not be removed from the body pages => different layout pages.
- Reference pages serve various purposes: graphic elements referenced in the paragraph-style; definitions for TOC and index generations, etc.

Flows and frames

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

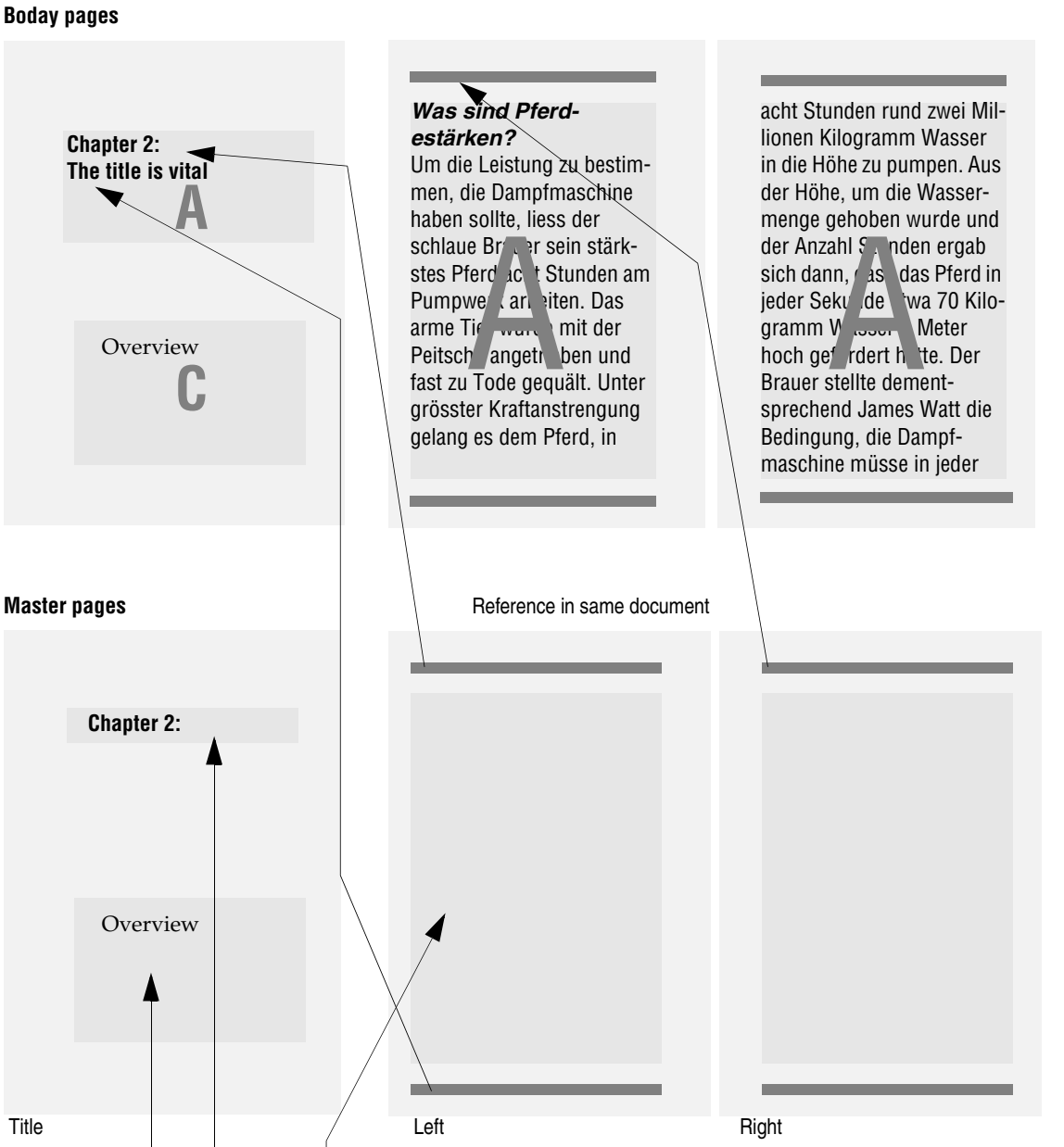
Text frame within graphic frame

Text frame on page

Footer frame bound to page

❒ To connect text frames:
Format > Customize layout > Connect text frames

Template for a chapterMaster page usage



Textflow	Paragraph format
A (connected)	Heading1 etc.
A (connected)	Chapter-title
C (unconnected)	Overview

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.
Keypoint: same flow tag (A) as the body text!

Assignment of master pages

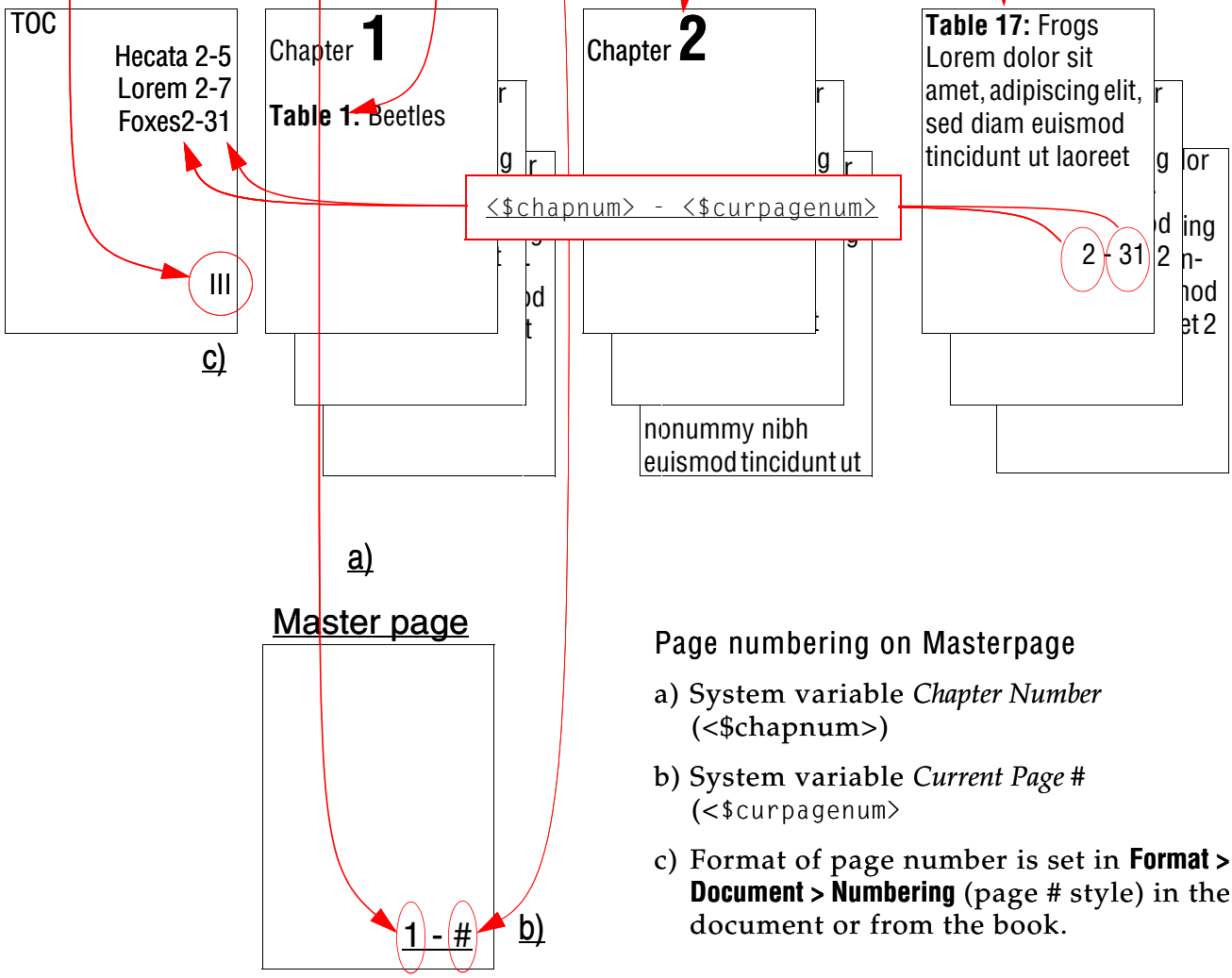
For ordinary pages the masterpages *Right* and *Left* are assigned automatically. Other master pages are assigned with **Format > Page Layout > Master Page Usage ...**

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

Numbering of elements

These properties are set with **Format > Document > Numbering** (or while in a book)

Chapter	Restart	Restart	Continue	Continue
Page	Restart, format roman	Restart, format arabic	Continue	Continue
Paragraph	Restart	Restart	Continue	Continue



Page numbering on Masterpage

a) System variable *Chapter Number* (<$chapnum>)

b) System variable *Current Page #* (<$curpagenum>

c) Format of page number is set in **Format > Document > Numbering** (page # style) in the document or from the book.

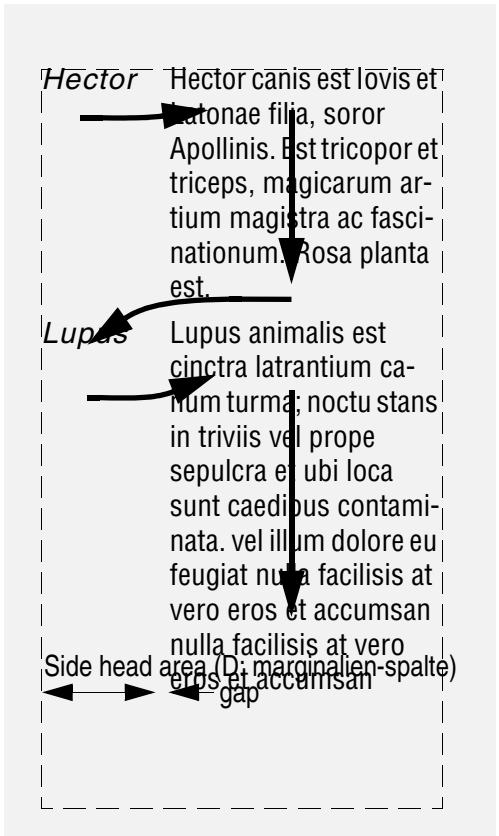
Columns, text flows and side headings

Columns vs text flows

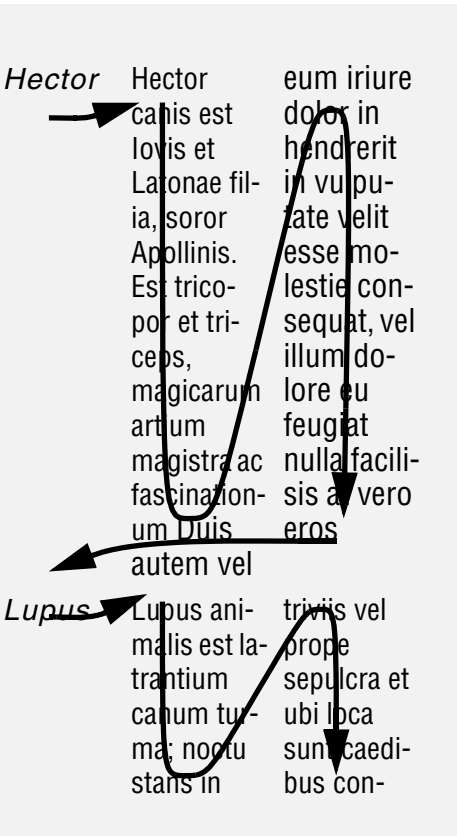
1 text flow with 3 columns

2 text flows with 1 column each

Side heads



1 text flow with 1 column and side head

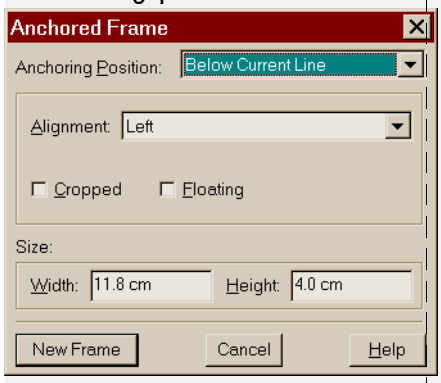


1 text flow with 2 columns and side head

Frame types and attributes

Anchored frames

Anchoring position



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

Cropped the frame crops all content at the border

Floating the frame may be placed on the next page, if space requires

A Below current line (default)⊥

B At Top of Column⊥

C At Bottom of Column⊥

D At Insertion Point⊥

E Outside Column⊥

F Outside Text Frame⊥

D Anchor is hidden; overlaps surrounding paragrpahs!

Frame **F** is cropped by the paper size and cut off by the 'non printing area' depending on the printer

G Run into Paragraph, left aligned⊥

Alignment⊥

right

center

left

The alignment of the frame is relative to the text frame in which the anchor point is located. For example the small frames below the heading 'Alingment' are all in the side head area.

- Left
- Center
- Right
- Side closer to Binding
- Side farther from Binding

Note: *The anchors (⊥) are visible here by using a special font. This rectangle is the gap between the side head area (D: marginal-ien-spalte) and the body of the page; this is the text area (D: satz-spiegel).*

A

B Frames top / bottom of clumn reduce the space available for headings /text indepently of their width.

C Frames top / bottom of clumn reduce the space available for headings /text indepently of their width.

E

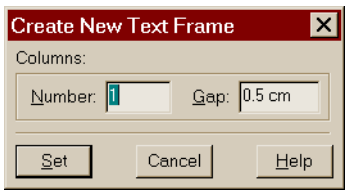
F

G

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:

Attributes of text frames



When inserting a text frame, you can set the number of columns and the gap between the columns.

To apply a border:

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

To 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

This anchored frame has a border

This is text within a text frame

This text frame was created with the graphic tool Text Frame

In this text frame all paragraph formats, character formats and table formats can be used as in the main text frame.

This is another text frame within the same anchored frame.

This has no border but is filled with 5% gray (a frame object can not have a border and a fill at the same time)

Graphic frames

These are placed on the page and hence do not float with the text. Main usage is on master pages and reference pages.

Insert a graphic frame with the largest graphic tool.

This gray area is a graphic frame, filled, moved to background, no runaround (**Graphics > Runaround properties**).

Note: *If you copy (or cut) the graphic frame and paste it to an other page, it becmes an anchored frame.*

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-22).

Graphic frames on Reference Page

On the reference pages the graphic frames are named to be referenced in the paragraph specification **Frame Above/Below** (see *Advanced* on page 4-3).

Templates

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 directory are not opened, but copied and then the unnamed document is opened.

This directory is divided into subdirectories, 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`:

```
[Directories]
; The path is either absolute or relative to FMHome
; Templates=templ
Templates=E:\Doc-std\Template\Frame
```

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 10.

❒ 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 (FrameMaker 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 an 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**, the select **Portrait**). You may need to clear the existing catalogues or use their contents as a starter.
- ❒ Save this file with an descriptive name at an appropriate place (e.g. as …`\doc-standards\frame\business-plan.fm`).

Sample template

The following describes the template used for this handout.

Master page Left

Layout (master page)

Header text frame:

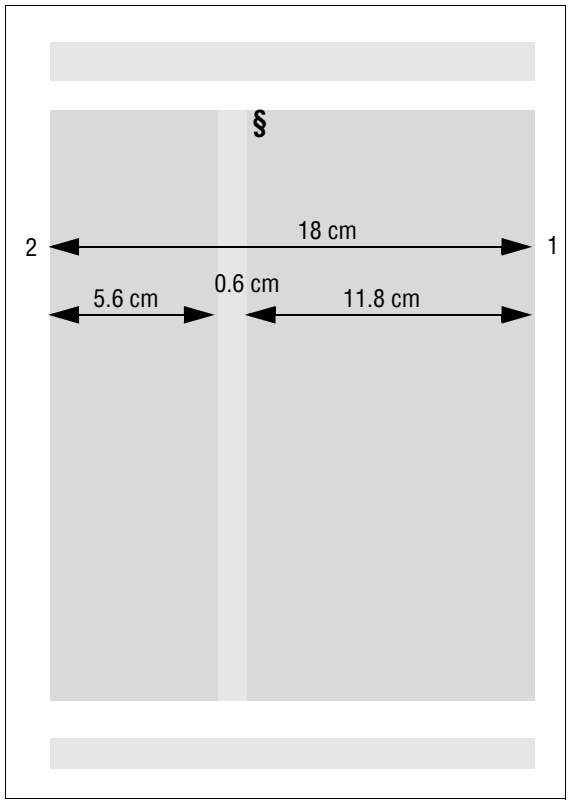
- Type background
- Top=1cm, Height=0.4 cm, Left=2 cm, Width=18 cm

Main text frame:

- Top: 2 cm, L=2 cm, W=18 cm, H=26 cm
- Flow A, autoconnected
- Sidehead: 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 paragraph 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 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_numb...					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			
th_table_head						12				
tc_table_cell	4pt					10				
tl_table_list	4pt	0.5	0.5							
Footnote	4pt		0.5			9			no	

Excerpt from 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

4

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.

Paragraph styles

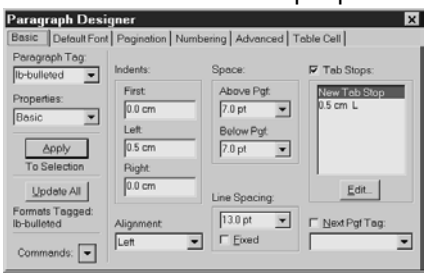
Using style names for paragraphs, character sequences and tables (rather than local formatting) gives you these advantages:

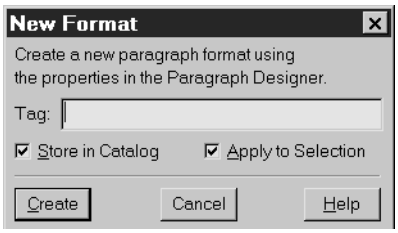
- The appearance of a document can be changed 'in the last minute'.
- The appearance of all documents in a book can be changed with 'the snip of a finger' (importing styles from any document).

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

Define a paragraph style name

Basic properties

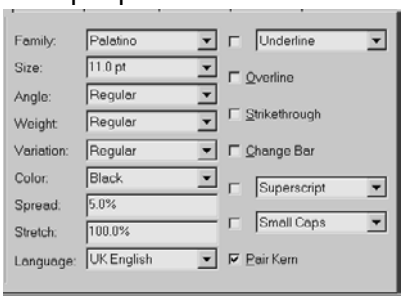




- ❒ Place the cursor in a paragraph the style of which you want to develop (and store in the catalogue).
- ❒ Open the Paragraph Designer (**Format > Paragraphs > Designer**).
- ❒ In the field **Paragraph Tag** enter the name of the paragraph style to be created.
- ❒ In the drop down list **Commands** select **New Format**.
- ❒ In the Dialog **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 definions 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**.

Properties of type

This text is spread (space between characters in % of em) with 0%

This text is spread with 5% and this with 10%.

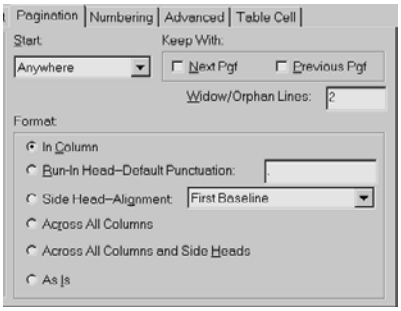
This text is not spread but stretched (character width) by 110%.

And this is stretched by 180%.

Without kerning: AV-Medium Yoga Tevde.

With pair kerning: AV-Medium Yoga Tevde.

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

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

A Across all Columns and Side Heads

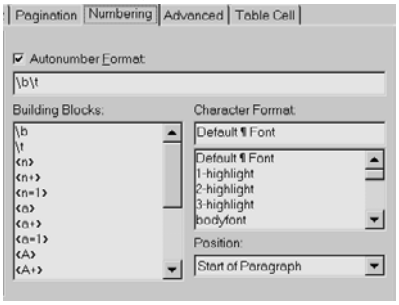
B Across all columns

C Side Head, alignment First Baseline

D In Column

E Run-In Head, Default punctuation “.␣“

Numbering



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 6.

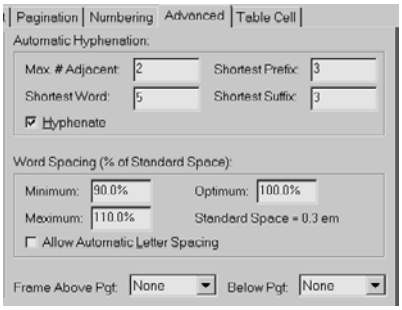
To highlight the numbering (or the constant text as for the *note*), you must define a character format first. You can not select fonts.

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

Numbering elements

`< =0>` Set counter, nodisplay
`<=0>` Set counter,display
`< >` Placeholder in scheme
`<n>` Display counter arabic
`<n+>` Increment and display
`\b` Bullet symbol
`\t` TAB character

Advanced



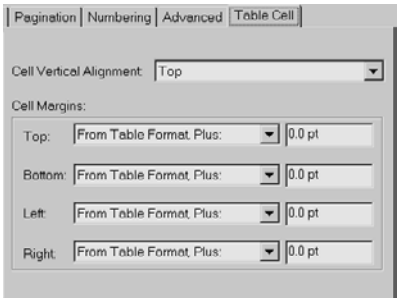
On the Advanced property sheet you define typographic details as well as graphic Frames attached to the paragraph (above or below). These graphic frames are located on the reference pages (see *Graphic elements on reference pages* on page 11).

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

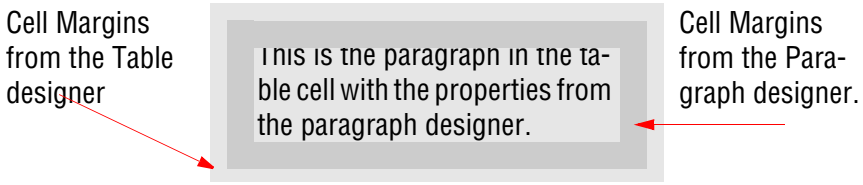


These properties become only relevant if the paragraph is used in a table (table heading, body or bottom cells).

For each cell margin you can specify

- **From Table Format, Plus** a value, or
- **Custom**.

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.

Names for paragraph- and character formats

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
Table with frame and fancy head	full_statistics	F9, fu
Highlight italics	1-highlight	F8, 1
Highlight bold	2-highlight	F8, 2

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

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.

Set only one property in paragraph or character 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**

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 *Define a paragraph style name* on page 2.

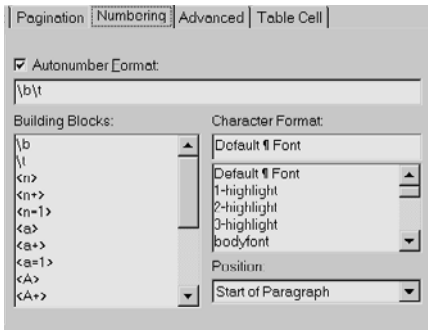
❒ Set the Property sheets in the Paragraph Designer to the first category of properties (Basic).

- 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.*

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.	Prefix	Number flow				
			1head	**2head**	**3head**	**table**	**figure**
1heading	H:		<n+>\t	<␣=0>	<␣=0>	<␣=0>	<␣=0>
2heading	H:		<n>.	<n+>\t	<␣=0>	<␣>	<␣>
3heading	H:		<n>.	<n>.	<n+>\t	<␣>	<␣>
tt_table_title	H:	Table	<n>.	<␣>	<␣>	<n+>\t	<␣>
ftn-fig-title-numbered	H:	Figure	<n>	<␣>	<␣>	<␣>	<n+>\t

Table 1: Hierarchical numbering

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:

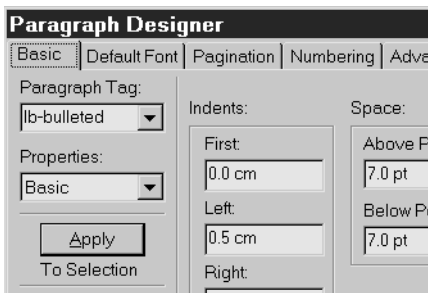
```
<n>.<n>.<n+>< >< >
```

Numbered lists

Numbered lists are normally not bound to the hierarchy of headings (see *Numbering* on page 3). 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 7-8).*

Rename a paragraph format

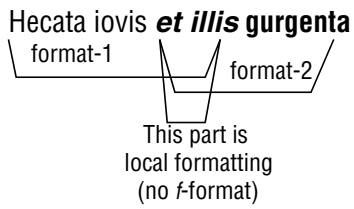


Use this operation with care because *all paragraphs of a particular style name* (including the catalogue) are changed! Generally this is correct for cleaning up an imported Word document):

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.

Character styles



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

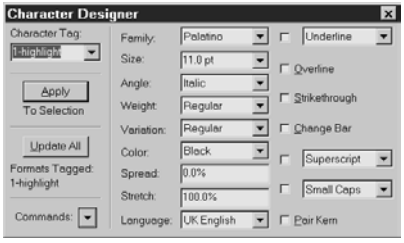
Character styles are used to:

- 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.*

Set up a character style



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

❒ 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.

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**.

Properties of type

This text is spread (additional space between characters) with 0%

This text is spread with 5% and this with 10%.

This text is not spread but stretched (character width) to 110%. And this is stretched to 120%.

Without kerning: AV-Medium Yoga Tevde.

With pair kerning: AV-Medium Yoga Tevde.

Import formats from another document

Warnings concerning format imports

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 Properies**…)
- 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

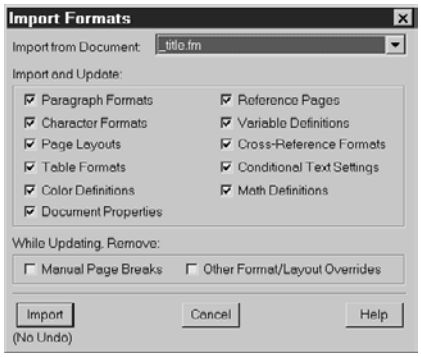
While their use is defined in the categroy Page Layouts, their defintion is located in category Variables. Appearance may be affected by Character Formats

Cross References and Variables

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

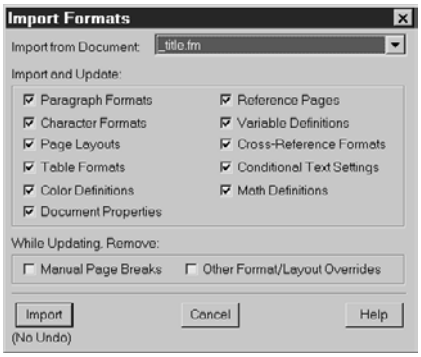
Import Format categories

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
- ❒ 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

Import formats into files of a book



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.

5 Tables

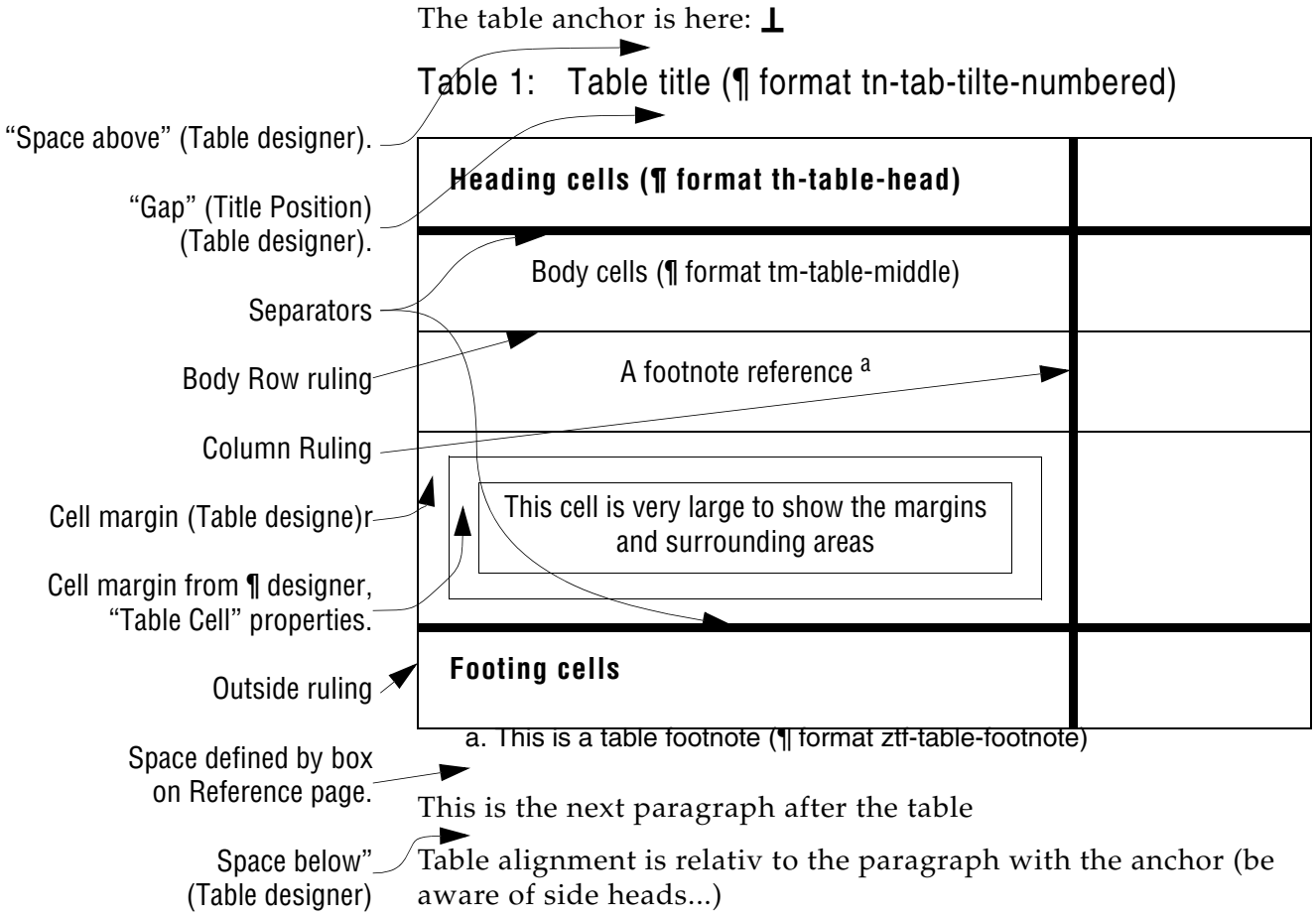
Overview

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.

Table properties



Properties in the table catalogue

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

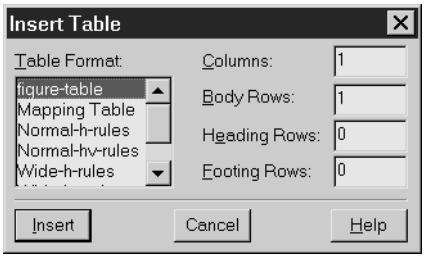
- All properties which can be set in the table designer (position, cell-margins, regular ruling and shading, title position).
- Properties from the sample table:
  - number of rows for table heading, body and footing
  - number of columns, width of each column
  - paragraph format in the first row (of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

Handling table items

Inserting tables

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

To insert a table



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 to 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.*

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).

Selections 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-16

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 (⊥).

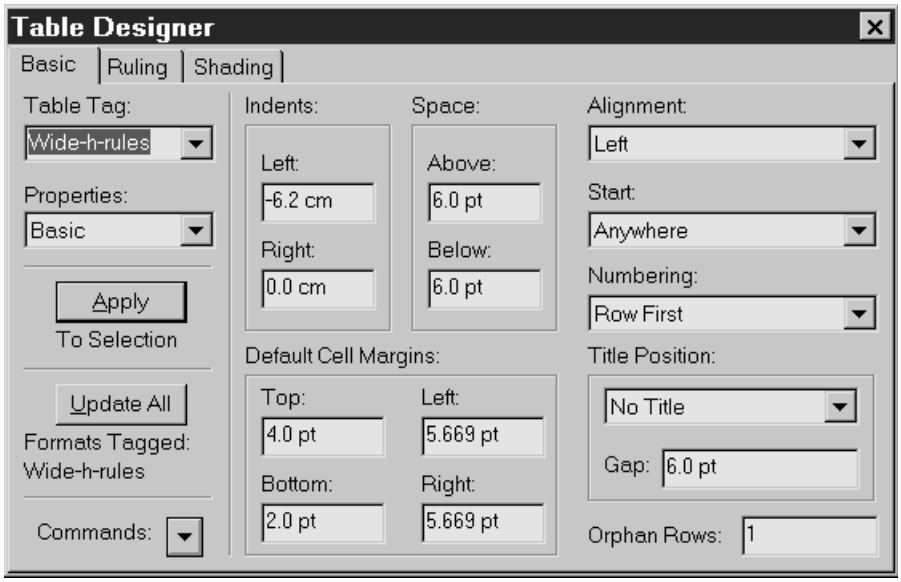
Copy / cut and paste cells — When pasting cells the number of cells to be pasted to need not be equal to the copied or cut cells. The copied cells are repeated to a larger amount of paste cells (a, b, c ⇨ a, b, c, a, b) or discardef or a smaller amount (a, b, c ⇨ a, b).

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



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

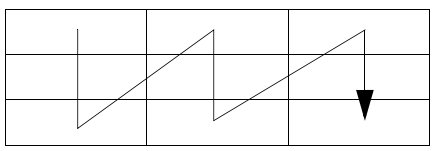
Space Space above defines the space between the line with the anchor point and the upper edge of the table (or when the table title is above) the table title.

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

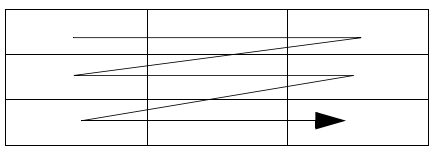
Alignment This defines the alignment of the table relative to the anchoring point.

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

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 4-4) this definesthe margins around the paragraph in the table cell:Table ruling.

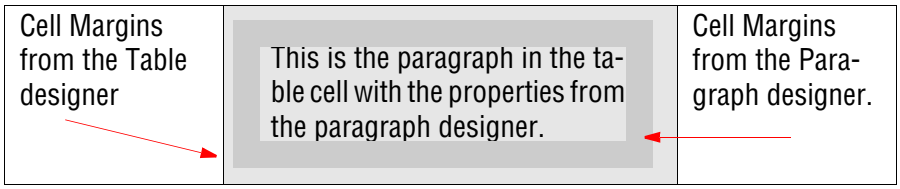
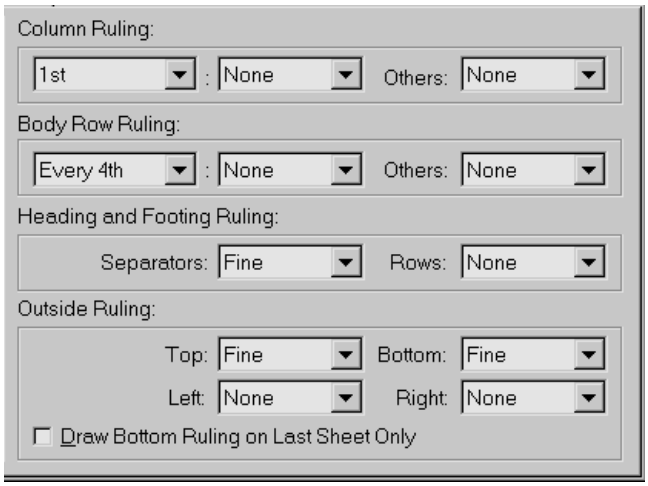


Table ruling

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

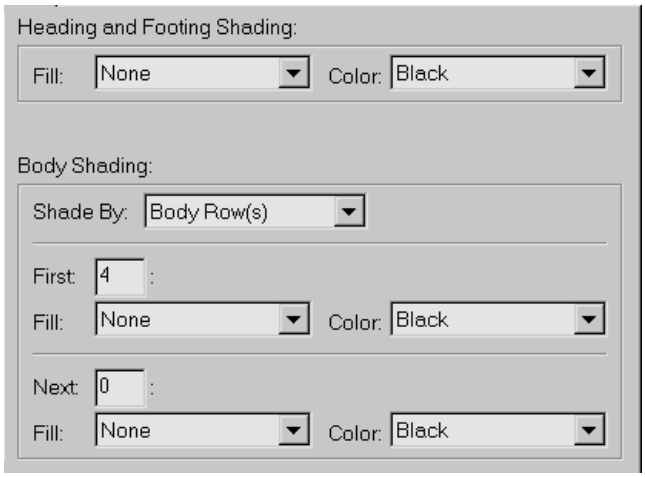


This table is left indented by 0.5 cm

Heading row(s)	
The line above is the separator between body and heading Body ruling is set to “Every 2nd”, Others: none	Cell
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)	

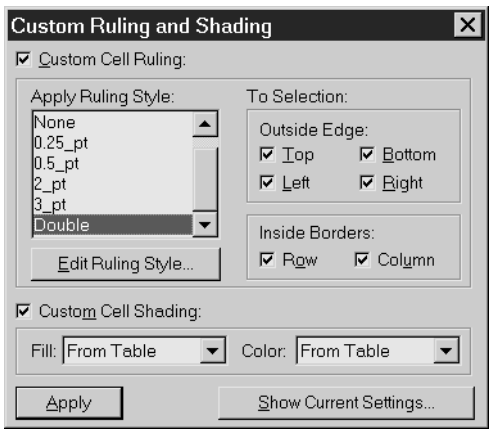
Table shading

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



Custom ruling and shading

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

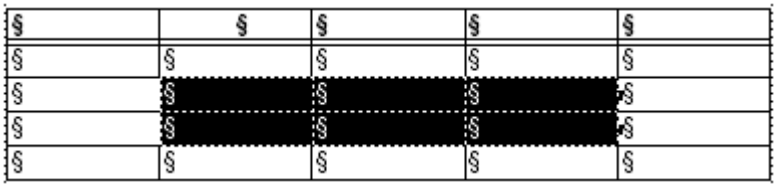


Note: *Beware of the 'reverse logic' to remove settings! You need to check all elements which you want to clear and then use the selection* **None** *from the* **Apply Ruling Style** *list.*

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.

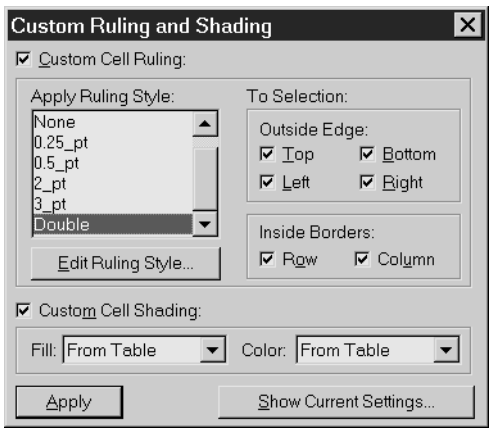
2 In **Table > Custom Ruling and Shading** set the same elements in 'To Selection' (Top, … Right) and 'Inside Borders' (Row, Column).

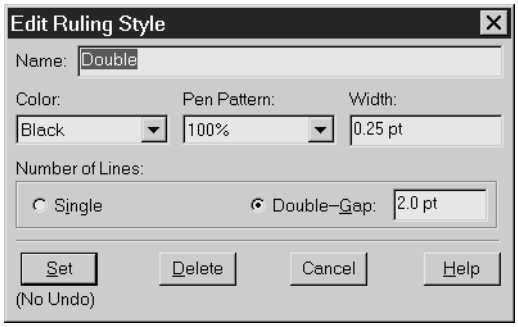
3 From the drop down list **Apply Ruling Style** select From Table.

4 Apply!

Line styles for tables

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





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 wich 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); dag a handle.

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

Set up a table template

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

To define a table template from an existing table

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.

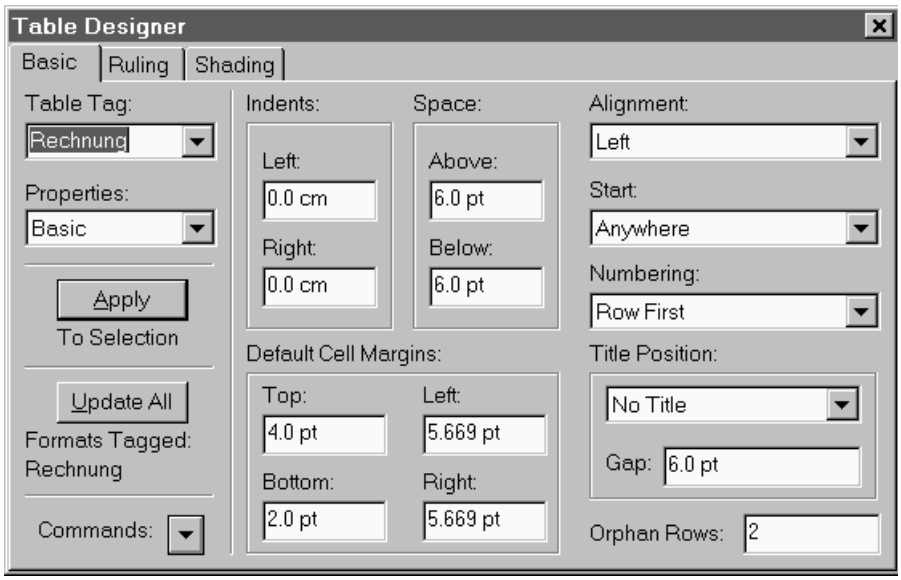
Ziffer	Arbeit	h	CHF
	Hier ist eine zeile		
	und hier die nächste		
	und hier die dritte		

1 Place the cursor in the table.

2 In the table designer (CTRL+T) set the table type (the name of the table template), for example *Rechnung*.

3 Select **Commands**: *New Format*.

4 Activate **Store in Catalogue**; **Create**!



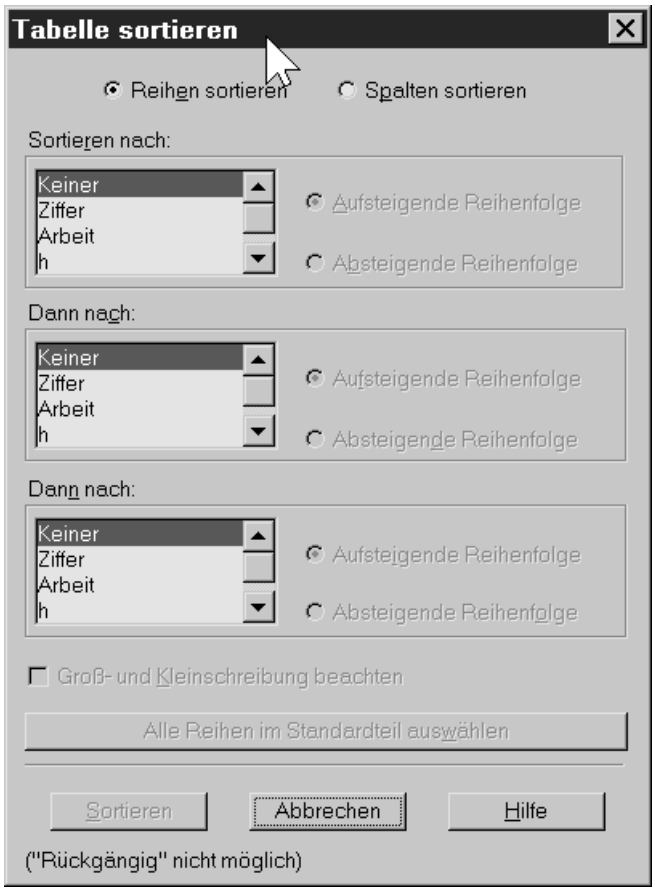
Functions in tables

Sort by columns and rows

Sorry, there is no undo for this function.

❒ Place the cursor in the table

❒ In **Table > Sort** … set the desired options; **Sort**!



Calculations in tables

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

- FrameScript by .ries (`http://www.ries.de/`) places scripts into reference pages. This is a good method for 'office' applications.
- 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.

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 ⟩ und der dritten zelle
```

❒ **File > Import > File…** select *Copy into Document*.

❒ In the dialogue **Unknown File type** select *Text;* **Convert**!

❒ In the next dialogue (Import text by copy) select Convert to Table

❒ 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

Table 2: Snapshot from log of PC DDD-KLD

❒ 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

To import an Excel table (or part of):

1 In Excel select the table area to be copied

2 Copy to the clipboard

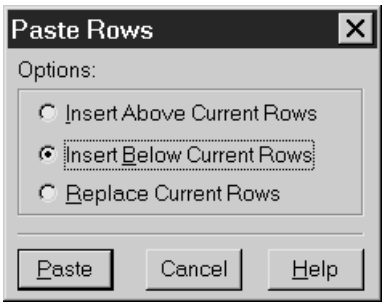
3 In FrameMaker use **Edit > Paste Special…** and select **text**.

4 Convert the tabbed paragraphs to a table with **Table > Convert to Table…**

5 Select an appropriat Table format and format the rows according to the needs.

Special operations

Merge tables



To merge two tables into one:

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

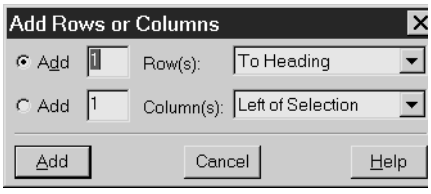
Split a table

To split a (source) table into two tables (for a second method see *Split a table* on page 5-16):

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

- ❒ Save your work to have a backup for this operation.
- ❒ 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	



- ❒ Place the cursor into the first row of the new tble 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	

- ❒ **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).
- ❒ If the source table has Footing rows:
  Place the cursor into the last row of the new tble 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.
- ❒ Select the copied body rows in the *source table* and delete them.

Fix appearance of table title

The table title may expand over the right edge of a table.

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

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

To make the heading as wide as the table itself,

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, hence you may wish to define and add a paragraph z6pt (line spacing 6pt fixed) or just add a line break.

5 Remove any ruling on the top and sides of this row; also remove any shading.

6 Set table property “No Title”.

The table then looks like this:

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

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

Rotated tables

Selecting a table by triple clicking into it and then rotating the table with **Graphics > Rotate** will just rotate the cells, not the table as a whole.

head-ing cell	**sec-ond head-ing cell**	**third head-ing cell**	**fourth head-ing cell**	**fifth head-ing cell**	**sixth head-ing cell**
body cell 1	body cell 2	body cell 3	body cell 4	body cell 5	body cell 6
body cell 7	body cell 8	body cell 9	body cell 10	body cell 11	body cell 12

To get a rotated table you must rotate the text frame which contains the table.

Create a rotated master page

- ❒ 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 described above.
- ❒ Apply this master page to any desired page with **Format > Page Layout > Master Page Usage**.

Insert a disconnected page

- ❒ **Special > Add Disconnected Pages**: use a master page which provides the desired heading and footing, for example 'left'.
- ❒ Rotate the page counter clockwise with **Graphics > Rotate.**
- ❒ Modify the size attributes of the rotated page (exchange hights and width and restore the top and left distance).

Although this text flow has the name from the main text flow and is reported to be auto connected it is independent of the previous and following pages with the same text flow name (it is a **disconnected** page)

You may wish to create a special master page (e.g. named 'left_rotated') if you have many of these rotated pages in your document.

Editing rotated tables

To edit rotated tables (e.g. enter text) the table must be horizontally oriented. Hence you need to 'unrotate' the text frame with the table. It might also be necessary to adjust the location of the text frame to get access to the cells.

This page uses Master Page 'rotated'

The table is rotated and can not be edited in this mode. It is even impossible to enter the title.

Table 5:

Edit table in 'unrotated' text frame

The next page shows the same table in unrotated mode of the text frame (for better understanding the text frame is shaded). Since the table is wider than the width of the text frame, not all cells are visible.

- Select the text frame containing the table
- Rotate clockwise 90 degrees.
- To access the left portion of the table, set the frame property 'Offset from left' to 0 (in Table designer).
- to access the right portion of the table, set the text frame property 'Offset from left' to -(*page width - text frame width*)
- After editing the table rottate the text frame back.

first column	**second column**	**third column**	**fourth column**	**fifth column**	**sixth column**	**seventh column**	**eights column**

Table 6: The title can only be set in unrotated mode of the table

Special tables

Table at top of page

To get a table at the top of a page,

- Select the table (place curser anywhere into the table)
- Activate the table designer (**Table > Table Designer**)
- 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 overnext 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.

Tables with varying column widths

In a Framemaker table all cells of a column have the same width. The following, however, pretends a table with varying column width:

		Width a	Width b	
		Width c = a + b		

Table 7: Table with straddled cells

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-16).
  You may wish to select a distinct table by CTRL+triple-click into one of its cells (see *Handling table items* on page 3).

Split a table

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* on page 5-11 for another method):

- ❒ Make a copy of your table (A => B)
- ❒ Remove the superflous body rows at the end of A
- ❒ Remove the superflous body rows at the beginning of B
- ❒ Anchor table A, then C, then B with the above mentioned spaces before or after.

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§** § § § / § § § / § § §
§	§

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

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.

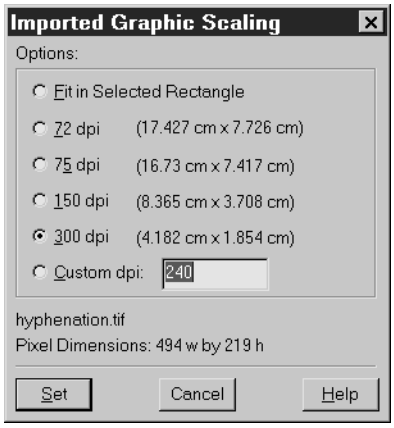
The graphic tools of FrameMaker were not developed further at the point when specialised applications became available even on UNIX.

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

Importing graphics

The kind of graphic formats FrameMaker can handle depends on the installation of the filters. If all filters are installed, an impressive number of vector and bitmap formats can be handled.

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 you have selected a bitmap graphic, set up the resolution for the desired size (dialogue **Import Graphics Scaling**).

  If you do not want to calculate, just press **Set!**
- ❒ An anchored frame containing the graphic will be inserted with the following properties:
  - Placement **Below current Line**
  - Centred
  - Cropped (if the image is to large, it will be cropped)
  - Margins of 1/12" = 6 pt (2.12 mm) around the image

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

Import graphic into frame

When you import a raster graphic into a selected (anchored) frame, FrameMaker knows about the size of the frame and thus

- Provides a number for the fitting resolution (e.g. 183 dpi).
- You just need to activate the Custom dpi option.

Note: *Framemaker can only know the properties (e.g. dpi value) if you have used the dialogues and not the mouse to resize the graphic.*

Scaling a graphic

- ❒ Change the size and position of the graphic within the frame (which is selected already) with the mouse (hold down the SHIFT key to constrain to proportional scaling).
- ❒ After you have scaled a bitmap graphic with the mouse the resolution (dpi) is no more known in the **Graphics > Object Properties**
- ❒ When scaling a vector graphic, FrameMaker support only proportional scaling in percents.

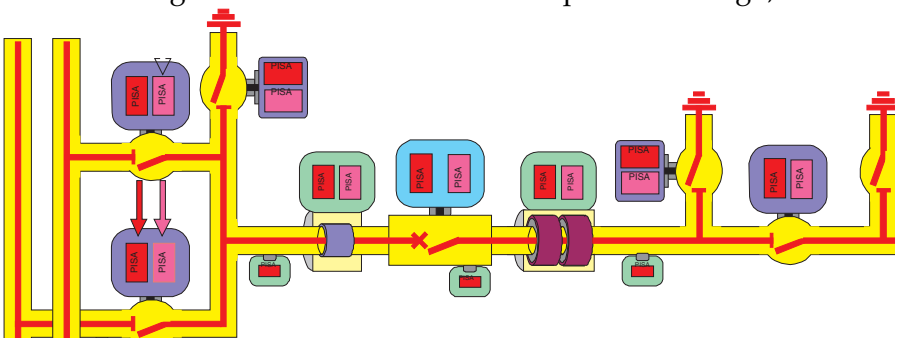
Problems with imported graphics

- ❒ 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)
- ❒ Can you get a different format from the source?

Vector data formats

EPS (Encapsulated PostScript)

This drawing is coloured and contains a preview image, scaled

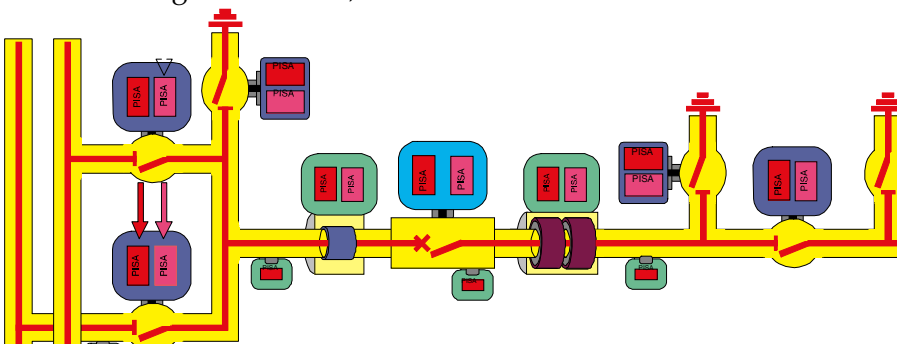


to 75%. If no preview image is included, FrameMaker displays a gray box of appropriate size. To see the image, you need to print on a PostScript printer.

On a non-PostScript printer you will get only the preview image (if present).

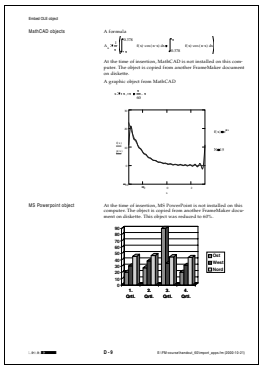
WMF (Windows MetaFile)

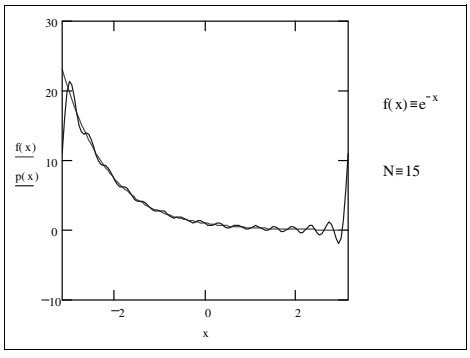
This drawing is coloured, scaled to 75%.



PDF

PDF of a page, scaled to 16%; cropped image from this PDF, scaled to 60%.





Note: *From a multipage PDF only the first page is presented.*

Raster data

DIB (Device Independent Bitmap)

This image is coloured, scaled to 75 dpi

GIF (Graphic Image Format)

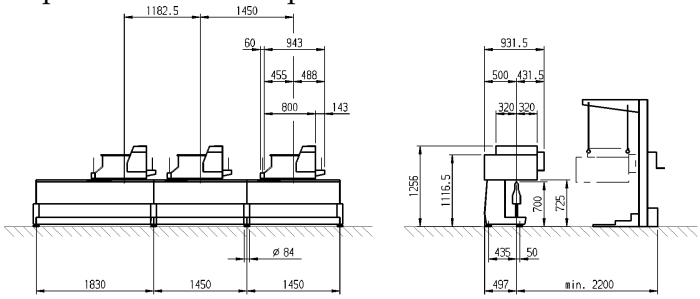
This image is coloured, scaled to 200dpi

TIF (Tagged Image Format)

This image is coloured (TIF 6), scaled to 75dpi

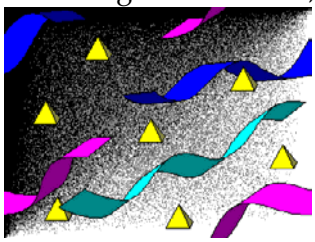
XWD (X-Windows)

Imported with 400 dpi



BMP (Bit Map)

This image is coloured, scaled to 200 dpi



JPEG (Joint Programming… Group)

This image is fully coloured, scaled to 100dpi.

Printing coloured images

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

- 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**).

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 the 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 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

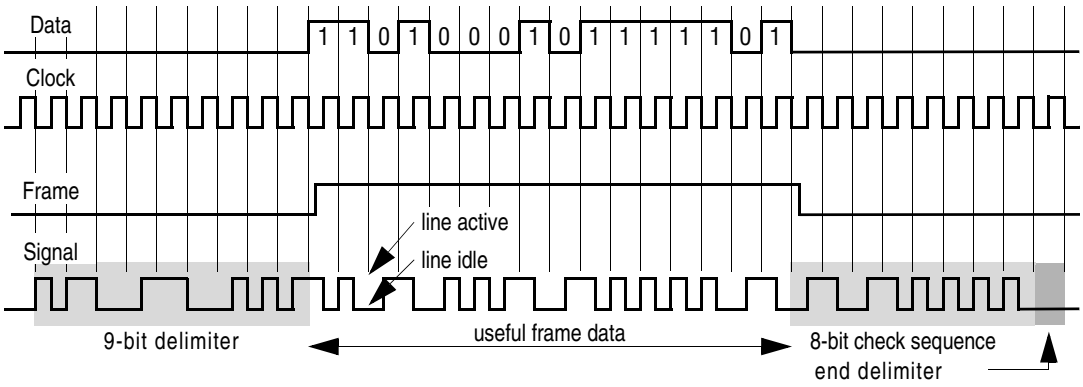
You may also wish to change the properties of the image to...

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

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 moue 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

Toolbars for graphic work

Prepare the environment

- 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 colour	Apply area fill colour
Define line fill colour	Apply line fill colour
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, hight, width), use **Graphics > Object Properties** or button . Which properties can be set depend on the object.

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).[1)]

Group and ungroup items

Use **Graphics > Group** ( ) to group variaous selected items. Use **Graphics > Ungroup** ( ) to ungroup selected items. You can ungroup as long as the button is not gayed.

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

1 With Shlomo Perets' Express Customization Kit installed you get this function on the context-menue (right click).

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, equidstant centers/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

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

Modify shapes

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

- Convert an arc from 1/4 circle or 1/4 ellipse to any angle. Use **Graphics > Object Properties** to set the value numricall.
- Activate the handles of a polygon or spline to modify the location of a handle point.

Regular polygons

To create regular polygons (3 … n), start with a cirle, ellipse, square or rectangle and reshape it to an arbitrary number of edges 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. Then use **Graphic > Smooth** ( ) to convert it to a smooth line. For adjusting the shape it may be useful to get the polygon again with **Graphic > Unsmooth** ( ).

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 DPT-point[2)] by DTP point (with **ALT+SHIFT+arrow** 6 points)

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.

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

2 1 DTP point = 1/72 inch = 0.3528 mm

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.

Rectangles with rounded corners

Change the radius of the corner with **Graphics > Object Properties** or

Special arrows

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 arrow head

- ❒ 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.*

Adjust frame size to iconic images

Inline icons (e.g.)are placed in an anchored frame **At Insertion Point** with some negative "Distance above Baseline". 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'.

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.

Border and Fill colour

The colour of the border and the colour of the interior fill can only be the same.

Clip art

FrameMaker comes with a set of clip art, which is very useful. These drawings are all done with FrameMaker tools.

FrameMaker 5.5

In FrameMaker versions before 6 you can access the clip art files by **Help > Samples & Clip art**.

FrameMaker 6.0

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

The names of the clipart files in `$FMHOME/clipart` give a hint on their contents:

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

Own clip art

It may be a good idea to collect arbitray 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 into the clip art directory.

Importing from special applications

Origin

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

- Export eps from Origin
- 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** dialogue select **as shown when printed** to get best reults

4 In FrameMaker use **Edit > Paste Special…** and select **wmf**.

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
- Table Footnote
- Single Line
- Double Line

To create a graphic element for a paragraph

❒ Switch to the Reference Pages (**View > Reference Pages**)

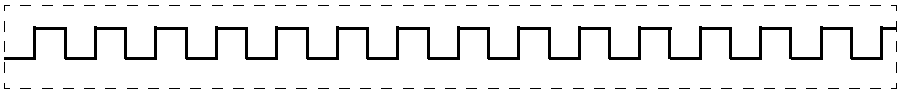
❒ Create a graphic frame with the corresponding graphic tool.

❒ 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

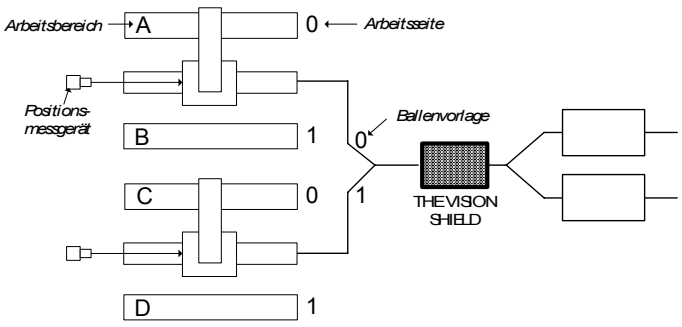


Note: *The size of the graphic frame defines the white space around the graphic when it is used above or below a paragraph. If you will use it for both purposes, centre the graphic vertically.*

Graphic objects

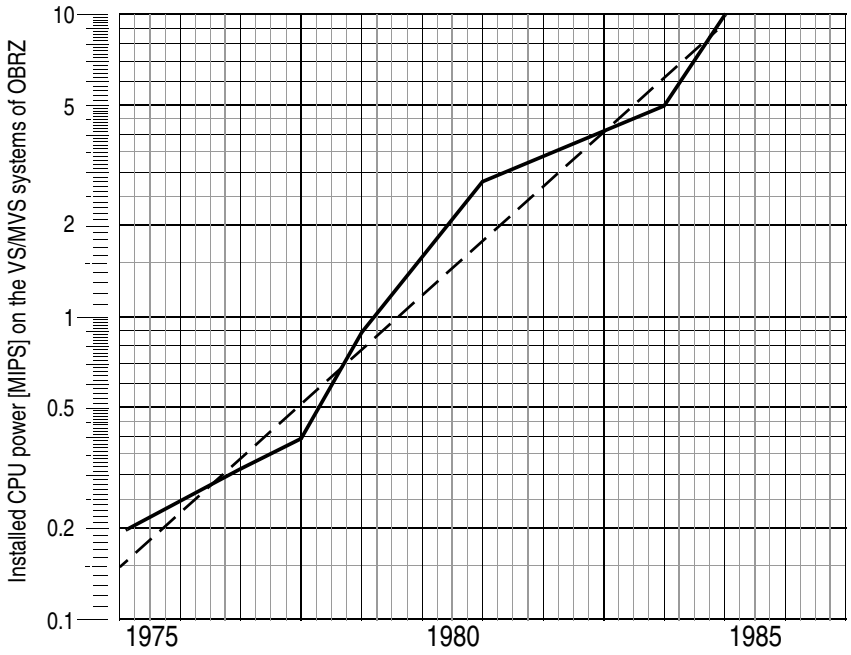
When just copying and pasting a graphic from another application, you get an embedded object (OLE). If you double-click on the graphic, the creating application is opened.

Do not use this method for documents you distribute.



Diagrams using clip art

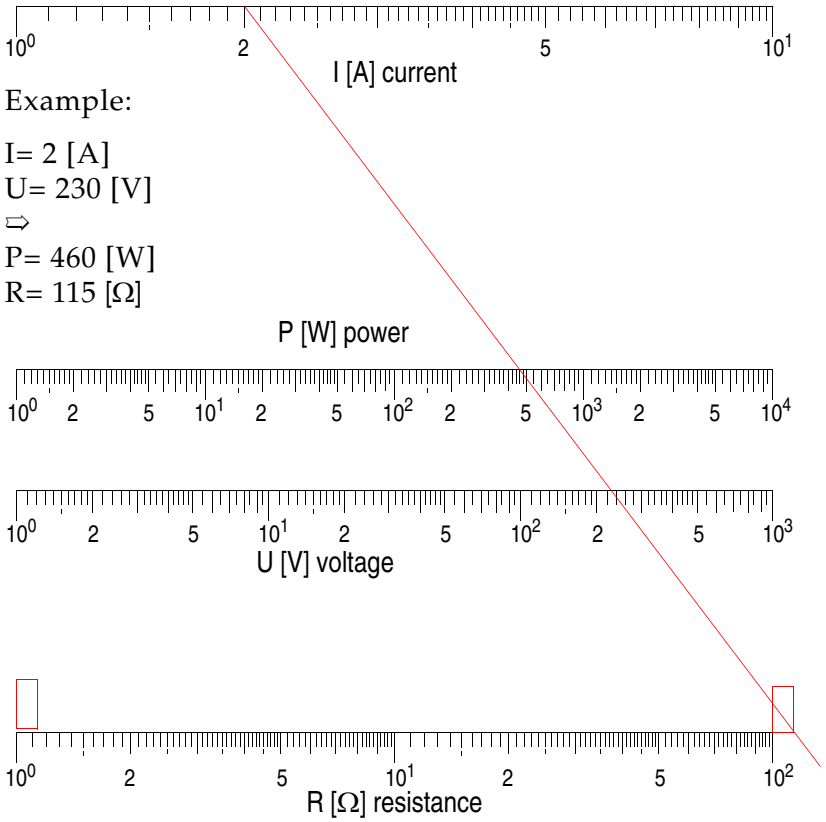
Diagram



Source: Klaus Daube, OBR-DTA report 27, Zürich 1988-05-06

Nomograph

$P = U \bullet I;\ R = U/I$



Example:

I= 2 [A]
U= 230 [V]
⇨
P= 460 [W]
R= 115 [Ω]

Source

The clip-art for these diagrams (and much more) can be obtained from the author (see `http://www.daube.ch/public_html/docu/fmaker09.html`) for a small fee.

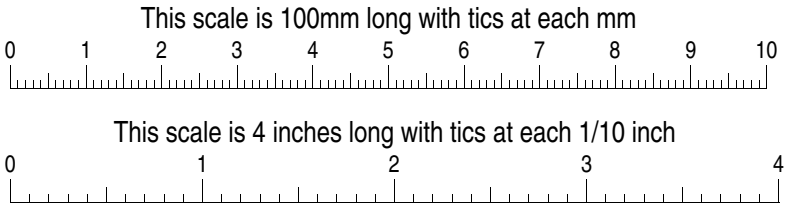
All scales comprise these elements:

- Tic marks
- Axis (the spine) - not present in all templates
- Figures (using character format **x-figure**)
- Title (using character format **x-title**)

The grids are just a collection of long tic marks, most are grouped in units.

Adjust a scale to your needs

To adjust a scale to your needs (e.g. to make an inch ruler):



- Make a copy of the desired scale (in this case, the linear scale).
- Ungroup the elements (you get the basic elements).
- Use a large zoom factor for positioning.
- Do not use spacing smaller than 2mm in diagrams when printed on an ordinary laser printer.

Note: *Be very careful manipulating the ungrouped tic marks! Remember that there is **only one undo** in FrameMaker. The arrangement of the tic marks is the core of the boilerplate scales!*

Adjust the tic marks[3)]
- Adjust the length of the tic-mark cluster (100mm ⇨ 254mm)
- Ungroup the tic mark cluster and delete all unneeded tic marks
- Group the tic marks

Adjust the figures
- Ungroup the Figures
- Remove the un-needed figures
- Redistribute the figures horizontally
- Group the figures

Adjust the title
- Select the title text and change it
- Select the title and then the tic marks
- Align the title to the tic marks

Put it together again
- Select all four elements of the adjusted scale
- Group the elements to prevent accidental misalignment.

3 An object may not have its centre of gravity outside a frame (or it will no more belong to the frame). Hence it may be necessary to first ungroup the tic mark cluster and remove any unneeded tics, re-group and adjust the length.

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.

Variables

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

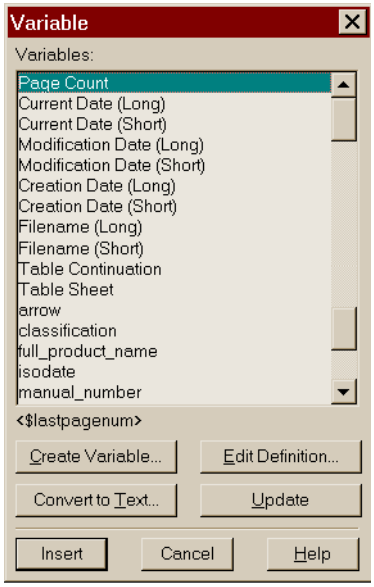
Note: *Because the names of the building blocks of system variables are localised, you may get problems when changing the UI language during the development of a document (the Running Heading / Footing definitions in layout are also variables).*
This warning applies also to the building blocks of cross-references

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.

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

Insert a variable



To insert a variable:

❒ Place the cursor at the desired location

❒ Select **Special > Variable...**

❒ Select the variable from the given list in the dialog.

❒ 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 4-8. 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:

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

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 of SAWATEC AG” there could be three variables:

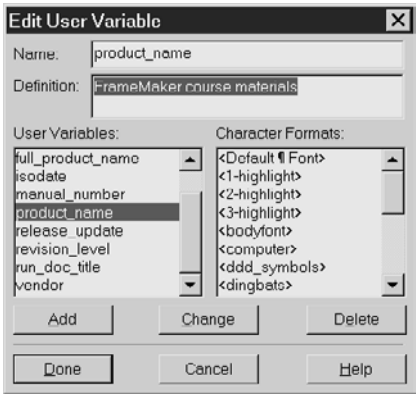
Product-short	Precision Dosing Pump
Product-type	GP-98ML
Vendor-short	SAWATEC AG

Building blocks

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

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 dialog 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	<$tbssheetnum>	<$TabSeiteNr>
Number of table pages	<$tblsheetcount>	<$TabSeiteZählen>
	<$marker1>	<$Marke1>
	<$marker2>	<$Marke2>
	<$paratext[*paratype*]>	<$AbsText[AbsTyp]
Number of the paragraph *paratype* [a]	<$paranum[*paratype*]>	<$AbsNum[*AbsatzTyp*]>
Counter value of paragraph *paratype*.	<$paranumonly[*paratype*]>	<$AbsNumExkl[*AbsatzTyp*]>
Tagname of paragraph	<$paratag[*paratype*]>	<$AbsTyp[*AbsatzTyp*]>
Name of condition type on page.	<$condtag[*hitag,..,lowtag,nomatch*]>	<$BedTyp[*Typ1,...,Typn,Sonst*]>
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 [b]	<$Default Para Font>	<Absatz Standardschrift>
Character format *name*	<*name*>	<*name*>

Table 1: Building blocks for system variables

a. Entire auto numbering string including any leading and trailing constant text.

b. Starting with FrameMaker version 5.5.6 this can be abbreviated to </>.

Cross-references

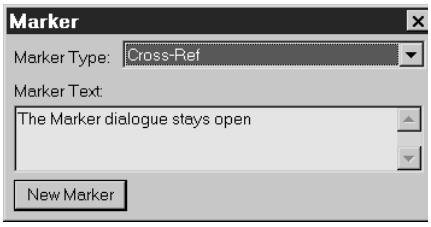
Cross reference restriction

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.

Define the 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.

To insert a cross-reference marker



❒ Place the cursor where you want to define the target (marker)

❒ Insert the marker with **Special > Marker…**
Marker type= *Cross-Reference*

❒ Define the name (text) of the marker. Be aware that in long document you will need some logic to find the correct markers later.

❒ **New Marker!**

❒ The Marker dialogue stays open, so you can go to the next location in the document...

Hint

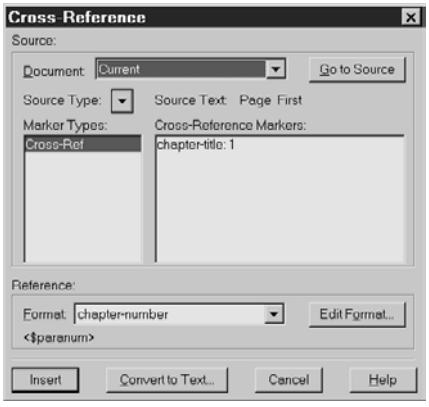
You can use existing text to appear in the marker text: select the text you want to be placed in the marker text. It will appear in the Marker dialogue box.

Note: *The marker text is only a reminder for the editor to distinguish the various targets. This text can not be used in references.*

Create a cross-reference

To define a cross-reference to another file, this file must be open.

To define a cross-reference to a cross-reference marker



❒ 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

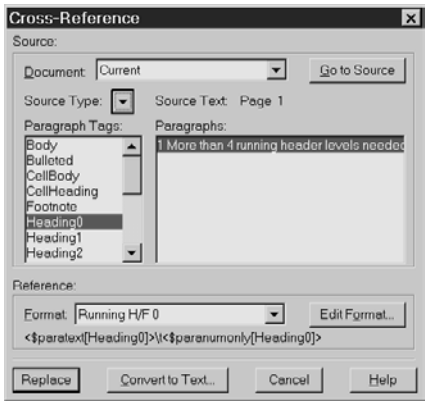
❒ Select the desired marker in the right hand list.

❒ 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.

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).*

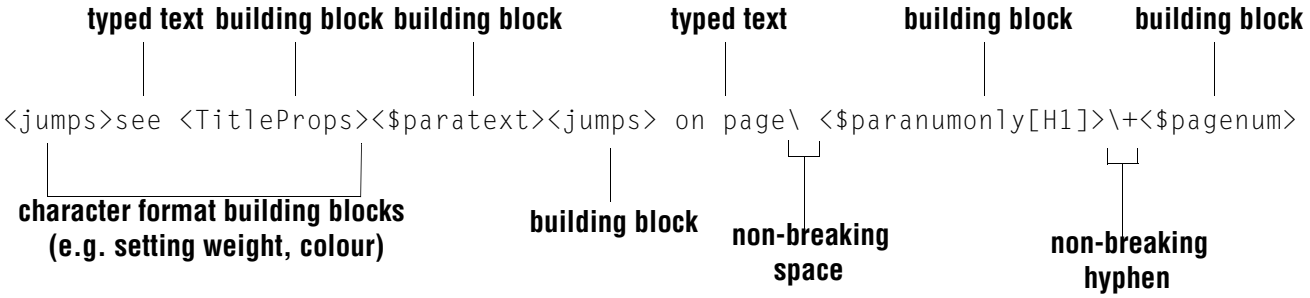
Cross-reference to any paragraph



- ❒ 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 = Paragraphs
- ❒ Select the desired paragraph type in the left hand list.
- ❒ Select the desired paragraph 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.

Example of complex cross reference format

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



Cross-reference to other files

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 7-5".

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>
```

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 7-7

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

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

```
<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:
  Siehe Tabelle *1 Building blocks for system variables* on page 4.

The format for the second solution is:

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

Footnotes

Footnotes in the text

Footnotes comprise a reference (in the text) and the note itself at the end of the page.

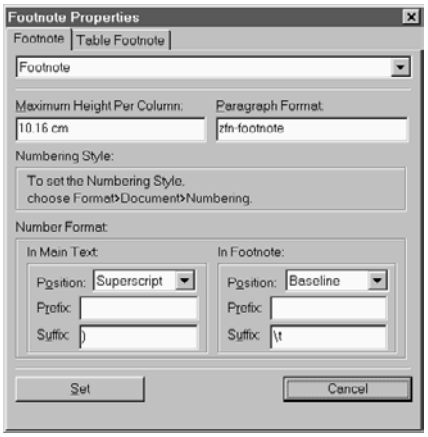
For the footnotes the following items must have the same name:

- 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.

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 1-5).*

Note: *If a footnote is referenced close to the end of a page (for example, in the last paragraph) then the footnote is placed on the next page.*

Format of the footnote reference



- The format name (normally Footnote) and the number format of the reference and the note is defined in **Format > Document > Footnote Properties…**
- The separation line is *not* defined by the 'Frame above' property of the paragraph style of the note. The separation line is defined on the Reference pages in a graphic frame named "Footnote".
- You can only define constant text for the prefix and suffix in the footnote format (e.g. opening and closing brackets). For footnotes *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.
  - Apply numbering properties to the paragraph format Footnote.
- The numbering style is defined in **Format > Document > Numbering > Footnote** (or > Table Footnote).

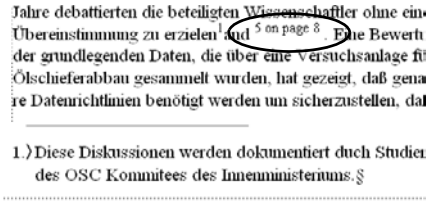
For special treatment you may wish to replace footnotes by ordinary references.

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 ein
Übereinstimmung zu erzielen[1] and <5 on page 8>. Eine Bewertu
der grundlegenden Daten, die über eine Versuchsanlage fü
Ölschieferabbau gesammelt wurden, hat gezeigt, daß gena
re Datenrichtlinien benötigt werden um sicherzustellen, dal

1.) Diese Diskussionen werden dokumentiert duch Studien des OSC Kommitees 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 (super-scripting) 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 tables

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

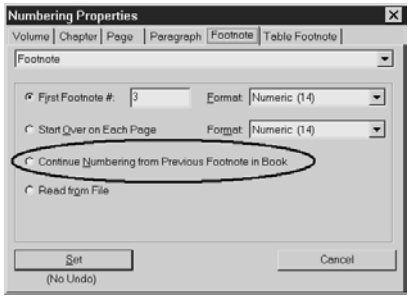
Footnotes at the end of a book

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).

Solution

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 8-6. 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]

This is just text in the column and uses a footnote reference in this left column [2].

This footnote reference is in the right column [3].

2. This footnote is referenced in the left column

3. Footnote referenced in the right column

1. This footnote is refenced in the title

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]

This is just text in the column and uses a footnote reference in this left column [2].

This footnote reference is in the right column [3].

1. This footnote is refenced in the title
2. This footnote is referenced in the left column
3. Footnote referenced in the right column

Bibliographies

Bibliographies are an essential element in scientific publications. The format of the bibliographic data as well as the form of refrences varies. Each instituion 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.

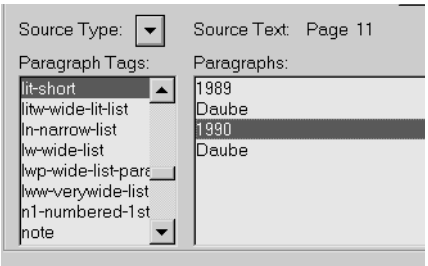
[3] Garneau, D., ed. *National Language Support Reference Manual*. January 10, 1990 ed. National language Information Design Guide, ed. IBM. Vol. 2. 1990, IBM National Language Technical Centre: Toronto, CDN.

Essential properties of paragraph format

The paragraph format for the bibliographic data in this example is `lit-ref-numbered` with the main properties: Autonumbering 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).

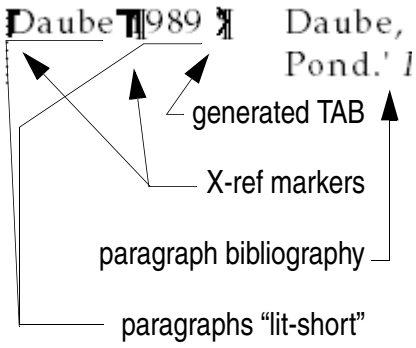
This method provides a sequential list of data items (name, year, name, year, ...) in the cross-reference dialogue. Strangely enough the first entry in the list is the second paragraph of the specified format...

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 agressively 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; autonumbering sequence: “`\t`”; Left indent: 3 cm; tab position: 3 cm.

Sorting the biblographic data

To sort the bibliographic data in lists (paragraps), 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).

Distinction between 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 13).

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 Bibligraphien in Framemaker, Journal of FrameMaker, Nr. 43, 256-268.

[2] Th. Reuter, FrameMaker

[2] Reuter, Thomas M., 1999: Das Buch zu FrameMaker. Smart-Books Kilchberg. ISBN 3-908488-28-1

Essential properties of paragraph formats

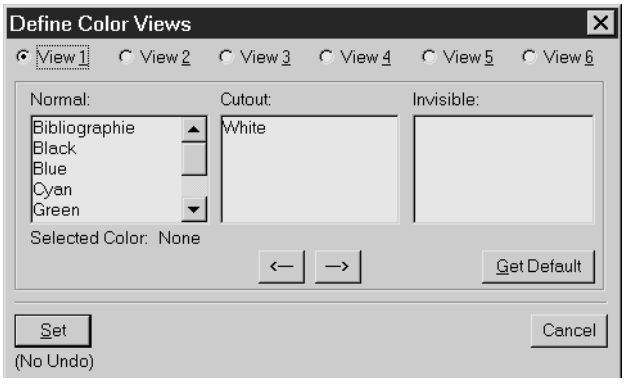
B1 Next paragraph: B2; colour: Bibliographie; Keep with next; autonumbering sequence: "`B:[<n+>]\t`".

B2 Next paragraph: B1; no keep; autonumbering sequence: "`B:[<n>]\t`" .

Colour views

The file with the biblographic 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.



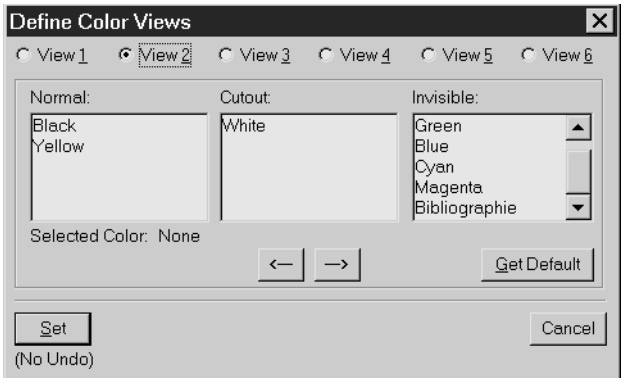


Table of bibliographic data

Since tables can be sorted, it would be nice to use them for bibliographies in place of the above mentioned lists.

However, sort destroyes 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 Syndrom.

Blum et al, 2000	Blum, L., Bajaj, P., Gass, J., Poulikakos, 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.

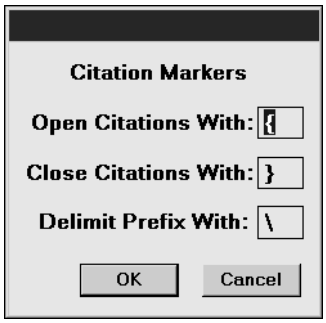
Bibliographies with EndNote

EndNote from ISI ResearchSoft (www.endnote.com) does not provide any integration with FrameMaker (compared to MS Word and Word Perfect, where menus are provided).[4)]

Setting up EndNote

Set Citation Markers

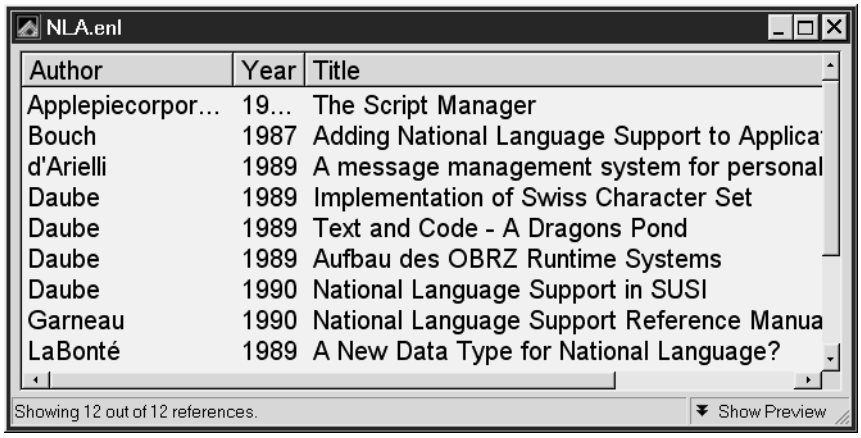
In EndNote define curly braces for Citation Markers, because FrameMaker MIF uses brackets for many purposes. Brackets could interfere with the Citation Markers.



Define the reference data base in EndNote

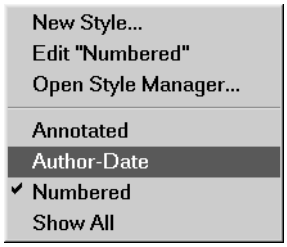
Select a reference data base with **File > Open**.

For your work you might have a specific data base where you collect all references from various sources.



Define the format for the bibliographic items

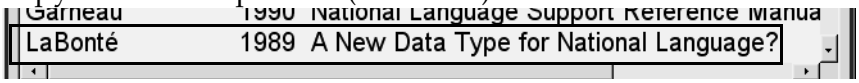
In EndNote select **File > Output Styles... >** *the desired format*, for example, Numbered.



4 At ETH Zürich a 1-day course about EndNote is offered: *Literaturverwaltung mit EndNote Plus (US-Version)*.

Insert a citation

1 In EndNote select the Citation in the Database view and copy it to the clipboard (CTRL+C).



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+V). The inserted temporary citation has the format `{LaBonté, 1989 #11}`.

Note: *Do not change this form of the temporary citations until you have finished all the work on your document.Otherwise EndNote might not find them with "Scan paper...".*

Create the bibliography

EndNote can not operate directly on the FrameMaker file. It only can operate on the MIF files (Maker Interchange Format, which is a plain text file). Hence you need to perform some steps.

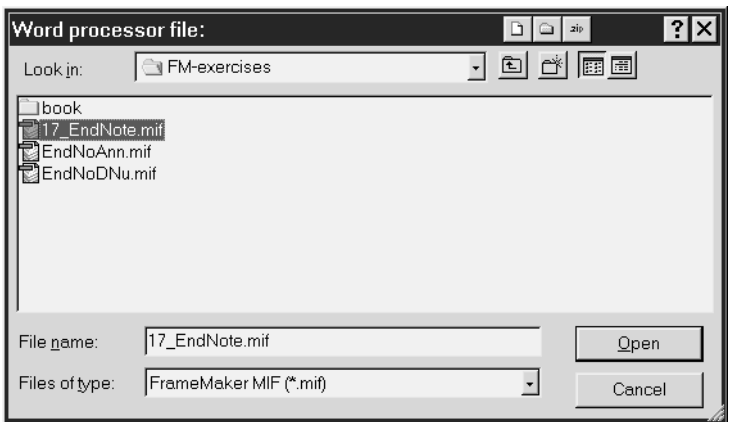
Save your current work

1 Save your document (with the temporary citations) in the FrameMaker format. This file will be used later, if you want to change text and / or citations.

2 Save your document as MIF (**File > Save as...**). You may wish to place this file in a different directory.

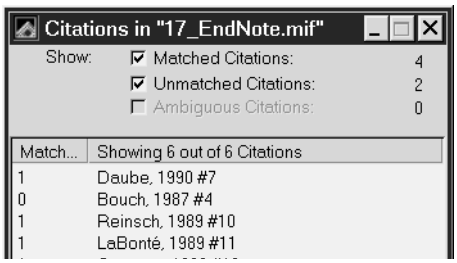
Create the bibliography

3 In EndNote select **Paper > Scan Paper...**. The following dialog will appear.



4 Select the MIF file and click **Open**.

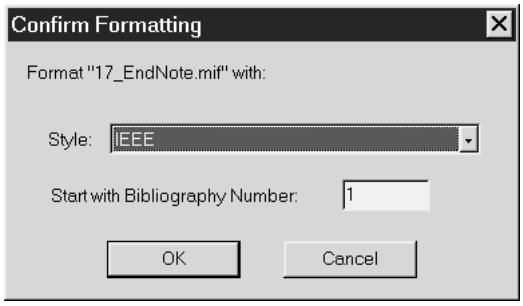
5 EndNote now scans the MIF file and provides a list of the found (and matched citations)



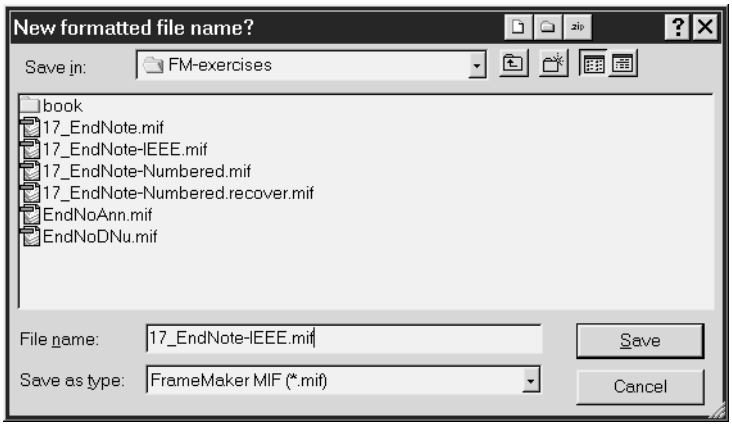
Note: *A zero in the* Matches *column indicates that EndNote was unable to match the temporary citation to a reference. This may be caused by the presence of a citation delimiter used for something other than a temporary citation.*

6 In EndNote choose **Paper > Format...** In case of unmatched temporary citations you will be asked whether to continue or not.

In the next dialogue you choose the style of the references from the drop-down list. With option **Other...** additional styles can be selected (e.g. IEEE)



You may wish to change the name of the output file [5)].



7 Click the **Save** button.

Back in FrameMaker

8 Switch to FrameMaker and open the generated file (for example, `17_EndNote-IEEE.mif`). The citations have changed to an appearance according to the selected format:

Tia non ob ea soluad incommod quae egen ium improb fugiend {Bouch, 1987 #4} [2].

Note: *This example displays an unresolved Temporary Citation.*

3 working files

Be aware that you now have 3 files:

- The original FrameMaker file with the temporary citations. Make any *changes* to text or citations *only in this file*.
- The MIF file from this, which is absolutely identical, when opened in FrameMaker.This is an intermediate file, which you can discard after the output file has been generated.
- The MIF file with the resolved References and the bibliographic list. This is what you should *print or publish*.

5 EndNote versions < 5 propose a DOS-style name (only 8 characters)

Format of references and bibliography

When generating the final format for the citations and the bibliography, EndNote does not know about the character formats in the FrameMaker document. EndNote uses text processing features such as 'italic' or 'superscript' for the in-line formatting.

EndNote does, however, use a paragraph style for the bibliographic list: *Bibliography*.

If you do not have a paragraph style Bibliography defined in your document, this style is based on the *last paragraph* in the document.

The paragraph format *Bibliography* should...

- be in the paragraph catalogue,
- use appropriate indentation.

Note: *You must not define a FrameMaker autonumbering feature for the paragraph format (for example, to surround the number in the bibliographic list with brackets). EndNote generates a 'complete text paragraph'.*
You can change the generating pattern in EndNote with **Files > Output Styles > Edit ...**

Generated by EndNote

[3]⟩A. LaBonté, "A New Data Type for National Language?," presented at SEAS Anniversary Meeting, Amsterdam, The Netherlands, 1989.

After defining ¶-style *Bibliography*

[3] A. LaBonté, "A New Data Type for National Language?," presented at SEAS Anniversary Meeting, Amsterdam, The Netherlands, 1989.

Bibliography style variants

EndNote provides a large number of pre-defined styles according to various publication standards. The formatting definitions are not well documented, at best you learn from the examples (e.g. how to produce a hanging indent, how to append an abstract).

For example, with output style *Generic* you will get reference numbers in brackets and the bibliography for this conference proceeding formatted accordingly:

Generated by EndNote

Ut w eros et accumsan et iusto odio dignissim qui blandit praesent luptatum zril delenit au gue duis dolore te feugat nulla facilisi [2].

1.⟩A. LaBonté (1989). *A New Data Type for National Language?* in *SEAS Anniversary Meeting*, Amsterdam, The Netherlands, SEAS Share Europe Association.

... and with proper ¶-style *Bibliography*

1. A. LaBonté (1989). *A New Data Type for National Language?* in *SEAS Anniversary Meeting*, Amsterdam, The Netherlands, SEAS Share Europe Association.

Bibliography in a FrameMaker book

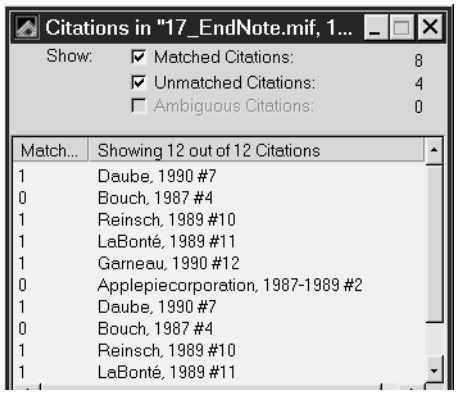
This procedure will place the bibliography at the end of the last file in a book.

1 The last chapter in the book should end with the paragraph style *Bibliography*, which is properly set up.

2 Save each file from the book as MIF.

3 In EndNote use **Paper > Scan Paper...**. for the first file. Do not close the report dialogue "Citations in ...".

4 Choose **Paper > Scan next > Scan next...** for the succeeding files. This cumulates the references.



5 When selecting **Paper > Format...** EndNote will generate the output MIF for the first, then for the second etc. input file.

6 Open each of the output files in FrameMaker and save it as an ordinary FrameMaker file (probably into a new directory `...\final\`).

Note: *Be careful with the output file names, because the FrameMaker book process does not know anything about the new names!*

Bibliography in specific chapter

If you want to have the bibliography list in a specific chapter (which might hold only the bibliography),

- Create a specific chapter ending with a paragraph of style *Bibliography*, which is formatted properly.
- Provide this chapter as the last input file to **Paper > Scan next > Scan next...**

Since in this last chapter no citations are present, EndNote will just place the bibliographiy there.

Sample text

Text with references

Note: *In this sample text the temporary citation at the end of the **first** paragraph is **split across lines**. The last paragraph contains a hyphenated temporary citation. Both cases are handled correctly with EndNote version 3.*

Lorem ipsum dolor sit amet, nulla facilisi corper susc accumsan et iusto odio dignissim qui blandit praesent luptatum zzril delenit augue duis dolore te feugait nulla facilisi. {Daube, 1989 #9}

Et tam neque pecun modut est neque nonor et imper ned libidig met, consectetur adipiscing elit, velit esse molestaie cillum. Tia non ob ea soluad incommod quae egen ium improb fugiend.{Bouch, 1987 #4}

Officia deserunt mollit anim id est laborum Et harumd dereud facilis est er expedit distinct. trenzsa schengos ent kaap zux copy wipont trenz kipg naar mixent phona. {LaBonté, 1989 #11}

Cak pwico siructiun ruos nust prexs. Piy opher hawers, eit yaggles orn ti sumbloat alohe plok. Su havo loasor cakso tgu pwuructs tyu.{Garneau, 1990 #12}

Lorem ipsum dolor sit amet, consectetaur Greek to me, dereud facilis est er expedit distinct. Nam liber te conscient to factor tum poen legum Officia deserunt mollit anim id est laborum {Applepiecorporation, 1987-1989 #2}.

Formatted references

Note: *These are copied to this document from another file to preserve the above displayed temporary citation.*

Lorem ipsum dolor sit amet, nulla facilisi corper susc accumsan et iusto odio dignissim qui blandit praesent luptatum zzril delenit augue duis dolore te feugait nulla facilisi. [2]

Et tam neque pecun modut est neque nonor et imper ned libidig met, consectetur adipiscing elit, velit esse molestaie cillum. Tia non ob ea soluad incommod quae egen ium improb fugiend.[3]

Officia deserunt mollit anim id est laborum Et harumd dereud facilis est er expedit distinct. trenzsa schengos ent kaap zux copy wipont trenz kipg naar mixent phona. [1]

Cak pwico siructiun ruos nust prexs. Piy opher hawers, eit yaggles orn ti sumbloat alohe plok. Su havo loasor cakso tgu pwuructs tyu.[4]

Lorem ipsum dolor sit amet, consectetaur Greek to me, dereud facilis est er expedit distinct. Nam liber te conscient to factor tum poen legum Officia deserunt mollit anim id est laborum [5].

Generated bibliography

[1] LaBonté, A. *A New Data Type for National Language?* in *SEAS Anniversary Meeting*. 1989. Amsterdam, The Netherlands: SHARE European Association.

[2] Daube, K., *Aufbau des OBRZ Runtime Systems*, in *Technisch-wissenschaftliches Rechnen am MVS System*. 1989, OBRZ AG: Zürich. p. Chapter 400.50.10.

[3] Bouch, D. *Adding National Language Support to Applications*. in *SEAS Anniversary Meeting*. 1987. Edinbourgh, Great Britain: SHARE European Association.

[4] 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.

[5] Applepiecorporation, *The Script Manager*. Apple Developers CD ed. Inside Macintosh, ed. A. Inc. Vol. V. 1987-1989, Renton, WA, USA: Apple Inc.

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.

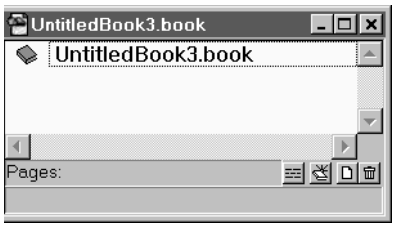
Chapters in a book can consist of more than one file.

All files in a book can receive formats (style elements) from any document at once. This is a great feature of FrameMaker.

Handling book items

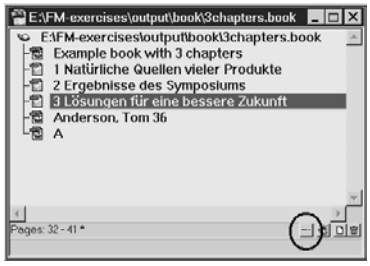
- Either you start a new book without having any clue which files you want to put in.
- Or you start from an already existing file.
- The sequence of files in the book determines the chapter numbers (and other numbering).
- Generated files get the name from the current book, for example, *book*name*TOC.fm.

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 .

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.

Rename file

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".

Note: *Renaming a file causes FM to update all references ot this file. In addition a file with the old name is saved before the updating is performed.*

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.*

Delete file

To delete a file from the book, select it and press the button or use the DEL key. 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.

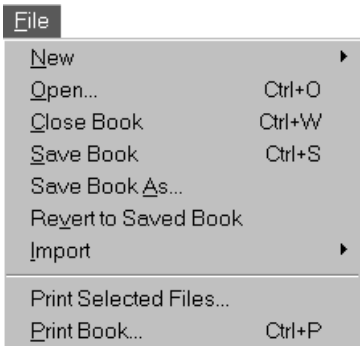
Change location of file in book

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 menue:

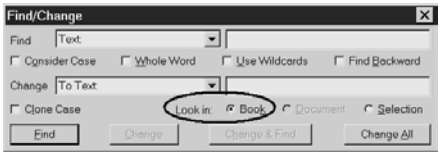


For the book window some menu items change (see figure).

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 menue



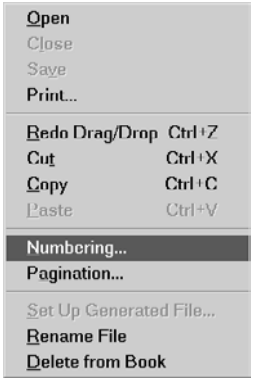
In the Edit menu the following items change when you are in a book window:

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 new items in the Edit menu.

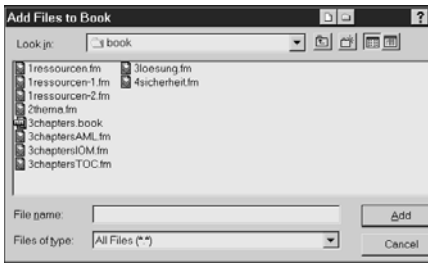
Context menu (right mouse button)



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 5).
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 a chapter (file) to the book

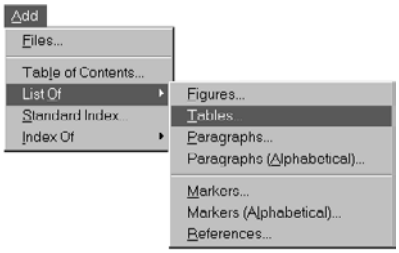


1 In the book window use **Add > File...** to get a standard file list.

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** menue to add generated files to the book. This menue is only visible if the book file is active. Select the desired type of file:

Table of Contents... In the next dialogue specifiy the properties of the Table of Contents (see *Table of contents* on page 9-3).

List of The submenue gives you a list of list types. These lists are based on marker types or paragraph styles (see *Arbitrary lists* on page 9-13.

Standard Index... In the next dialogue specify the properties of the Index (see *Index creation* on page 9-8).

Index of Gives you the choice of predefined indexes in a submenu.

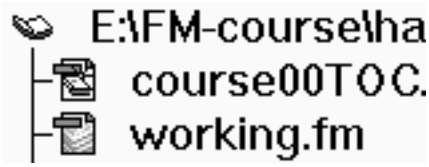
To add a generated file to the book,

1 Select the type of file from the **Add** menue (and probably using a submenu)

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.

Icons in book window



The files in the book window use different icons:

- Book
- Generated file
- Sandard file

Set up numbering of chapter files

A FrameMaker document holds a set of numbering properties:

- Paragraph numbering (see details in *Hierarchical numbering* on page 4-6).
- 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	Volume	Chapter	Page	Paragraph	Footnotes	Table footnotes
TOC with intro	1	0	1	1	1	alpha
working	1	1	1	1	1	alpha
texthandling	1	2	1	cont.	cont.	alpha
layout	1	3	1	cont.	cont.	alpha
styles	1	4	1	cont.	cont.	alpha
tables	1	5	1	cont.	cont.	alpha
tables_2	1	5 cont.	cont.	cont.	cont.	alpha
graphics	1	6	1	cont.	cont.	alpha
tips	2	A	1	cont.	cont.	alpha
design	2	B	1	cont.	cont.	alpha

Table 1: Example of numbering properties for files in a book

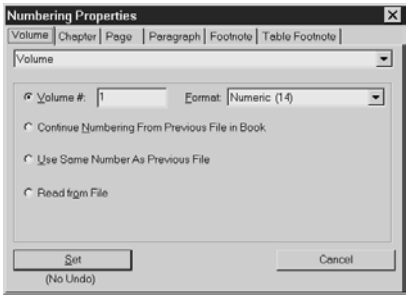
Apply the numbering properties

For the files in the book apply the properties book by file:

1 Select the file

2 Either use the context menue and select **Numbering** or use menue **Format > Document > Numbering**.

Volume number



Set the volume number according to your file structure:

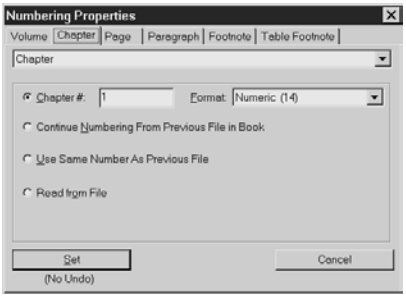
In 1st file of vol. 1 Set the **Volume #** to 1 and select an appropriate format (I, II, III or A, B, C etc.)

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:

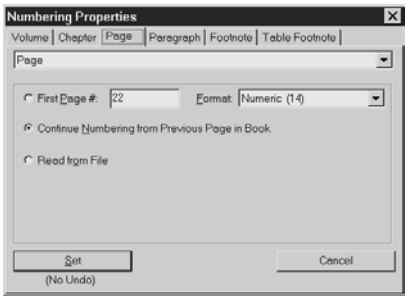
In 1st file of chapt. 1 Set the **Chapter #** to 1 and select an appropriate format (1, 2, 3 or i, ii, iii etc.)

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:

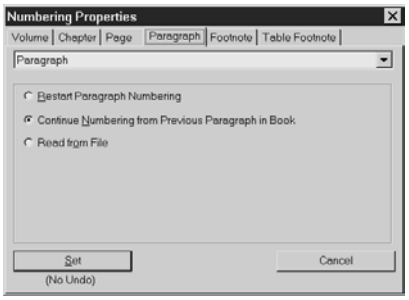
In 1st file of chapt. 1 Set **First Page #** to 1 and select an appropriate format (1, 2, 3 or i, ii, iii etc.)

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:

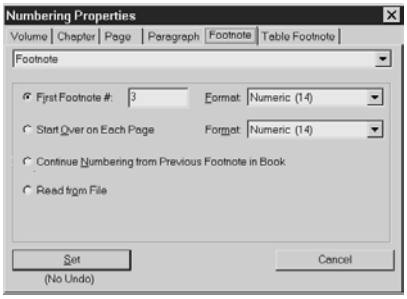
In 1st file of chapt. 1 Set **Restart Paragraph Numbering.**

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:

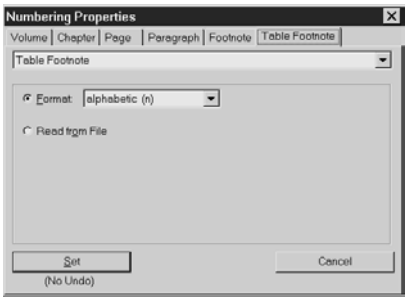
In 1st file of chapt. 1 Set **First Footnote #** to 1 and select an appropriate format (1, 2, 3 or i, ii, iii etc.)

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

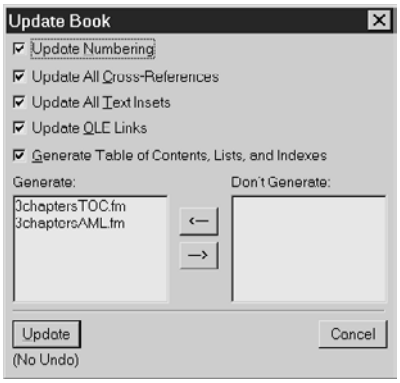
- To select all files in the book use **CTRL+A**.
- To select a contigous group of files, select the first file and then SHIFT+click on the last file of the group.
- To select arbitrary files, sleect the first file and then add more files by holding CTRL while clicking on the additional files..

Note: *Just selecting the book (the first line in the list) does not select anything!*

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.

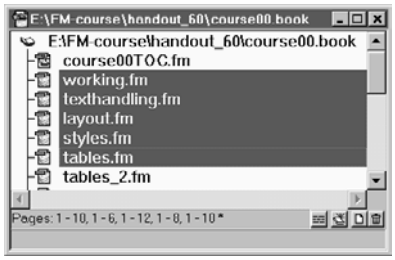
3 Press the update button ( ) or use the contect menu

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.

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 files of a book* on page 4-9.

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 4-9.

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.

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.

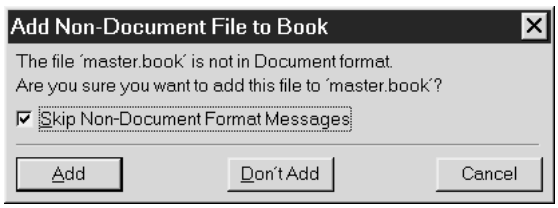
In a master book, only the following actions are possible:

- Add a book file to the master book
- Remove a book file from the master book
- Open a book file

Create a master book

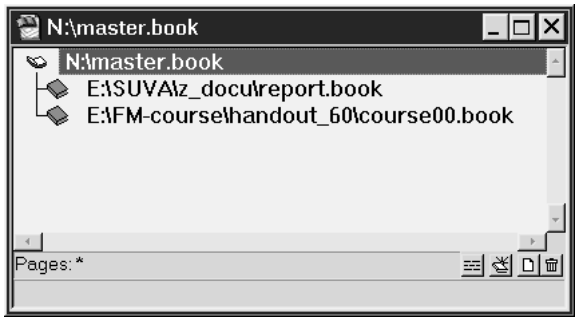
To create a master book, just create a book file with **File > New > Book** and save it with an appropriate name, e.g. `master.book`.

When adding files to the book with the icon or with menu **Add > Files** you get a message about non-document files:



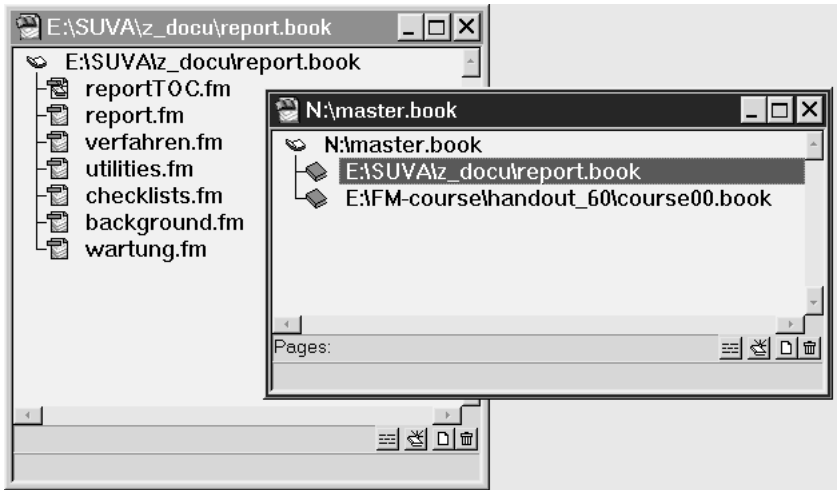
Activate *Skip Non Document Format Messages* to avoid this dialogue for future imports of book files.

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 acces to the document files in these book files:



Source

Dick Gaskill <dgaskill@bluepumpkin.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

For handling inconsistent colours see *Inconsistent colour* on page A-25

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-26.
- 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**.

Migration from FrameMaker 5.x

When updating from FrameMaker 5.x to 6, take care of your files:

For each file belonging to a book:

1 Open each file individually (not from the old book!) and accept the "Opening a Release 5.x Document..." message.

2 Adjust the layout: you now have a Chapter Number and Volume Number system variable available which greatly simplifies the chapter numbering.

3 Open also the generated files to get them converted to level 6, but do not update (re-generate) them. This is to be able to copy the layout and other defintions.

Set up new book

Set up a new book with the files you have converted to FM 6, *but without the generated files*.

4 Add the special files to the book, which must be generated. Set the properties accordingly (e.g. heading levels for a TOC).

5 Open each generated file and its old counterpart. Then import the formats (layout, paragraphs, cross-references, characters, tables - *but not the reference pages*) from the old version of the respecive file.

6 Set up (modify) the information in the reference pages of the new files according to the specials you did in the old files (e.g. generating pattern for TOC or index). For this purpose it is good to have both the new and the old file open in adjacent windows.

No more prefixes

Use <chapter-#> in the generating pattern for the page number in TOC etc.

Old

<$paratext> <$pagenum>

<$paratext> . . . . . .<$pagenum>
<$paratext>. . . . . .<$pagenum>
<$paratext> . . . . . .<$pagenum>

And specification of prefixes in the set up for the TOC file.

New

<$paratext> <$chapnum>

<$paratext> . . . . . .<$chapnum> - <$pagenum>
<$paratext>. . . . . .<$chapnum> - <$pagenum>
<$paratext> . . . . . .<$chapnum> - <$pagenum>

Another method

Open the old book in FrameMaker 6.

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.

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.

Hypertext links

In all generated files (Table of Contents, Index, List of authors and the like) FrameMaker can automatically insert hypertet links to the source location. These hypertext links

- ease the development of the document with the various revision cycles, homognisation 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

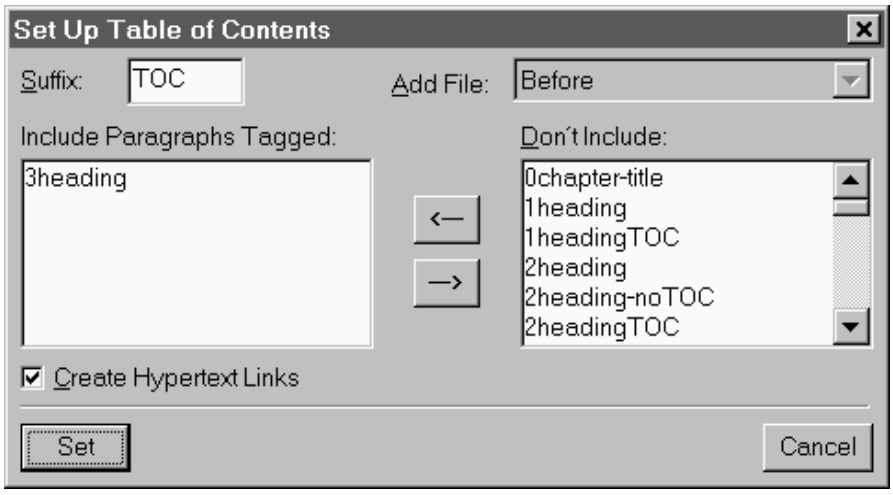
- The table of contents (TOC) must be started as a generated file (do not set up a file and then try to generate the TOC into it).
- Document comprising a book may be closed to generate the TOC from them. The book file, however must be open.
- You can generate a TOC from a single chapter file also.
- 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.

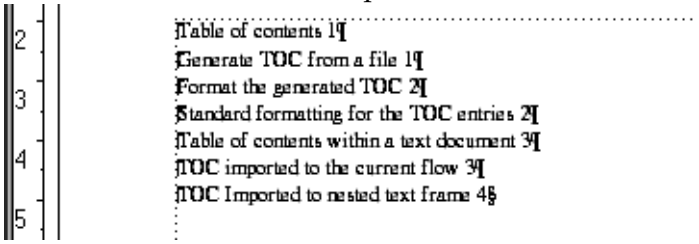
3 In the dialogue **Set Up Table of Contents** move the paragraph styles, which should appear in the TOC, to the left.



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.



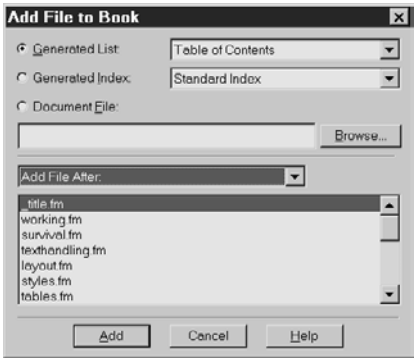
If your document file contains definitions for xxxTOC paragraphs, these will be used and the generated TOC may look

already quite well. See *Format of the generated TOC* on page 5 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.

Generate TOC for a book

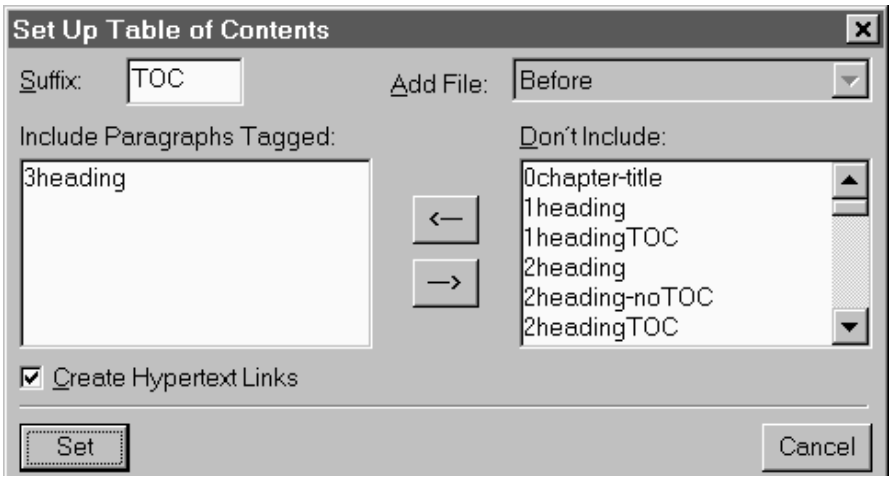


1 Enter the book file for which you want to generate the TOC

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).

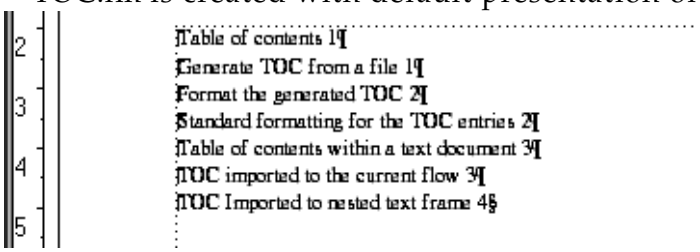
4 In the dialogue **Set Up Table of Contents** move the paragraph styles, which should appear in the TOC, to the left.



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*-TOC.fm is created with default presentation of the TOC.



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 defintions 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 5.

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.

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 postion 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\foilsTOC.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 7, 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 wihint the anchored frame will be too narrow in the case here.

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

Text frame

Anchored frame

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.

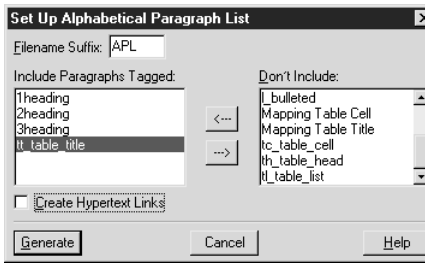
Time

- 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 *document*APL.
- ❒ 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

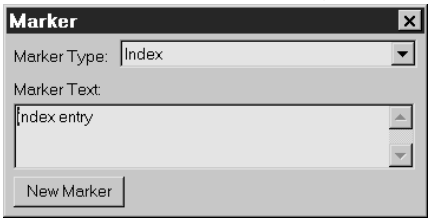
- Choose keywords carefully. Include words which do not appear in the document, but describe the concepts behind existing words (so that readers can find 'grouping words'. In most cases you will need two types of keywords: objects and actions which are applied to these objects.
- Keywords are always 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 as "KGB = Konsum-kritisch Gebildete Bürger". The colon has a specific meaning in FrameMaker index entries.

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.

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
```

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>Einkommen</> \> 100 Millionen
Obst\: vitamine für alle
Gurken\; Bohnen\; Blumenkohl
```

Force sort order

To force a word (e.g. with umlauts) or an entry with punctuation so sort similar to another, use this syntax:

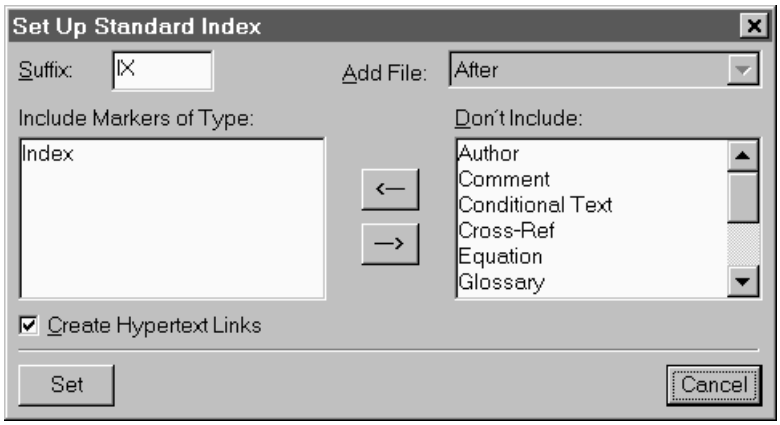
```
Äeger[aerger]; Cost History, screen[Cost History]
```

Generate 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 name *document-name*IX.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 11 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 Open the index file

2 The layout you see 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).

3 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'.

4 On the reference page named IX you will find the following lines. The purpose of these lines can be determined from their format names (indicated to the left):

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

Define the *position* of the TAB (in front of the page-number) in the lines Level#IX; for the pattern generating the TAB see IndexIX

Enter any 'prefixes' to the page-number here (not in the Level#IX lines), if you need one. For example you may set up this line (format IndexIX) as

```
)<$chapnum> - <$pagenum>
```

5 The basic formatting concerns the index entries with the paragraph formats **LevelxIX**. Format them according to your needs (Paragraph Designer, **Update All!**)

6 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.

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
```

<$alphabetics>	AÁÀÂÄÃÅaáàâäãåª Bb CÇcç Dd EÉÈÊËeéèêë Ff*f* Gg Hh IÍÌÎÏi íìîï Jj Kk Ll Mm NÑnñ OÓÒÔÖÕØoóòôöõøº Pp Qq Rr Ss Tt UÚÙÛÜuúùûü Vv Ww Xx YŸ yÿ Zz
<$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 alphabetics.

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, CÇcç<CH><Ch><ch>. In this example, all the characters or letter pairs are in the same letter group (the letter C). The letter pair CH is sorted after the letter C, and uppercase letter pairs are sorted before lowercase letter pairs.

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>AÁÀÂÄÃaáàâäãª Bb CÇcç Dd EÉÈÊËeéèêë Ff ƒ Gg Hh IÍÌÎÏi íìîï Jj Kk Ll Mm NÑnñ OÓÒÔÖÕoóòôöõº Pp Qq Rr Ss Tt UÚÙÛÜuúùûü 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 6.

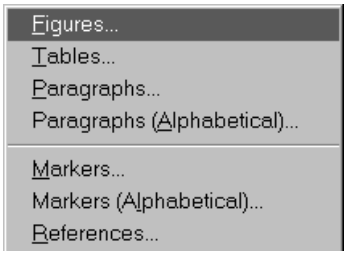
Arbitrary lists

Especially in scientific publications various lists are required, for example, lists of:

- Authors
- Formulae
- Figures
- Tables
- Diagrams
- Bibliographic references (see *Bibliographies with EndNote* on page 15 in chapter).

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 numers. If you want to avoid mulitple entries of same kind (e.g. three times the same author name with different page numbers) you must use an index.*

List of tables

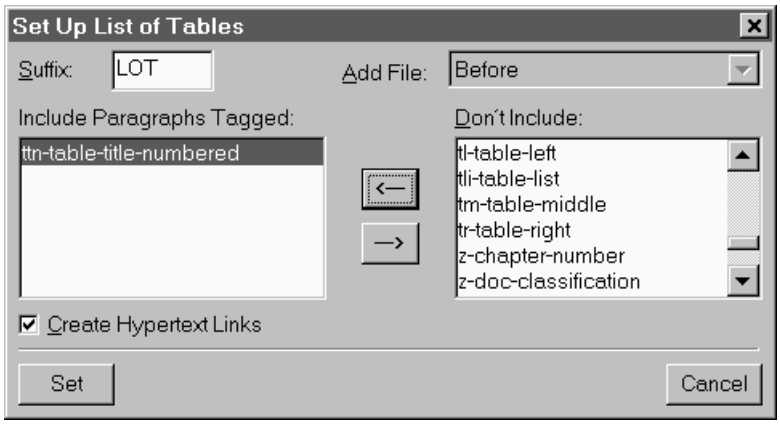
Tables may bear a title, which is associated with paragraph style (in this document: `ttn-table-title-numbered`). Hence a list of all tables is a list of all paragraphs of the format(s) used for the table titles.

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.

2 In the dialogue **Set Up List of Tables** move the appropriate paragraph format(s) to the left. FrameMaker automatically recognises a format TableTitle.



3 You may wish to generate hypertext links: click the selection box.

4 Press the **Set** button. A new file named name *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 5 for further refinement of the index.

5 Save the file. **Do not change the name of this file!**

6 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.

7 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 5 or *Format the generated index* on page 11 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: Hierachical 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`).

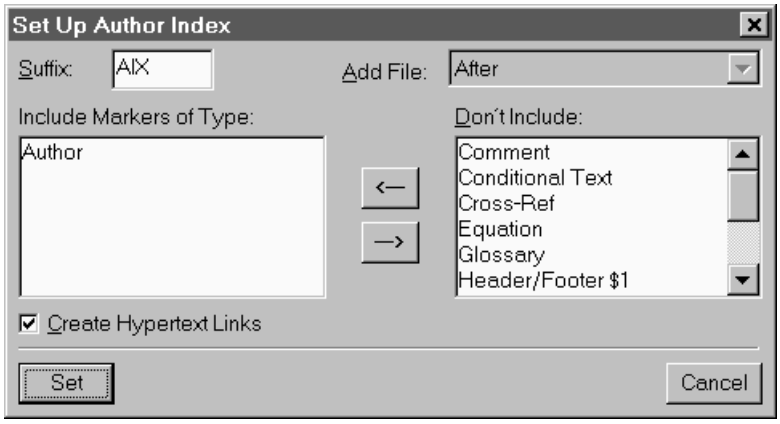
With **Special > List of > Figures** you specify the paragraph format(s) to be included. See *Figures in FrameMaker* on page 6-5 for details how to set up and use such tables.

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 > Autors**...



3 In dialogue **Set up Atuhor 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-name*AIX.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 11 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 5 or *Format the generated index* on page 9-11 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
Systec 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.

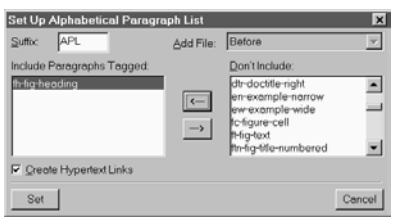
1 Define a new marker type with **Special > Marker...** and select **Edit...** from the list of Markers.

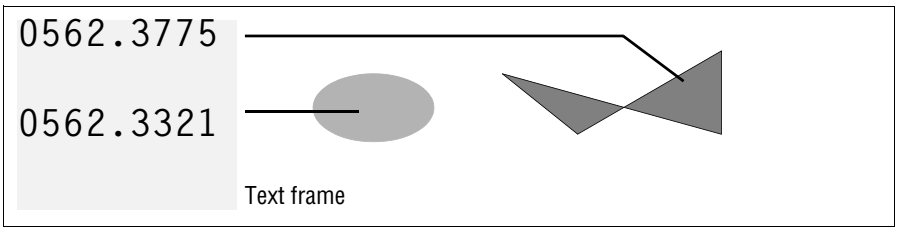
2 In the dialogue **Edit Custom Marker Type** specify the name of the new marker type (e.g. `artefacts`) and **Add!** it to the list of markers.

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 *document*APL is created:

```
80
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.

10

Generate Acrobat (PDF)

Overview

This chapter aims at Acrobat 4.

FrameMaker is well integrated with Acrobat. Bookmarks are automatically generated from specified headings and you can set some document properties.

Acrobat version 4 solves most problems known with Acrobat 3 and provides paramter profiles, which greatly enhances the process.

Introduction

PDF 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 some sort of 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 procerual programming language which is interpreted by a RIP (raster image processor) to generate the contents of pages (lines, images, etc.). A PS file may contain device specific commands, such as 'select papertray'.

A PS must always be handled (interpreted) sequentiylly. Thre 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. Ressources 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 necessary (according to Murphy's First Law).
- 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 op-

tions. For example:

Option category(selection)	Parameter (selection)	Screen output (e.g. web)	Digital printing
General:	Compatibility	Acrobat 3.0	Acrobat 4.0
	Format	Optimise PDF	-
	Device resolution	72 dpi (600 if printing is intended)	600 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 grp 4 compassion	Bicubic downsampling to 600 dpi, CCITT grp 4 compassion
Fonts		embed all fonts; subset imbedded fonts below 35%	embed all fonts
Colour	Conversion	leave colours unchanged	leave colours unchanged
	Options	preserve transfer functions	preserve overprint settings, …
Advanced options	General	Allow PS file to override job options; process DSC comments …	Allow PS file to override job options

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 FrameMaker & PDF.
www.prepress.ch/	Mr. Jäggi is an EU wide recognised expert in PDF.
Adobe Acrobat tips	http://www.adobe.com/products/tips/acrobat.html
Jaeggi Distiller settings	http://www.prepress.ch/d/pdf/web/settings.html

Generate PDF from a FrameMaker document

Note: *Do not use the PDF Writer to create a PDF file directly (without the Distiller):*

Anyone on this list who uses the "save as PDF" feature and then bitterly complains about (1) missing color, (2) missing fonts, (3) PostScript job failure in distillation, (4) weird PostScript and/or PDF file sizes, (5) system hangs, (6) heartburn, or (7) a case of terminal "charotzmees" absolutely deserves what they've gotten and no "rachmanot" (sympathy)! [Dov Issacs, Adobe Interoperability Lab].

- You need to have a PostScript printer driver installed – and be aware of the printer setup (2-up will yield only even pages...).
- It is good practice to use the Acrobat Printer driver to generate the PostScript file to be distilled. This driver is the most elaborate and safe one, especially on Windows NT.

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).

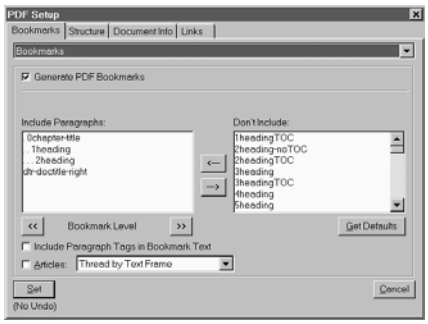
4 Distill the PS file to a PDF.

5 Check the PDF with Acrobat Reader.

Set up PDF properties in FrameMaker

In **Format > Document > PDF Setup...** you set parameters which are handed over to the distilling process in the PostScript file. Four categories of properties can be set by means of tabs (Windows).

Bookmarks



In this pane you specify, which items you want to have in the Table of Contents for the left pane of the Acrobat view (in Acrobat called bookmarks). Do not forget to specify a useful bookmark level with the << and >> arrows.

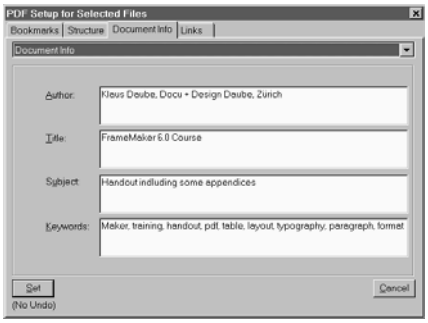
You can move all items from the left pane to the right one (or vice versa), by holding SHIFT and clicking the >> button (or <<).

Structure

Although the FrameMaker manual requests to look up the Adobe web site for further information on this option nothing was found with the keywords “logical PDF structure”.

Either leave the box Generate Logical PDF Structure unchecked, or set up the same structure as in category Bookmarks.

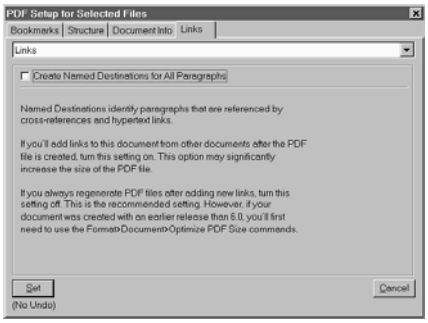
Document Info



In this category you can set some information about the PDF file, which will be displayed in Acrobat / Acrobat Reader with **File > Document Info > General**.:

Author	Author(s) of document, including company
Title	Title of document
Subject	You may wish to add dates here
Keywords	These become relevant if the PDF is combined with others on a CD for example.

Links

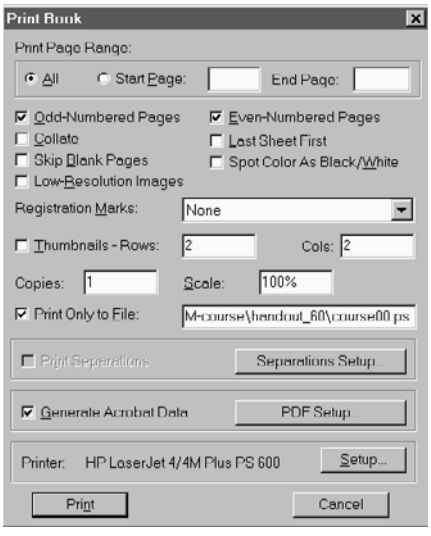


Leave the box Create Named Destination For All Paragraphs unchecked.

If you check this box, your PostScript file becomes very large - and your PDF file also.

This box must be checked if you want to create links from other documents to this document in Acrobat.

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 when printing to 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.
Gen. Acroabat Data	**Check!** If not yet done, you may set the properties with PDF Setup!
Printer	Select a PostScript printer, at best use the Acrobat Distiller Printer.

Note: *PostScript files may become very large (the 200 pages of this handout produce about 30 MB due to many screen shots. The final PDF to be printable on a desktop laser printer (600 dpi) is only about 3.0 MB.*

Message in the FrameMaker Console Log

When printing to a file, you may get the following message in the FrameMaker Console Log:

maker: acrobat.fm
Saving or printing this document to PDF may result in some links not working in the generated PDF document.
This problem can occur when a document that was created using a release of FrameMaker earlier than 6.0 has not been optimized for PDF file size.
To fix this problem, either use Format>Document>Optimize PDF Size to optimize the file, or use Format>Document>PDF Setup to turn on the Links setting.

You don't need to do anything if you have converted your document to FrameMaker 6 (and saved) before you create the PS file.

Distill 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:

```
PressOptimized.joboptions
PrintOptimized.joboptions
ScreenOptimized.joboptions
```

The Swiss PDF guru Jaeggi (see *Jaeggi Distiller settings* on page 3) has developed another set of options, which are highly recommended:

```
Jaeggi_Belichtung.joboptions
Jaeggi_CD-ROM.joboptions
Jaeggi_Digitaldruck.joboptions
Jaeggi_Internet.joboptions
Jaeggi_OPI.joboptions
Jaeggi_Separiert.joboptions
Jaeggi_Zeitung.joboptions
```

Distill the PostScript file

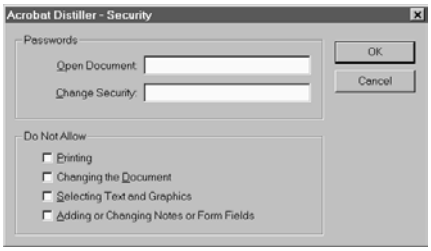
Open Acrobat Distiller (you will have this on your system only if you have installed the Acrobat application, not just the Acrobat Reader - which is free).

1 Select the proper set of job options, e.g. Jaeggi-Digitaldruck depending on your target (Digitaldruck is good for desktop printing up to 600 dpi).

2 You may check the settings in **Settings > Joboptions**. Changing the settings of a well proven set may not be a good idea...

3 Select the PostScript file with **File > Open** and specify where to save the PDF file.

Note: *Be aware of the Distiller habit to keep its dialogue contents between sessions! Always check the save location!*



4 You may wish to set security options:

Password	Write it down and store the note in a safe place if you set a password!
Do not allow...	These check boxes can be set to prevent printing of the file, changing content or adding / changing notes using the Acrobat application.

These security features are hurdles for ordinary people but not for Acrobat gurus.

5 As soon as you press **Save** 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: 2000-11-02 at 17:55
Destination: E:\FM-course\handout_60\acrobat.pdf
Source: acrobat.ps
Distill Time: 3 seconds (00:00:03)
**** End of Job ****
```

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
```

Eventhough 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.

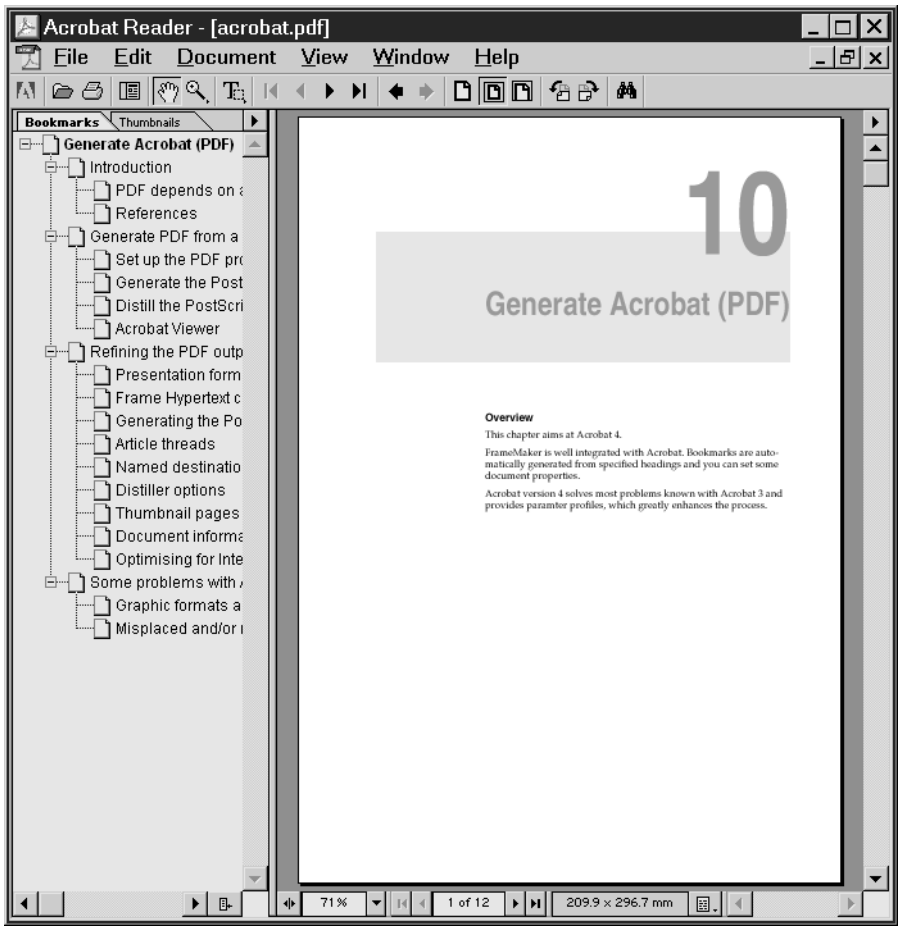
Acrobat Reader

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 to 1.3. Your reader should be capable to read the highest level (Acrobat exists in versions 2.x, 3.x and 4.x). The difference of thePDF levels is the type of compression used per default and the handling of fonts

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. A right pointing triangle indicates “more levels exist”. When cklicking on such a triangle, the lower level becomes visible and the triangle turns to point down.

Cross references

I 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 cotain live links, if you have specified so.

Web links

Web links (see *Weblinks* on page 9) 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)

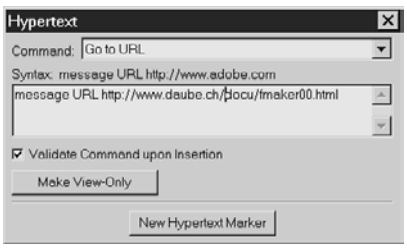
Cross reference formats should not contain page numbers.

Hypertext commands in FrameMaker

Not all FrameMaker hypertext commands have an adequate Acrobat functions:

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, gotolink-fitwin, gotopage, nextpage, openlink, openlinkfitwin, openpage, previous-page	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	Not possible in Acrobat Exchange / Acrobat 4
opennew	-	Acrobat can not create a new document
popup	-	Not possible in Acrobat 3
previouslink, previouslinkfitwin	-	Use menu View > Go Back
quit	-	Use menu File > Exit
quitall	-	Use menu Window > Close All

Weblinks



To create a link to a web-page, use the hypertext command Go to URL:

1 Select the text which should become the hotspot in the PDF file. You may with 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), eg. `http://www.daube.ch/docu/fmaker00.html`

4 Press **New Hypertext Marker**.

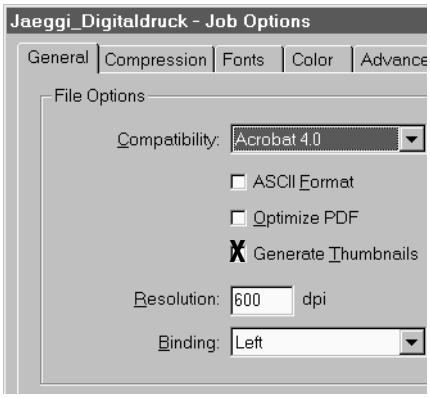
Article threads

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



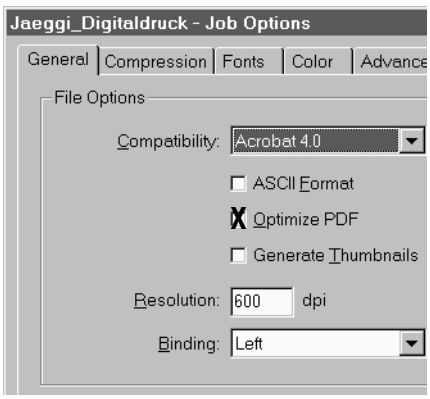
To generate thumbnail pages as a navigational aid:

1 In the Distiller **Settings > Job options** activate the option "Generate Thumbnails".

2 You may wish to save the special settings with a name (e.g. `Digiprint-thumgs.joboptions`) in **Save as...**

3 Open the PostScript file which you want to distill etc.

Optimising for Internet distribution



In the Distiller **Settings > Job Options** activate the option "Optimize PDF" or (in Acrobat 5) "Optimize 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 (IE 4.0 does not support byte serving, while IE 3.0 does...).

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

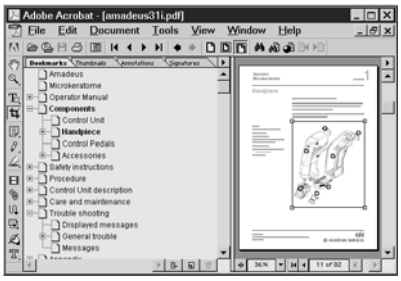
Print shops may require you to use their job option if you want your PDF to be printed on their equipment.

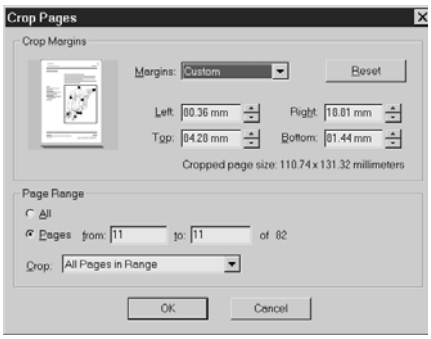
It is also a good idea to use in other cases job options prepared by experts, for example those at www.prepress.ch

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 PDF mark statements which can be embedded into the PostScript file by FrameMaker.

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 presentatio size,

1 Open the PDF file in Acrobat (not Acrobat Reader)

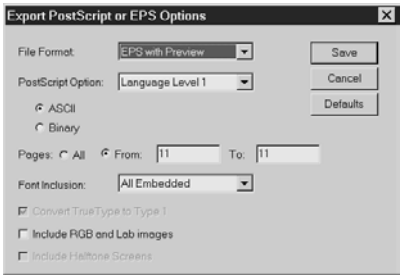
2 Got to the desired page if you want to crop only one page.

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 Save!

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* on page 11).

3 Save the image with **File > Export > PostScript or EPS...**

4 You will need to set the options properly:

- EPS with Preview
- Language level 2 (if colours are relevant, a level 3 PS printer must exist in your system)
- Binary form is much smaller than ASCII
- EPS always gets only one page
- Font inclusion is necessary

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 the FrameMaker , the process is the following:

1 Close FrameMaker

2 Open your `maker.ini` file (or `fmsgml.ini` in case you use SGML)

3 Find the line that reads:

```
GetLibraryColorRGBFromCMYK=Printer
```

4 Change that line to read:

```
GetLibraryColorRGBFromCMYK=None
```

5 Restart FrameMaker and create your PDF.

11

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.

Save as HTML

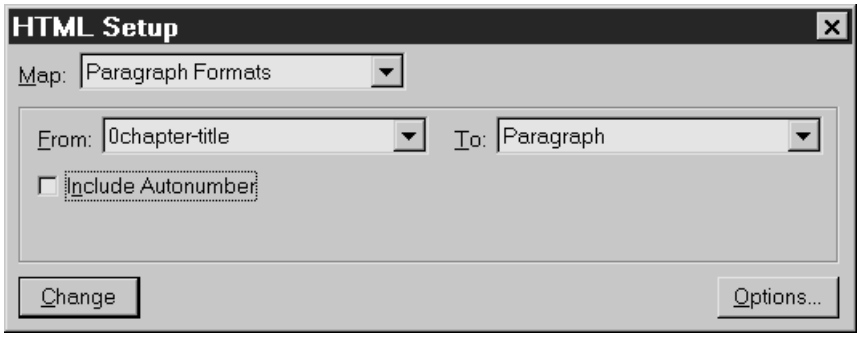
With **File > Save as ...** and selecting HTML a FrameMaker internal process is used to convert the document to HTML.

With 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**

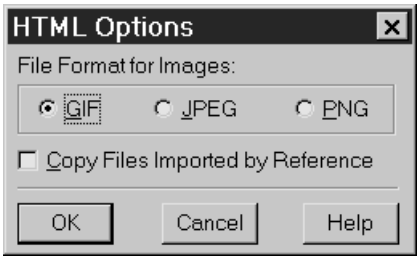
❒ If not all styles in the document are in the paragraph catalogue, you get prompts for all of those. You may decide not to include them in the catalogue. Nevertheless they are available for conversion to HTM.



❒ 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 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 dont 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 entitties 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

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 dirctory other than where FrameMaker is insalled.*

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).

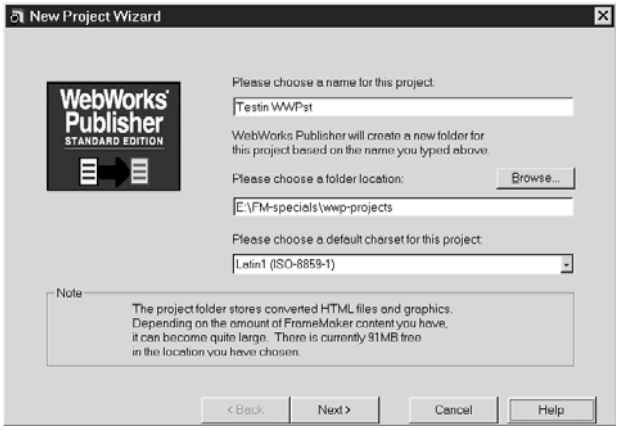
XML+CSS — This template produces Extensible Markup Language (XML) that can be displayed by browsers that support XML and CSS.

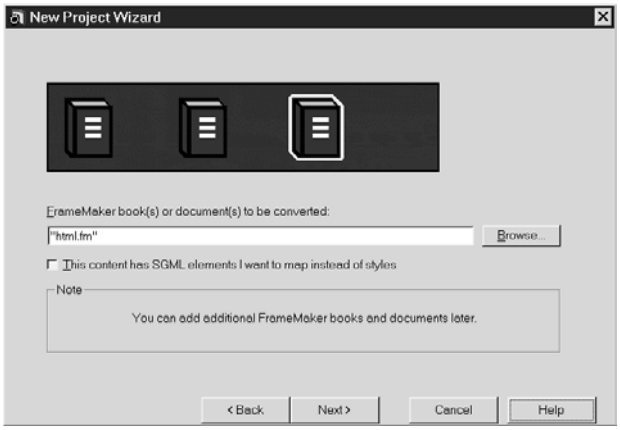
XML+XSL — This template produces XML that can be displayed in browsers that support the Extensible Stylesheet Language (XSL). The default XSL rules included with the template transform the generated XML into an HTML result set for display in IE5, however, they can easily be customized for other purposes if desired.

Conversion process

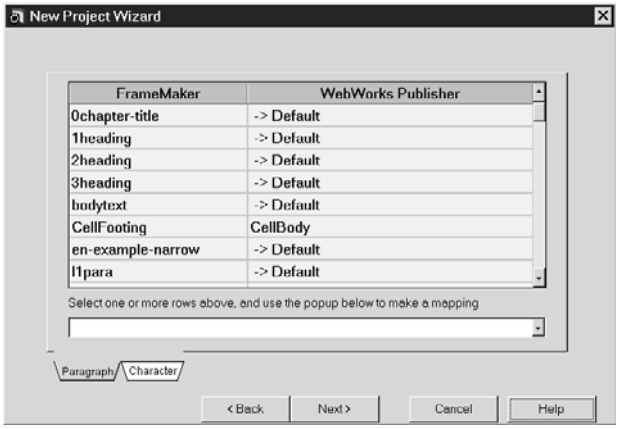
WWPst provides a wizard to set up a WWP project. Use **File > New** to start the wizard and follow the dialogues:

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).

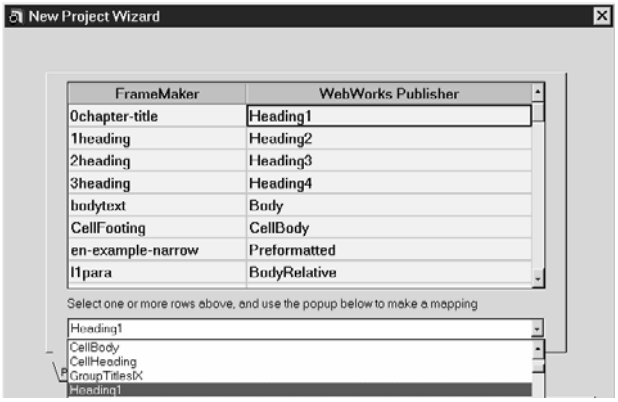


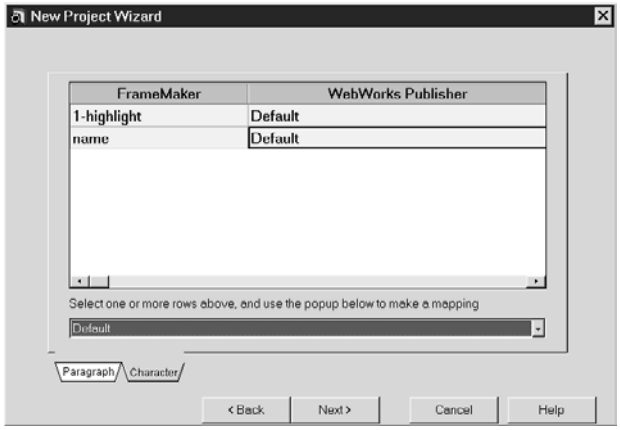


WWPst now analyses the input file(s) and creates a mapping table for the paragraph and character styles found (in use).

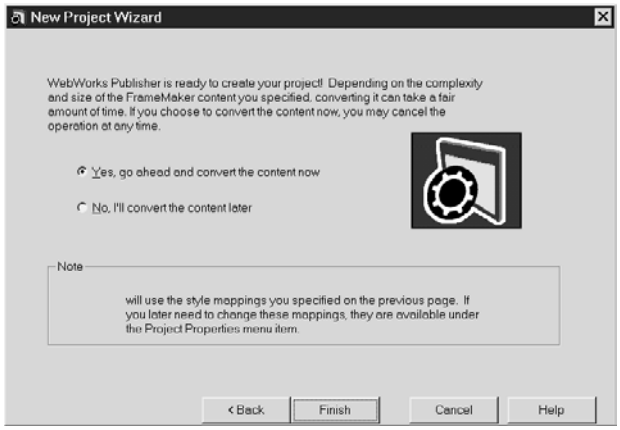


Set the defaults to more reasonable mappings:

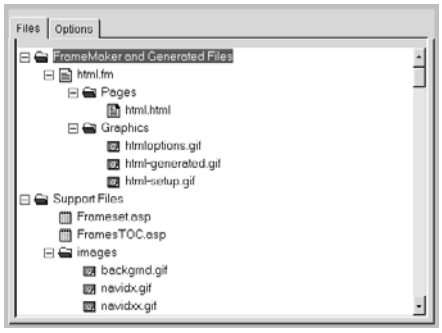




WWPst is now ready to convert the input files into HTML:



A number of project files become visible in the subdirectories of the project.

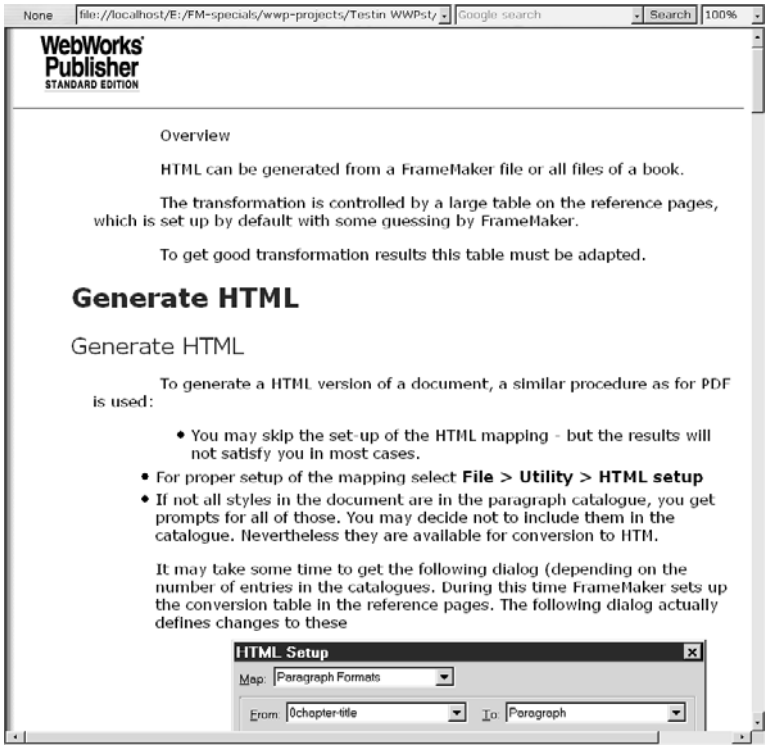


The most prominent results are the HTML file and the CSS file. We did not specify to break up the long input file into distinct HTML files at a certain heading level. Hence there is only one HTML file for one FrameMaker file.

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. Obviously

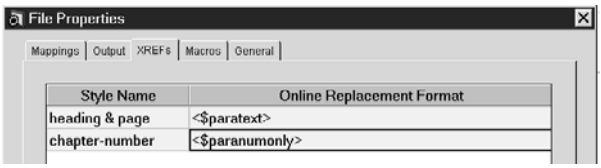
the WWPst is an advertisment for the full product - hence the banner on top and at the bottom of the page:



Refining the project

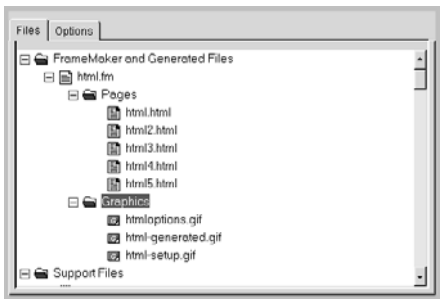
The mapping can be refined with **Project > Options**:

- Start new HTML pages with paragraph mapping to NewHTML-Page
- Map a table format to either *Default* or *Alternate Shading*
- In the mapping of crossreference formats remove the page number building blocks

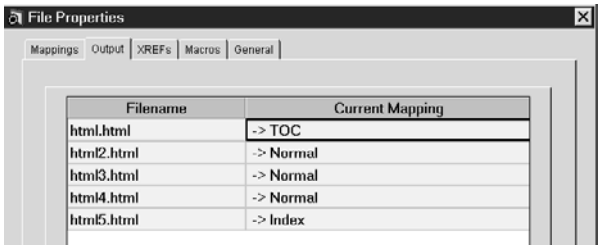


Note: *In WWPst the Macos and the General properties can not be changed. This requires the full product.*

After setting of NewHTMLPage for 1heading and 2heading we get these files in the project:



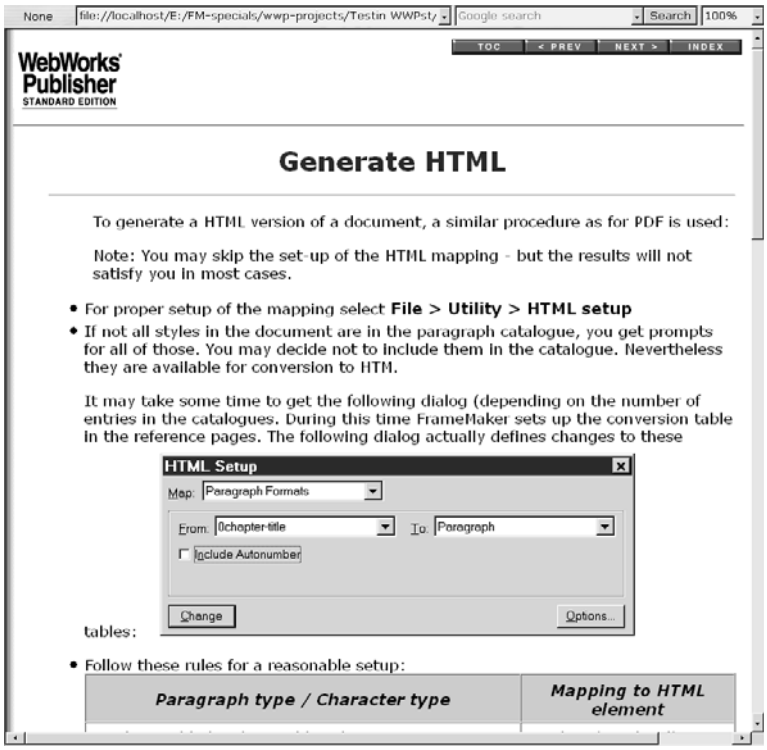
Now the FM file is broken up into 4 HTML pages. In addition we modify the default file mapping



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:



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 perfomed 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 { }
```

12

Formulas (equations)

Overview

Formulas are mathematical objects in FrameMaker, not just graphical objects as in other DTP applications. The construct has many features including mathematical operations. It is possible to evaluate a formula both symbolically and numerically.

A complete list of all mathematical element for keyboard input is derived from the on-line help of FrameMaker.

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 gray 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). No 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.

Stand alone formulas (display formulas)

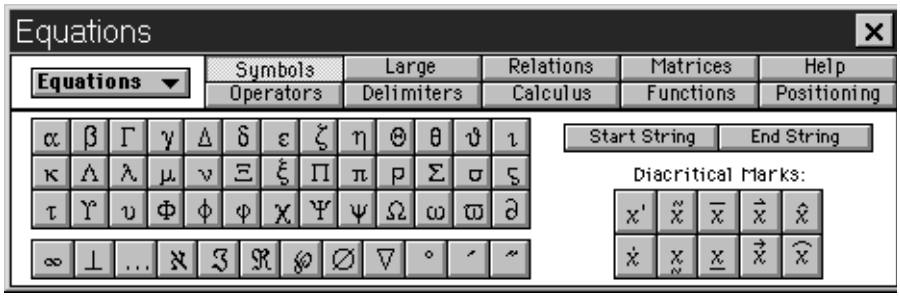
Example formula: proportion of the golden rectangle

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:

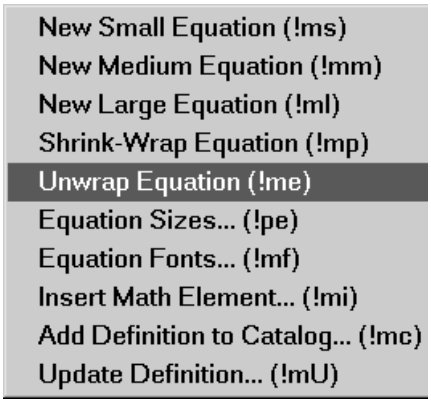
$$a = \left(\frac{\sqrt{5}-1}{2}\right) \cdot b$$

Insert a formula

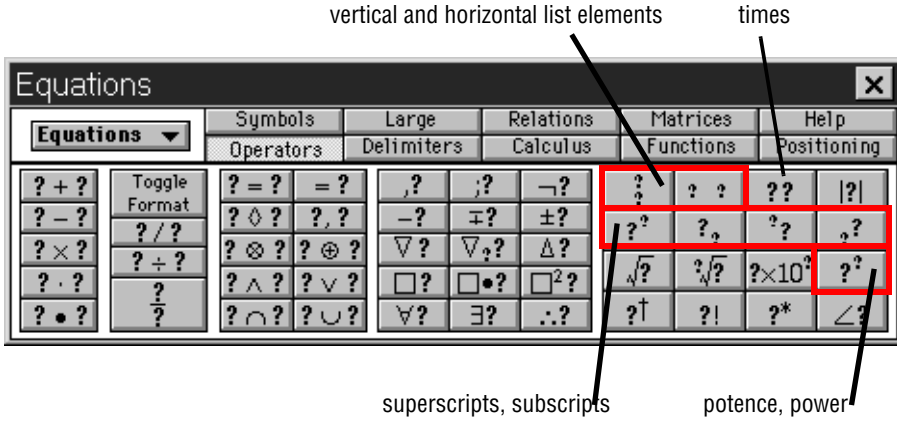
- ❒ Place the cursor in an empty paragraph with the basic property "variable line spacing".
- ❒ Open the Equation palette (Δ)



- ❒ With the button **Equations** select the appropriate size for the new equation (for example, **New Medium Equation**),
- ❒ 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 point denotes the ESC character. To unwrap a formula you enter `ESC, m, e.`



- ❒ Select the second ? and replace it by operator square-root; replace the ? under the root by "5"
- ❒ Select the square root and apply operator "? - ?"; replace the new ? by "1"
- ❒ etc. - by now you should know how to work with this editor...
- ❒ 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**, ⇨ is **Right Arrow**):

`ESCmla=/\sqrt!5␣␣-1⇨2␣␣bESCmp`

Numbered formulas

Set up a numbered paragraph format with the number appearing at the end of the paragraph.

$$a = \frac{\sqrt{5}-1}{2}b$$ Formula (1)

Format name — For example `fon-formula-numbered`.

Basic properties — Line spacing must be variable (*fixed* 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><Default ¶ Font> on page <$pagenum>
```

Example reference — As you can see in *Formula (1)* on page 4, …

Create formula in anchored frame

Formulas can be placed directly into an anchored frame:

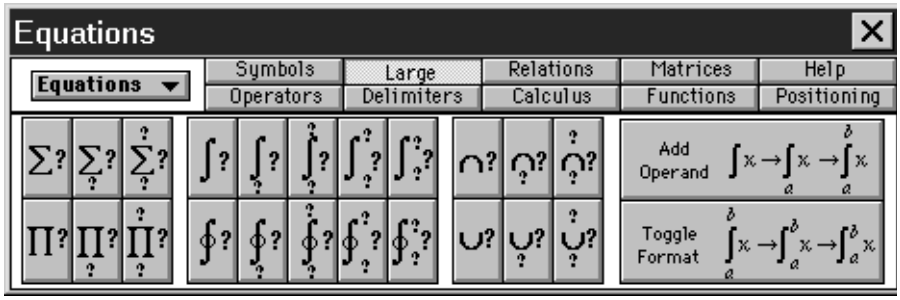
$$\sin x = \sqrt[4]{\frac{\operatorname{asech}\sqrt{5}}{x}} \qquad \sum_{min}^{max} \sin x = \sqrt[4]{\operatorname{asech}\sqrt{5x}}$$

- ❒ Select the frame
- ❒ Select formula size from the Equations palette
- ❒ Build the equation
- ❒ CTRL-click on the formula to select it and move it around
- ❒ Add any other elements to the anchored frame (for example, graphics). These may also be in the frame at first.
- ❒ 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.

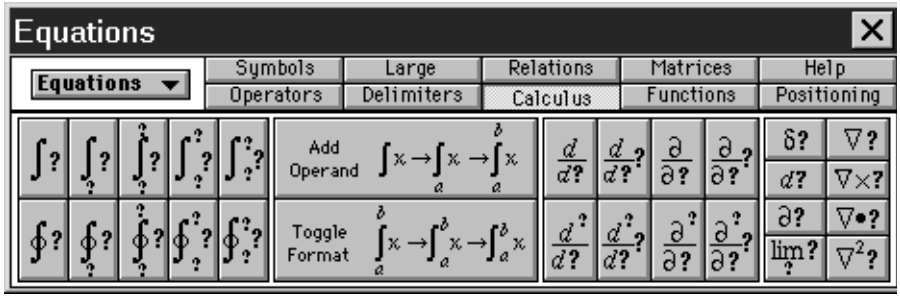
Palette overview

The Symbols and Operators palette are displayed on page 3.

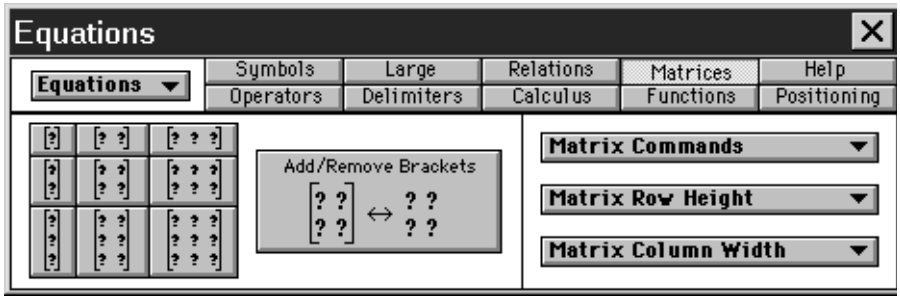
Large Symbols



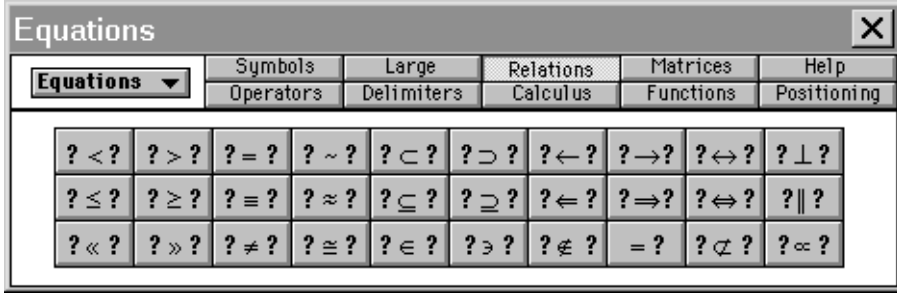
Calculus



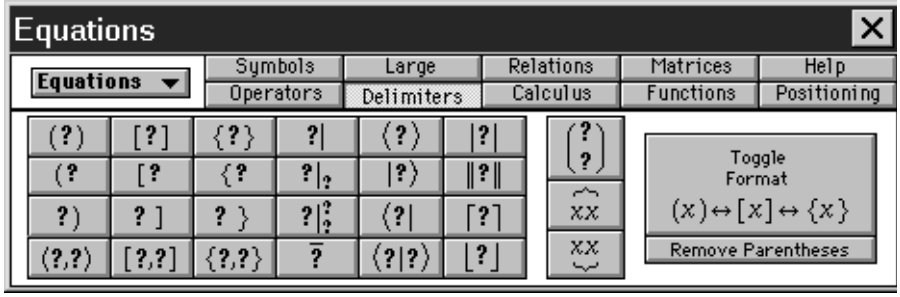
Matrix



Relations

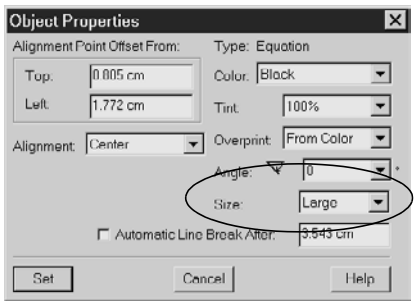


Delimiters



Special formatting of formulas

Resize a formula



When setting up a formula you must choose a size (small, medium, large). To change this afterwards,

- ❒ Select the formula. It may be shrink wrapped or expanded.
- ❒ Select **Graphics > Object properties**
- ❒ Change the size attribute to your desire; **Set!**

Align multiple formulas

$$\sin x = \sqrt[4]{\frac{\operatorname{asech}\sqrt{b}}{x}}$$

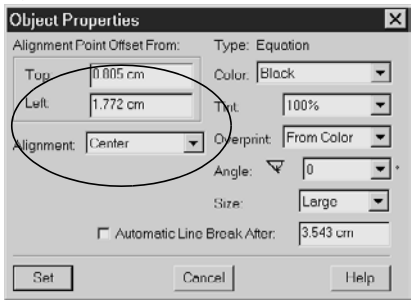
$$\sum_{min}^{max} \sin x = \sqrt[4]{\operatorname{asech}\sqrt{5x}}$$

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:

- ❒ Select the equation (s) which you want to align.
- ❒ Select the equation which will be the master for the alignment.
- ❒ Choose **Graphics > Align** and set the alignment to your desire.

Align formula along special symbol



$$\sin x = \sqrt[4]{\frac{\operatorname{asech}\sqrt{b}}{x}}$$

$$\sum_{min}^{max} \sin x = \sqrt[4]{\operatorname{asech}\sqrt{5x}}$$

To align the formulas along a special point (e.g. the equal sign):

- ❒ Click into the first formula to set the alignment point. You may move the alignment point with the **left** or **right arrow**.
- ❒ Set the alignment point with the Equations palette **Positioning > Left/Right > Set Manual** or `ESC, m, a, s`.
- ❒ Repeat the above sequence for all formulas in the frame which you want to align.
- ❒ To clear an alignment point, select the formula and enter `ESC, m, a, d` (or choose from the Equations palette **Clear Manual**).
- ❒ Select the formula with the most proper alignment and choose **Graphics > Object Properties**.
- ❒ Set the Alignment to **Manual** and set the left position to a memorable value (2.544 ⇨ 2.5)
- ❒ Select the next formula to be aligned, with **Object Properties** set Alignment to **Manual** and the left position to the new value.
- ❒ 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,

$$(1+x)^8 = x^8 + 8x^7 + 28x^6 + 56x^5 + 70x^4 + 56x^3 + 28x^2 + 8x + 1$$

- ❒ Place the cursor at the point where you want to break the formula.
- ❒ Enter a manual break with Equations palette **Positioning > Line Breaking > Set Manual** or `ESC, m, b, s`.
- ❒ To remove a manual line break, select the formula element with the line break and apply `ESC, m, b, c` or choose from the Equations palette **Clear Manual**.

Note: *To remove a line break it is not sufficient to select only an operator followed by the line break. You must select the preceding and succeeding elements also (e.g.* $70x^4 + 56x^3$ *)*

Copy and paste formula elements

$$\cfrac{1}{a+\cfrac{1}{a+\cfrac{1}{a+\cfrac{1}{a+\cfrac{1}{a+\ldots}}}}}$$

Formulas with 'self repeating' contents can be set up very quickly with the keyboard:

```
ESCml
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 formula visible, before you shrink wrap it with `ESC m p`.

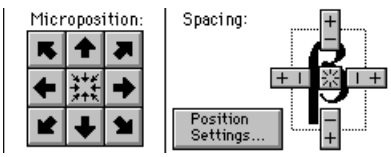
Physical dimensions

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 Enter/Return key. You see a double quote ("") after entering the straight quote. This disappears 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]⏎`
where ⏎ is the Enter/Return key.

Vehicle speed: $v[\mathrm{m/sec}] = \dfrac{s[\mathrm{m}]}{t[\mathrm{sec}]}$ Formula (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:

Vehicle speed: $v\ [\mathrm{m/sec}] = \frac{s\ [\mathrm{m}]}{t\ [\mathrm{sec}]}$ Formula (3)

This method does not adjust the length of the fraction bar.

Enter space in formula string

The method of choice is to enter a space as the first character in the string:

Vehicle speed: $v\ [\mathrm{m/sec}] = \frac{s\ [\mathrm{m}]}{t\ [\mathrm{sec}]}$ Formula (4)

To enter a thin space, type ESC,␣,t . To enter an n-space, type ESC, n,t. The following formula uses n-spaces:

Vehicle speed: $v\ \ [\mathrm{m/sec}] = \frac{s\ \ [\mathrm{m}]}{t\ \ [\mathrm{sec}]}$ Formula (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).

Diacritical marks

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.

$$\tilde{\bar{a}} = \overset{\frown}{\dot{v}xy}$$ Formula (6)

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.

$$\vec{\vec{a}} = \overrightarrow{\overrightarrow{\underline{\underline{b}cd\tilde{e}}}}$$ Formula (7)

The others are only placed centred above the spanned elements (see formula 6). 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 diacrital 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:

$$\frac{\partial}{\partial x}\widehat{uvw} + \frac{\partial}{\partial x}\widetilde{uvw} = 0$$

Formula (8)

You need a little bit of work to create such constructs:

1 Create an anchored frame (here filled with gray to display it):

2 With the Graphic-Line tool from the graphics tools palette (A) 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

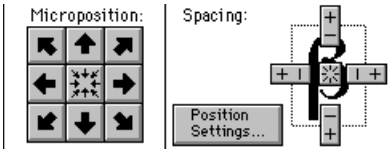
5 Move the selected symbol (tilde) to the desired place with the mouse or with CTRL+arrow.

Working tip

In the anchored frame you may set up a collection of items: ~ ^ ⌒ .

These symbols can only get charcter 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, finetuning presentaion

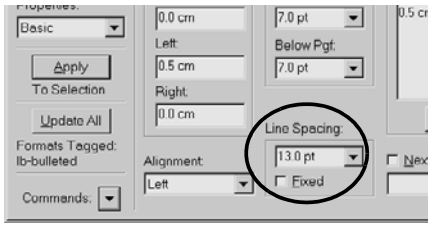


You may not be satisfied with the space between math elements, the location of exponents and indices etc. Although FrameMaker does a good job, math typesetters and TEX experts may have their complaints. In these cases manual work with micropositioning may be necessary.

For fine tuning see the manual.

Common problems with formulas

Formula overlaps surrounding paragraphs



The formula construct uses an anchored frame *at insertion point*, which can only expand the paragraph hight, if the paragraph has varible 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 accidently 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

Vehicle speed: $v\ [\mathrm{m/sec}] = \frac{s\ [\mathrm{m}]}{t\ [\mathrm{sec}]}$

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.

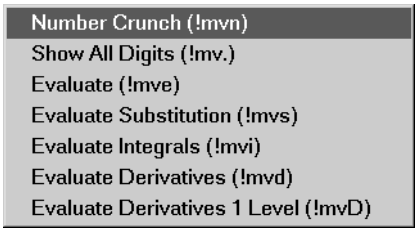
Evaluation

Numeric results

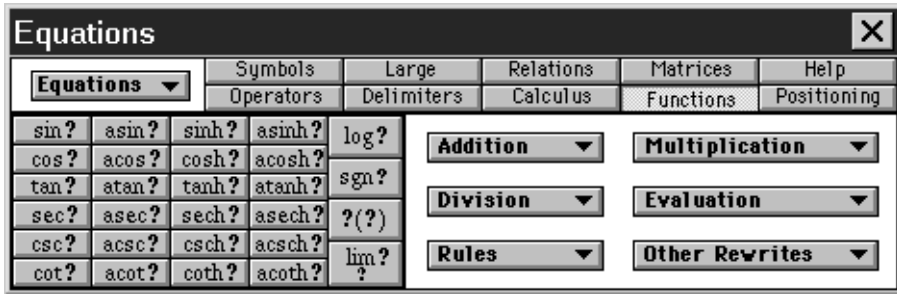
To evaluate an equation (get numeric results):

To evaluate the formula, for example $a = \left(\frac{\sqrt{5}-1}{2}\right) \cdot b$:

❒ Select the equation inside its frame.



❒ From the Equations palette choose **Functions > Evaluation > Number crunch**



❒ You get the following result: $a = 0.61803399 \cdot b$

❒ 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

$\frac{a}{4} + \frac{2a}{3} + \frac{7a}{5b}$ becomes $\frac{11a}{12} + \frac{7a}{5b}$ and ten $\frac{55ab + 84a}{60b}$

Division > Long Division

Numerator and denominator must be polynomials for this function. Select any x in $\frac{x^5 + 20x^4 + 160x^3 + 640x^2 + 1280x + 1024}{x^2 + 8x + 16}$ and apply the function: $x^3 + \frac{640x^2 + 1280x + 12x^4 + 144x^3 + 1024}{x^2 + 8x + 16}$ and then

$$x^3 + 12x^2 + \frac{1280x + 48x^3 + 448x^2 + 1024}{x^2 + 8x + 16}$$

Multiplication > Multiply out

$y = (x+4)^5$ becomes $y = x^5 + 20x^4 + 160x^3 + 640x^2 + 1280x + 1024$

Evaluation > Evaluate

$(x+4)^5$ 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.

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

Table 1: Equations pop-up menu

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

Table 2: Entering strings

See example in *Physical dimensions* on page 7.

Symbols

Greek characters

Element	Short-cut	Backslash sequence
α	Control+Alt+a	\alpha
β	Control+Alt+b	\beta
Γ	Control+Alt+G	\Gamma
γ	Control+Alt+g	\gamma
Δ	Control+Alt+D	\Delta
δ	Control+Alt+d	\delta
ε	Control+Alt+e	\epsilon
ζ	Control+Alt+z	\zeta
η	Control+Alt+h	\eta
Θ	Control+Alt+Q	\Theta
θ	Control+Alt+q	\theta
ϑ	Control+Alt+J	\vartheta
ι	Control+Alt+i	\iota
κ	Control+Alt+k	\kappa
Λ	Control+Alt+L	\Lambda
λ	Control+Alt+l (lowercase L)	\lambda
μ	Control+Alt+m	\mu
ν	Control+Alt+n	\nu
Ξ	Control+Alt+X	\Xi
ξ	Control+Alt+x	\xi
Π	Control+Alt+P	\Pi
π	Control+Alt+p	\pi
ρ	Control+Alt+r	\rho
Σ	Control+Alt+S	\Sigma
σ	Control+Alt+s	\sigma
ς	Control+Alt+E	\varsigma
τ	Control+Alt+t	\tau
Υ	Control+Alt+U	\Upsilon
υ	Control+Alt+u	\upsilon
Φ	Control+Alt+F	\Phi
ϕ	Control+Alt+f	\phi
φ	Control+Alt+j	\varphi
χ	Control+Alt+c	\chi
Ψ	Control+Alt+Y	\Psi
ψ	Control+Alt+y	\psi
Ω	Control+Alt+O	\Omega
ω	Control+Alt+o	\omega

Table 3: Greek characters

Element	Short-cut	Backslash sequence
ϖ	Control+Alt+I (uc i	\varpi
∂	Control+Alt+7	\cpartial

Table 3: Greek characters

Other special symbols

Element	Short-cut	Backslash sequence
∞	Control+Alt+one	\infty
$\bot$	Control+Alt+2	\bot
…	Control+g period	\ldots (lowercase L)
$\aleph$	Control+Alt+3	\aleph
$\Im$	Control+Alt+4	\Im
$\Re$	Control+m $	\Re
$\wp$	Control+Alt+5	\wp
$\emptyset$	Control+Alt+zero	\emptyset
∇	Control+Alt+6	\nabla
°	Control+m)	\degree
′	Control+Alt+`	\prime
″	Control+m "	\pprime

Table 4: Special math symbols

Diacritical marks

Some of the sequences listed in the Help for the German FM are wrong. The sequences given here are tested with Windows NT and Swiss keyboard. Sequences in shaded cells do not work at all. No correct sequence could be found for these.

Element	Short-cut (FM-E)	Short-cut (FM-D)
x'	` (grave)	` (Grave)
$\tilde{x}$	~ (tilde)	~ (Tilde)
$\bar{x}$	Control+g hyphen Esc m _ (underline)	Control+g hyphen
$\vec{x}$	Control+Alt+V	Strg+Alt+V
$\hat{x}$	Control+g ^	Strg+Alt+^
$\dot{x}$	period	Punkt
$\underset{\sim}{x}$	Control+g ~ (tilde)	Strg+Alt+~ (tilde)
$\underline{x}$	Control+g _ (underline)	Strg+g _ (underline)
$\vec{x}$	Control+g right arrow	Strg+Alt+= [a]
$\overset{\frown}{x}$	Control+g @	Strg+g @

Table 5: Diacritical marks in mathematics
a. Control+g right arrow works also in the German FM.

Operators

Some of the sequences listed in the Help for the English and the German FM are wrong. The sequences given here are tested with Windows NT and Swiss keyboard. Sequences in shaded cells do not work at all. No correct sequence could be found for these.

Toggle format switches between the representation of fractions.

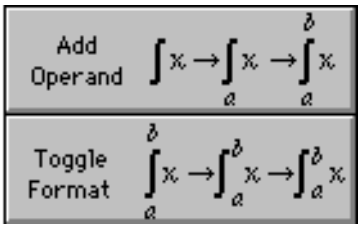
Element	Short-cut	Backslash sequence
? + ?	plus	\plus
? - ?	minus (after an operand)	
? x ?	Control+m * (asterisk)	\cross
? · ?	Control+m . (period)	\cdot
? • ?	Control+8	\bullet
Toggle Format	Control+T Esc m T	
? / ?	Control+Alt+/	\fract
? ÷ ?	Control+m /	\div
$\frac{?}{?}$	/	\over
? = ?	=	\equal
= ?	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

Table 6: Operators

Element	Short-cut	Backslash sequence
□² ?	Control+m 2	\box2
∀ ?	Control+m a	\forall
∃ ?	Control+m e	\exist
∴ ?	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)	
√?	Control+r	\sqrt
?√?	Control+r (and add operand)	
? X 10 ?	Control+E	\sn
? ? (exponent)	^	\power
? †	Control+m d	\dagger
? !	!	\fact
? *	Control+m s	\ast
∠ ?	Control+q P	\angle

Table 6: Operators

Large symbols



Use these short-cuts to type each element with only one operand. Then use **Add Operand** and **Toggle Format** as needed

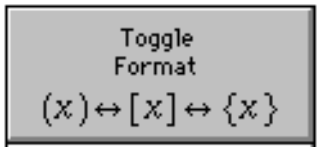
Element or command	Short-cut	Backslash sequence
∑?	Control+S	\sum
∏?	Control+P	\prod
∫?	Control+i	\int
∮?	Control+I (uc i)	\oint
⋂?	Control+m I (uc i)	\bigcap

Table 7: Large math symbols

Element or command	Short-cut	Backslash sequence
$\bigcup ?$	Control+m U	\bigcup
Add Operand	Control+N Esc m n	
Toggle Format	Control+T Esc m T	

Table 7: Large math symbols

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)	
$?\vert$	| (bar)	\substitution
$\langle ? \rangle$	Control+m <	\dangle
|?|	Control+g | (bar)	\abs
(?	Control+m (	\lparen
[?	Control+m [(left bracket)	
{?	Control+m { (left brace)	
$?\vert_?$	| (bar) (and add operand)	
$\vert ? \rangle$	Control+m k	\ket
||?||	Control+m | (bar)	\norm
?)	)	\rparen
?]	] (right bracket)	
?}	} (right brace)	
$?\vert_?^?$	| (bar) (and add two operands)	
$\langle ? \vert$	Control+m b	\bra
È?•	Control+q i	\ceil
(?,?)	Control+m N	\inprod
[?,?]	Control+m C	\cmut
{?,?}	Control+m A	\acmut

Table 8: Delimiters in formulas

Element or command	Short-cut	Backslash sequence
$\bar{?}$	_ (underline)	\overline
$\langle ?\vert ?\rangle$	Control+m B	\bket
Î?°	Control+q k	\floor
$\binom{?}{?}$	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	

Table 8: Delimiters in formulas

Relation

Element	Short-cut	Backslash sequence
? < ?	<	\lessthan
? > ?	>	\greaterthan
? = ?	=	\equal
? ~ ?	Control+m ~ (tilde)	\sim
? ⊂ ?	Control+q L	\subset
? ⊃ ?	Control+q I (uc i)	\supset
? ← ?	Control+q comma	\leftarrow
? → ?	Control+q period	\rightarrow
? ↔ ?	Control+q plus	\lrarrow
? ⊥ ?	Control+m r	\perp
? ≤ ?	Control+g <	\leq
? ≥ ?	Control+g >	\geq
? ≡ ?	Control+q : (colon)	\equiv
? ≈ ?	Control+q ; (semicolon)	\approx
? ⊆ ?	Control+q J	\subseteq
? ⊇ ?	Control+q M	\supseteq
? ⇐ ?	Control+q \	\Leftarrow
? ⇒ ?	Control+q ^	\Rightarrow
? ⇔ ?	Control+q [	\LRarrow
? ‖ ?	Control+m p	\parallel
? << ?	Control+q l (lc L)	\ll
? >> ?	Control+q g	\gg

Table 9: Relational operators

Element	Short-cut	Backslash sequence
? ≠ ?	Control+q =	\notequal
? ≅ ?	@	\cong
? ∈ ?	Control+q N	\in
? ∋ ?	Control+'	\ni
? ∉ ?	Control+q O (uc o)	
= ?	Control+g =	\uequal
? ⊄ ?	Control+q K	\notsubset
? ∝ ?	Control+q 5	\propto

Table 9: 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.

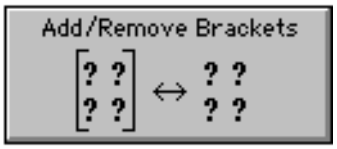
Element or command	Short-cut	Backslash sequence
$\int ?$	Control+i	\int
$\oint ?$	Control+I (uc i)	\oint
Add Operand	Control+N Esc m n	
Toggle Format	Control+T Esc m T	
$\frac{d}{d?}$	Control+g t	\optotal
$\frac{d}{d?}?$	Control+g T	
$\frac{\partial}{\partial ?}$	Control+g p	\oppartial
$\frac{\partial}{\partial ?}?$	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)	

Table 10: Calculus

Element or command	Short-cut	Backslash sequence
δ ?	Control+Alt+d	\var
∇ ?	Control+q Q	\grad
$d?$	Control+d	\diff
∇ x ?	Control+m c	\curl
∂ ?	Control+D	\partial
∇ • ?	Control+m v	\diver
$\lim_{?} ?$	Control+L	\lim
∇ 2 ?	Control+m l (lc L)	\lap

Table 10: Calculus

Matrices



Pre defined matrices in
Equations palette > Matrices

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

Table 11: Matrices

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	

Table 12: Functions on formulas

Element / command	Short-cut	Backslash sequence
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		
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	

Table 12: Functions on formulas

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 (lc 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
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

Table 13: Positioning formula elements

Navigation 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

Table 14: Navigation in a formula

Function	Short-cut
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

Table 14: Navigation in a formula

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

Table 15: Moving math elements

13 Specials

Overview

In this chapter special and maybe rarely used functions of FrameMaker are presented:

- Handling document structure
- Conditional text
- Import referenced texts (building blocks)

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 product FrameMaker +SGML.

Modifying structure

Re-arrange files within a book

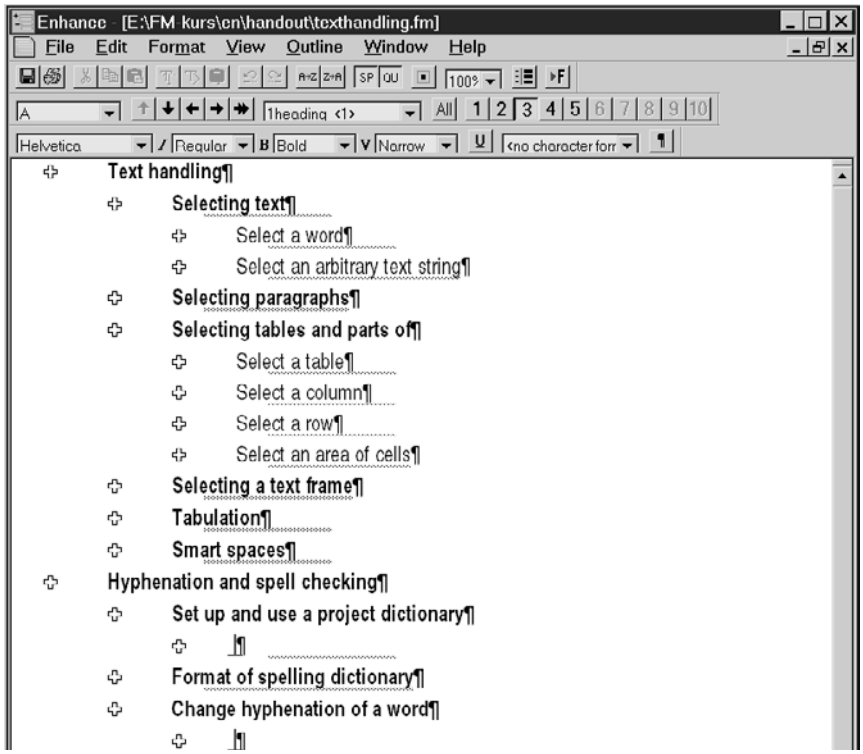
The files comprising a book are rearranged with **File > Rearrange Files...** while you are in a book file.

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

Although a piece of conditional text can be as large as a file or as small as a character it is good practice to apply the scope of conditions to paragraphs (or larger units).

If your conditional pieces become very large, consider variants of books. Chapters may be reflected in a single file or be built up with multiple files. Keep in mind here the problem of duplex printing:

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. So you will have two conditions: operator, system. If you will have portions only for beginners, things start to become complicated, if this is 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:

	Conditional text to be included			
Type of reader	**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

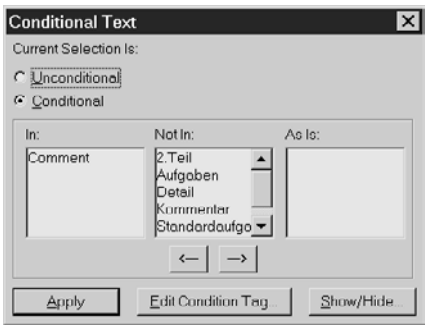
Table 1: Conditional texts for various types of readers

You may be tempted to handle n variants of a document with a smaller number of conditions (mathematically this is possible: with 3 conditions you can create 3! = 3 x 2 x 1 = 6 variants). But this method will make your work very difficult.

The manual provides a number of useful hints!

Handle conditions

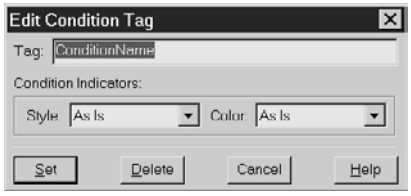
Apply a condition



To apply conditions you will need to define the condition tags and the appearance of the conditioned text:

- ❒ Select the text which will receive the condition (for example "comment")
- ❒ **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 4).
- ❒ Set the current selection to **Conditional** (radio button) and move the desired condition to the left column ("In:") and press **Apply!**

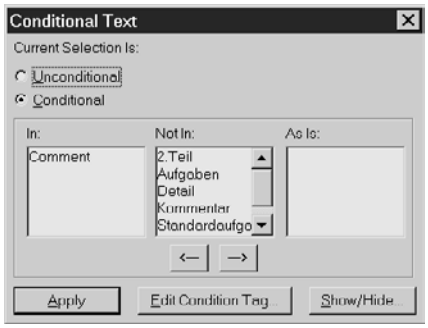
Define a new condition



To define a new condition tag (for example, operator):

- ❒ In **Special > Conditional Text...** press Edit Condition Tag...
- ❒ 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



To display the current condition of text,

- ❒ Place the cursor in the appropriate text
- ❒ **Special > Conditional Text...** displays the dialog Conditional text. This dialog can stay open during work.
- ❒ The radio button in **Current Selection Is** says whether the text is unconditional or conditional. The lists
- ❒ The In: column displays the conditions for this text.

This paragraph is text without any condition tag.

The following text is in condition tag "Comment".

This text is of condition "Comment". This is very useful for

- editorial comments
- notes to the translator
- this is both Comment and Detail - colours are mixed

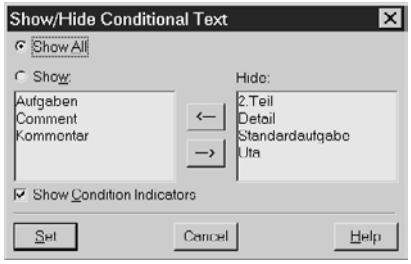
This is the last line with both the condition Comment and Detail.

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.

Display the unconditional / conditional) text



To display (and print) text with and/or without any condition, the following steps are required:

- ❒ In **Special > Conditional Text...** click button **Show/Hide**.
- ❒ To display (and print) everything, activate the radio button Show All.
- ❒ To display (and print) only certain condition texts,
  - move the conditions into the appropriate column (Show or Hide).
  - Activate radio button **Show**
- ❒ **Set!**

Note: *You may move all tags at once with* **SHIFT+click** *on an arrow.*

Text insets

Text insets are pieces of text *imported by reference*. These can be

- 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 also (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. These flows 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.

Text inset from flow warn_1

This is a flow from file `E:\FM-course\handout_60\specials.fm`.

Danger du mort

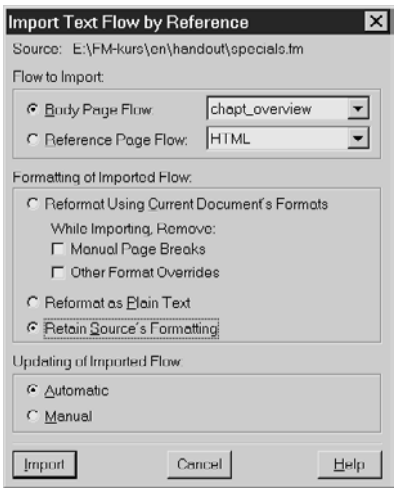
Kepp off you hands from de machine!

Das machine is nicht fur gefingerpoken und mittengrabben. It easy schnappen der springenwerk, blowenfusen und corkenpoppen mit spitzensparken. Ist nicht fur gewerken by das dummkopfen. Das rubbernecken sightseeren keepen hands in das pockets.

Relaxen und vatchen blinkenlichten!!!

Note: *Error in FrameMaker: The variable* Filename [Long] *with the format* <$fullfilename> *which is used in the text inset is re-evaluated when the text is inset. Hence the path noted above is the path of the current document - and not that of the inset!*

Import text flow from a Frame document



As an example, we import hereafter the text flow `chapt_overview` from current document:

- ❒ **File > Import > FIle…**
- ❒ Specify the proper file name (`specials.fm`) in the File selection dialog, **Import!**
- ❒ The imported file is a FrameMaker file, hence you get the dialog 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: `oti-overview-title`).

Overview

In this chapter special and maybe rarely used functions of

FrameMaker are presented:

- Handling document structure
- Conditional text
- Import referenced texts (building blocks)

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).

Inset from text flow A

This file (`E:\FM-course\handout_60\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: ***Fonts in a mixed environment*** on page C-3. Please note the special format which is local to this text inset.

Here comes arbitrary text using various styles - just to see what happens with it

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.

Note: *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.
```

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.

This is the last line of the text inset.

Avoid re-formatting

Importing a text inset in front of a specially formatted paragraph does not re-format that paragraph).

✔ This is a paragraph is in style `lcc-checklist-checked`.

Overview

In this chapter special and maybe rarely used functions of FrameMaker are presented:

- Handling document structure
- Conditional text
- Import referenced texts (building blocks)

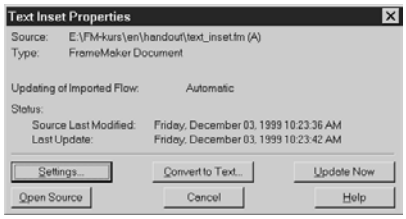
✔ This was `lcc-checklist-checked` and the inset was placed at the beginning of this paragraph. It was not changed by the inset.

Note: *When importing a text inset, set the cursor location to he start of a paragraph. If you import at the end of a paragraph, this paragraph will be re-formatted with the style of the first paragraph in the inset.*

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



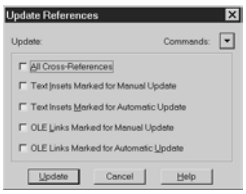
To update a particular text inset,

❒ Double click into the text (this is selected and a dialogue appears).

❒ In **Text Inset Properties** click on **Update Now**.

❒ 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,

❒ **Edit > Update References...**

❒ Activate the appropriate check boxes.

❒ **Update!**

Update everything in a book

To update all references in a book,

❒ Open the book file

❒ 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 xy.

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.*

A

Hints and tips

Overview

This chapter provides some hints to speed up your work: keyboard short cuts for commands and special characters etc.

The section Survival Kit 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 commands (both for the German and English FrameMaker) see
`www.daube.ch/docu/fmaker08.html`

Keyboard input

Short-cuts

Purpose	English FrameMaker version (Win)	Deutsche FrameMaker version (Win)
Format paragraph [a)]	F9, *para_stylename*, RET	F9, *para_stylename*, RET
Format characters [a)]	F8, *char_stylename*, RET	F8, *char_stylename*, 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	???
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
•(bullet)	CTRL+q, % / ALT 0149	CTRL+q, % / ALT 0149
—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	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, ␣,1	ESC, ␣, 1
■ ■ non breaking space	ESC, blank, h / CTRL+blank	ESC, s, z / CTRL+leerstelle
-nonbreakable hyphen	ESC, -, h	ESC, -, w (oder z?)
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)
Insert variable *name* [b)]	ESC, q, v, *name*, RET / CTRL+0, *name*	ESC, k, v, *name*, RET / CTRL+0, *name*
Lock / unlock document (view / edit)	ESC, F, l (lower case L), k	ESC, d, Y
Refresh display	CTRL+l (lower case L)	CTRL+l (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 (uppercas letter o)	ESC, g, O (uppercas letter o)

Table 1: Keyboard short-cuts (english and german FrameMaker)

a Style name can be abbreviated to significant length
b Variable name can be abbreviated to significant length

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 charcter). These meta-notations are independent of the UI language and platform.

Desired character	Meta notation	Desired character	Meta notation
TAB	\t	bullet (•)	\b
forced return	\r	dagger (†)	\d
start of paragraph	\p	double dagger (‡)	\D
end of paragraph	\P	ellipsis (…)	\e
start of word	\<	circumflex	\@
end of word	\>	florin (*ƒ*)	\F
end of flow / table cell	\f (does not work !!)	fraction (⁄)	\/ (slash)
non breaking hyphen	\+	grave (`)	\{
optional hyphen	\-	guillemet single left (‹)	\(
suppress hyphenation	_ (underscore)	guillemet single right (›)	\)
backslash	\\	hungarian umlaut (˝)	\&
non breaking space	\␣ (space)	ligature Œ	\OE
numeric space	\s#	ligature œ	\oe
thin space	\st	per thousand (‰)	\%
n-space	\sn	quote base single (‚)	\, (comma)
m-space	\sm	quote base double („)	\g
n-dash	\=	quote double left 66 (“)	\‘ (grave)
m-dash	\m	quote double right 99 (”)	\’ (single quote)
		quote single (’)	\" (double quote)
		trademark (™)	\TM

Table 2: Special characters in dialogue boxes

Wildcard-characters for Find dialogue

Use Wildcard must be set ON

Matching	Wild-card char.	Matching	Wild-card examples
any number of characters	* (asterisk)	end of line	$
any one character	?	any character from list abcd (or alphanumeric)	[abcd] or [a-zA-Z0-9]
space or punctuation	| (vertical bar)	any character except the listed	[^abcd]
start of line	^	brackets	\[and \]

For example, to find *manually numbered* paragraphs (start the line with a figure, followed by a period and a TAB symbol),

- ❒ Enter `^*[0-9].\t` in the **Find** dialogue
- ❒ Set **Use Wildcards**
- ❒ Press the **Find** button

Some Macintosh specifics

All entries using ESC sequences and CTR+q sequences are also valid on the Macintosh (␣ denotes a space).

	keys		keys		keys
[	alt+5	]	alt+6	\	alt+shift+7
{	alt+8	}	alt+9	@	opt+g

	keys		keys
– (n-dash)	opt+ -	— (m-dash)	shift+opt+ -
numeric space	alt+command+0	non-breaking ␣	alt+␣
line break	al+return	non-breaking -	shift+command+ -
optional hyphen	command+ -	suppres hyphen.	alt+command+ -

Keep dialogs (Find/Replace) and palttes (¶, *f*, table) on top

Either install an appropriate system extension or reduce the document window width to allow grabbing the ancillary windows at the right of it.

Characters with diacritical marks etc.

For platform independence FrameMaker uses a special *Internal code table* on page A-15 which differs from any standard platform code table. Hence various methods must be used to get special characters into text or into a dialogue box.

Text entry

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.
Characters not on your keyboard you either use an escape sequence (3 key strokes) or a CTRL-q sequence (2 keystrokes).

- enter a `CTRL+q` sequence (if such a sequence is given) to get the desired results, or
- enter an `esc` sequence. For example, to get an å into the text, type `esc, *, a` (three distinct key strokes). This method can not be applied in dialogue boxes.

Escape sequences

Characters in rows 80 and 90 (of the internal code page) are created with `esc` sequences. For example, to get a Å type `ESC, *, A` (3 key strokes).

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).

Enty 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` .

Symbols and dingbats

Note: *Although every effort was taken to get a complete and accurate table, the auhtor can not be held responsible for any errors. Various sources had to be consulted and MIF had to be examined to get as much information as possible.*

This table contains 217 lines, hence all codes in a Windows character set are covered.

Place symbols into text

To get a symbol or dingbat, such as ⊄ or 🏂 into text):

1 Use your keyboard to enter the base character (À or à).

2 If not available on the keyboard, use the `CTRL-q` sequence (`CTRL-q K`) or the `ESC` sequence (`esc ‘ a`)

3 Apply the font property by character format (symbol) or font (Webdings).

Warning: If you first define the font and then enter a character, you get different results, which are not correct (in this case the internal code table is bypassed).

Place symbol into dialog box

To get a symbol or dingbat, such as ⊄ or 🏂 into text):

1 Use your keyboard to enter the base character (À or à).

2 If not available on the keyboard, use the code notation (`\xcb` or `\x88`)

3 Define the special font by a character format.

Standard chars			T1 fonts		TT fonts		
char	Ctrl+q or esc	\x (hex)	Symbol	Dingbats		Wing dings	Web dings
A		41	A	✡		✌	
a		61	α	❁		♋	✔
À	K	cb	⊄	❷			
à	esc ‘ a	88	□	❰		⑧	
Á	g	e7	|	❱		🡐	
á	esc ´ a	87	□	❯		⑦	
Â	e	e5	∑	➥		🡔	
â	esc ^ a	89	□	❱		⑨	
Ã	L	cc	⊂	❸			
ã	esc ~ a	8b	□	❳		⓿	
Ä	esc : A	80	□	❨		⓪	
ä	esc : a	8a	□	❲		⑩	
Å	esc * A	81	□			①	
å	esc * a	8c	□	✡		✌	
Æ	.	ae	→	❁		♋	
æ	>	be	—	❷			
b		62	β	❂		♌	
B		42	B	✢			

Standard chars			T1 fonts		TT fonts		
char	Ctrl+q or esc	\x (hex)	Symbol	Dingbats		Wing dings	Web dings
C		43	Χ	✣		👍	
c		63	χ	❋		♍	
Ç	esc , C	82	□	❨		②	
ç	esc , c	8d	□			❷	
D		44	Δ	✤		👎	
d		64	δ	❄		♎	
Ð	C	c3	℘	④		⇦	
ð	2	b2	″	⑦		✧	
E		45	Ε	✣		☜	
e		65	ε	❄		♏	
È	i	e9	⌈	⇨		🡅	
è	esc ‘ e	8f	□			❹	
É	esc ´ E	83	□	❩		③	
é	esc ´ e	8e	□			❸	
Ê	f	e6	⌠	➦		↘	
ê	esc ^ e	90	□			❺	
Ë	h	e8	⌡	➡		🡆	Ⓟ
ë	esc : e	91	□			❻	
F		46	Φ	✦		☞	
f		66	ϕ	❄		⭧	
G		47	Γ	✧		☝	
g		67	γ	✳		♑	
H		48	Η	★		☟	

Standard chars			T1 fonts		TT fonts		
char	Ctrl+q or esc	\x (hex)	Symbol	Dingbats		Wing dings	Web dings
h		68	η	❋		♒	🚑
I		49	Ι	☆		✋	🏂
i		69	ι	❋		♓	ⓘ
Ì	m	ed	{	⇨		↙	\\/
ì	esc ‘ i	93	□			❽	🖃
Í	j	ea	|	⇨		↓	△
í	esc ´ i	92	□			❼	🏷
Î	k	eb	⌊	⇨		↖	📌
î	esc ^ i	94	□			❾	🏬
Ï	l	ec	⌠	⇨		↗	🎓
ï	esc : i	95	□			❿	🗡
J		4a	ϑ	✪		☺	🏝
j		6a	φ	❋		♋	🛩
K		4b	Κ	☆		😐	🏞
k		6b	κ	❋		&	🐝
L		4c	Λ	☆		☹	🔍
l		6c	λ	●		●	✦
M		4d	Μ	☆		💣	🏔
m		6d	μ	❍		❍	🕯
N		4e	Ν	☆		☠	👁
n		6e	ν	■		■	●
Ñ	esc ~ N	84	□	❮		④	🚬
ñ	esc ~ n	96	□			♋	👄

Note

The tilde character on the Swiss keyboard can not be used (dead key).

Standard chars			T1 fonts		TT fonts		
char	Ctrl+q or esc	\x (hex)	Symbol	Dingbats		Wing dings	Web dings
O		4f	Ο	✯			
o		6f	ο	❑			
Ò	q	f1	〉	⇨			
ò	esc ‘ o	98	□				
Ó	n	ee	⌡	⇨			
ó	esc ´ o	97	□				
Ô	o	ef	⎪	⇨			
ô	esc ^ o	99	□				
Õ	M	cd	⊆	❹			
õ	esc ~ o	9b	□				
ö	esc : o	9a	□				
Ö	esc : O	85	□	❭		⑤	
Œ	N	ce	∈	❺			
œ	O	cf	∉	❻			
Ø	/	af	↓	④			
ø	?	bf	↵	⑩			
P		50	Π	✰			
p		70	π	❒			
Q		52	Θ	✱			
q		71	θ	❑			
R		52	Ρ	✲			
r		72	ρ	❒			
S		53	Σ	✳			

Straight single quote

To get the straight single quote "Smart Quotes" must be switched off in **Format > Document > Text Options...**
`CTRL-q, CTRL-'` is not possible (at least not on a Swiss keyboard).

Standard chars			T1 fonts			TT fonts	
char	Ctrl+q or esc	\x (hex)	Symbol	Dingbats		Wing dings	Web dings
s		73	σ	▲		♦	?
ß	' single quote	a7	♣	❧		■	
Š	3	b3	≥	⑧		⌑	
š	p	f0	□			⇨	
Þ	W	d7	·	↕		➢	
þ	J	ca	⊇	❶		✍	
T		53	T	✳		❄	
t		74	τ	▼		⧫	
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	❖		❖	
W		57	Ω	✶		⌖	
w		77	ω	◗		◆	

Standard chars			T1 fonts		TT fonts		
char	Ctrl+q or esc	\x (hex)	Symbol	Dingbats		Wing dings	Web dings
X		58	Ξ	✸		✠	🔈
x		78	ξ	❙		☒	⊘
Y		59	Ψ	✹		✡	❤
y		79	ψ	▮		🗠	⊖
Ý	E	c5	⊕	⑥		🡐	🕻
ý	F	c6	∅	⑦		🡒	🕼
Ÿ	Y	d9	∧	➔		🡅	☁
ÿ	X	d8	¬	➘		🡆	🌧
Z		5a	Z	✳		☪	🐝
z		7a	ζ	▮		⌘	🚭
Ž	z	fa	|	➔		▫	🕯
ž	~	fe	⌡	⇛		☑	🌎
0		30	0	🖉		🗀	🗕
1		31	1	🔗		🗁	🗖
2		32	2	🔗		🗎	🗗
3		33	3	✓		🗏	🡄
4		34	4	✔		🗐	🡆
5		35	5	×		🖩	🡅
6		36	6	✖		🖴	🡇
7		37	7	✗		🖮	🡄🡄
8		38	8	✘		🖱	🡆🡆
9		39	9	✚		🖲	⏮
!		21	!	✂		🖉	🕷
"	esc "	22	∀	✂		🖰	🕸

Straight double quote

To get the straight double quote "Smart Quotes" must be switched off in **Format > Document > Text Options...** or use ESC "

Straight single quote

To get the straight single quote "Smart Quotes" must be switched off in **Format > Document > Text Options...**
or use CTRL-'

Standard chars			T1 fonts		TT fonts		
char	Ctrl+q or esc	\x (hex)	Symbol	Dingbats		Wing dings	Web dings
#		23	#	✂			
$		24	∃	✄			
%		25	%	☎			
&		26	&	✆			
'	ctrl+ single quote	27 \q	∋	✇			
(		28	(	✈			
)		29	)	✉			
*		2a	*	☛			
+		2b	+	☞			
,		2c	,	✌			
-		2d	−	✍			
.		2e	.	✎			
/		2f	/	✏			
:		3a	:	✚			
;		3b	;	✛			
<		3c	<	✜			
=		3d	=	✝			
>		3e	>	✞			
?		3f	?	✟			
@		40	≅	✠			
[		5b	[	✡			
\		5c \\	∴	✢			
]		5d	]	✣			

Grave

On a Swiss keyboard this ASCII symbol (`) can not be produced. This dead key is used for accents and creates (with accent on blank) another glyph (‘) - even if Smart Quotes is off.

Vertical bar

On a Swiss keyboard the key ¦ (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			T1 fonts		TT fonts		
char	Ctrl+q or esc	\x (hex)	Symbol	Dingbats		Wing dings	Web dings
^		5e	⊥	❀		♈	
_		5f	_	❁		♉	
` grave		60 \Q	‾	❀		♊	
{		7b	{	❛			
|		7c	|	❜		|	
}		7d	}	❝		“	
~		7e	~	❞		”	
·	a	e1	〈	➡			
¡	A	c1	ℑ	②			
¿	@	c0	ℵ	①			
£	#	a3	≤	❣			
¥	4	b4	×	⑨			
ƒ	D	c4	⊗	⑤			
¢	"	a2	′	❢			
¤	[	db	⇔	➛			
®	(	a8	♦	♣			
©	)	a9	♥	♦			
™	*	aa	♠	♥			
¼	9	b9	≠	❹			
½	:	ba	≡	❺			
¾	=	bd	|	❽			
ª	;	bb	≈	❻			
º	<	bc	…	❼			

Broken vertical bar

On a Swiss keyboard the key | (1) must be used!

Standard chars			T1 fonts		TT fonts		
char	Ctrl+q or esc	\x (hex)	Symbol	Dingbats		Wing dings	Web dings
±	1	b1	±	⑥		⌖	
×	0	b0	°	⑤		⌗	
÷	V	d6	√	↔		⌦	
⁄	Z	da	∨	➚		➘	
µ	5	b5	∝	⑩		✪	
¶	&	a6	ƒ	❦		❍	
§	$	a4	⁄	❤		⊙	
†	blank	a0 \d	□			▪	
¬	B	c2	ℜ	③		🕐	
‰	d	e4	™	➤		➚	
¹	6	b6	∂	❶		☆	
²	7	b7	•	❷		🕐	
³	8	b8	÷	❸		🕐	
¦	-	ad	↑	✍		✸	
°	!	a1	ϒ	❡		○	
•	%	a5	∞	❥		◎	
–	P	d0	∠	❼		✍	
—	Q	d1	∇	❽		✍	
…	I	c9	⊃	⑩		✍	
¯	x	f8	⌡	➳		⬊	
ˆ	v	f6	⌠	➶		⬈	
˜	W	f7	⎮	➴		⬋	
´	+	ab	↔	♠		★	
¨	,	ac	←	①		✶	

Standard chars			T1 fonts		TT fonts		
char	Ctrl+q or esc	\x (hex)	Symbol	Dingbats		Wing dings	Web dings
°	{	fb	⌋	➵		✖	
″	}	fd \&	⌉	➽		☒	
“	R	d2	®	❾			
”	S	d3	©	❿			
‘	T	d4	™	➔			
’	U	d5	∏	→		⌫	
„	c	e3	©	➢		↖	
,	b	e2	®	➢		↓	
‡	acc. grave a)	e0 \D	◊	➠		→	
‚	| b)	fc	⌉	➽		✓	
‹	\	dc	⇐	➔		➲	
›	]	dd	⇑	→		➚	
«	G	c7	∩	⑧			
»	H	c8	∪	⑨			

a See *Grave* on page A-13
b See *Vertical bar* on page A-13

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
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	ª	º	¾	æ	ø
	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	⁄	¤	‹	›	?	?
	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	undef
e0	‡	·	‚	„	‰	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	?	^	~	¯	?	Ž	°	¸	″	ž	?
	p	q	r	s	t	u	v	w	x	y	z	{	|	}	~	undef

For characters not directly supported by the keyboard, two input methods are needed:

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 with `CTRL+q`, followed by a character from the ASCII code page at a corresponding location ($loc_{ascii} = loc_{fm} - 80_{hex}$); e.g. to get a Þ type `CTRL+q, W` (2 keys).

Note: *Chacters* `CTRL-q v … }` *are accents. For example* `CTRL-q v` *(^) and* ^ *are different characters.*

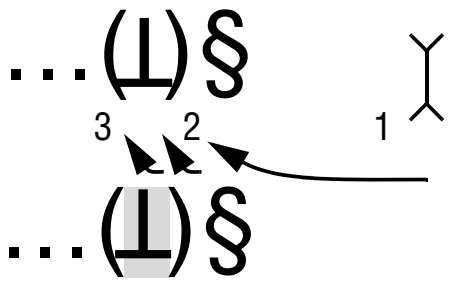
Non-width characters

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 might not grab an individual anchor out of a sequence or from amidst narrow characters.

This is any text with an anchor for the following table just here (⊥)



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).

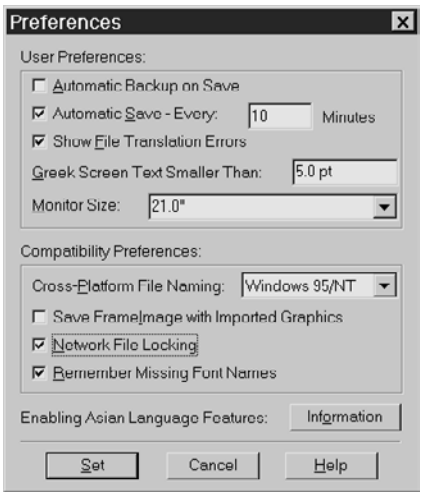
4 The anchored object becomes selected also. So you know, whether you have selected the right stuff...

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

Set up automatic save



Saving a file in FrameMaker does not take much time. Even for large files (100 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.

Be aware of unavailable fonts

In the preferences dialogue of Windows 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.

Network file sharing (Windows)

Sharing files in a network requires the option **Network File Locking** to be set. FrameMaker will create a file *document*`.lck` which existence is checked at open to prevent an open by an other user.

General problems

Warning: only one Undo level!

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!

All Frame users hope that there will be more undo levels in the near future.

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 procedure:

- 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.

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.

Display issues

Display jumps back to previous location when scrolling

This is a known bug since version 4 at least. The problem is caused by graphics with property "runaround" which touches or overlaps a text frame (which may be on a master page).

Solution according to Adobe KNB docuemnt 322405

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:

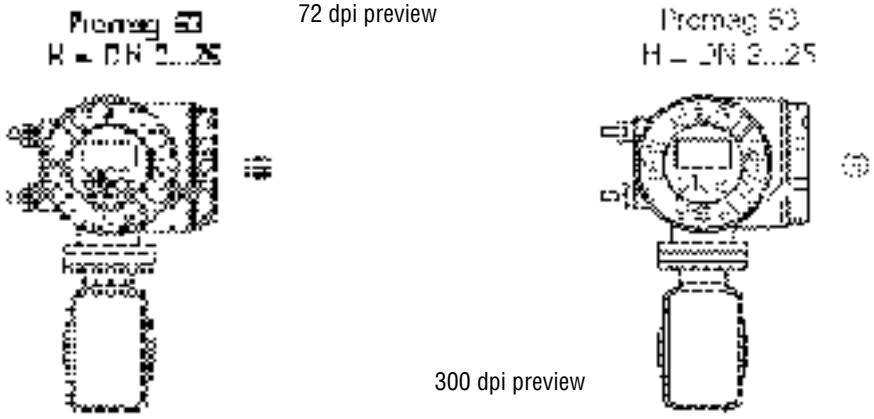
- Click outside any text frame and scroll through the complete document.
- After any close / re-open or File > Revert to Save, this procedure must be repeated.

General solution

Install the free plugin 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

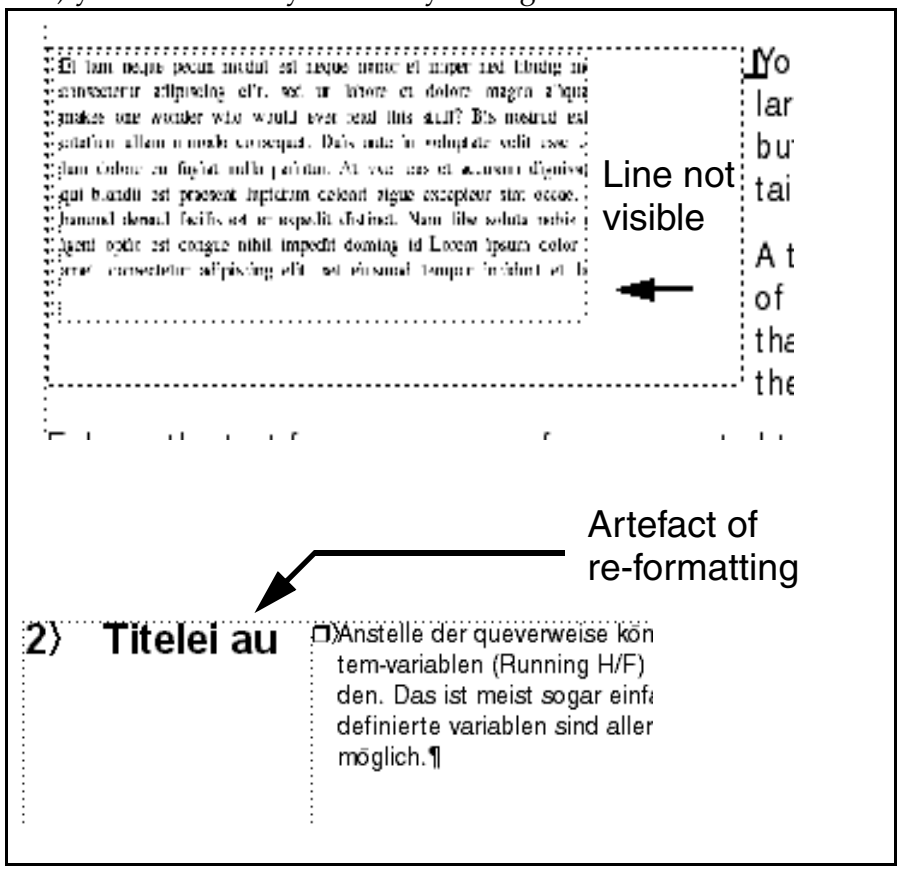
2 Make a PDF from the page using Acrobat Distiller

3 Crop the page in Acrobat to the size of the image and export as eps with previw.

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).

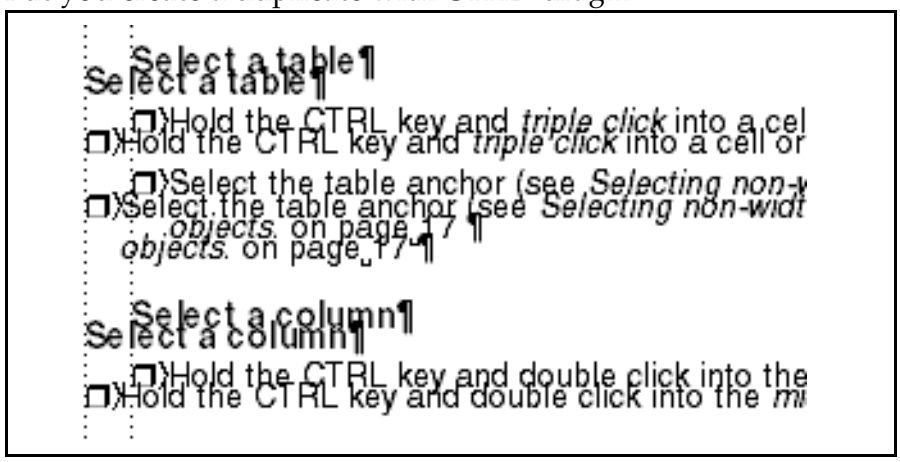
Check the tools palette for the cursor setting. It will look as displayed in the image.

You must select the 'intelligent' type of cursor (left button with the two cursor shapes on it).

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

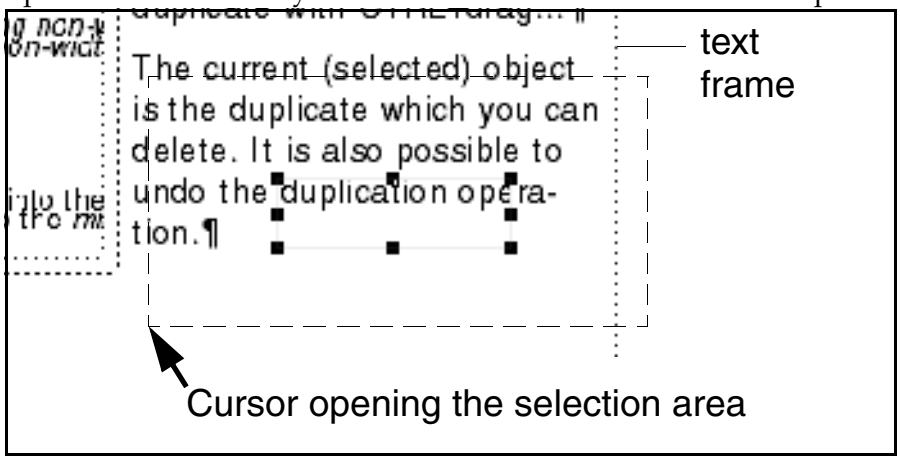
The original heading row	**Original heading row**
This is something you can not get rid of, but you can not select it!	
The first table cell	the second table cell
and the next table cell	the fourth table cell
the last line in the table	the last cell in the table

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

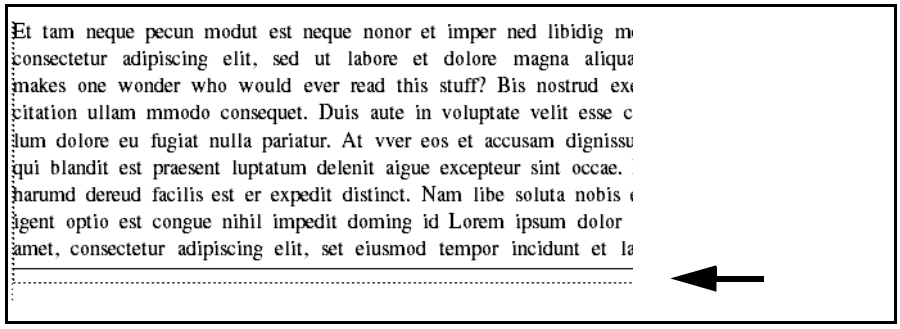


If you suspect invisible objects,

- 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.



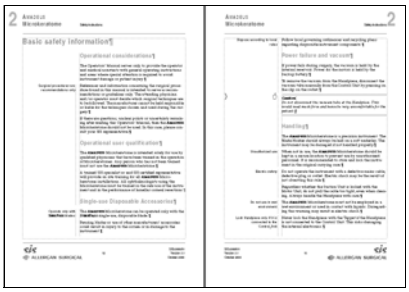
A thin solid line at the bottom of the text frame indicates that there is more text then the frame can hold.

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 arrange face to face (for example, to check the layout), but they do not:

What you see



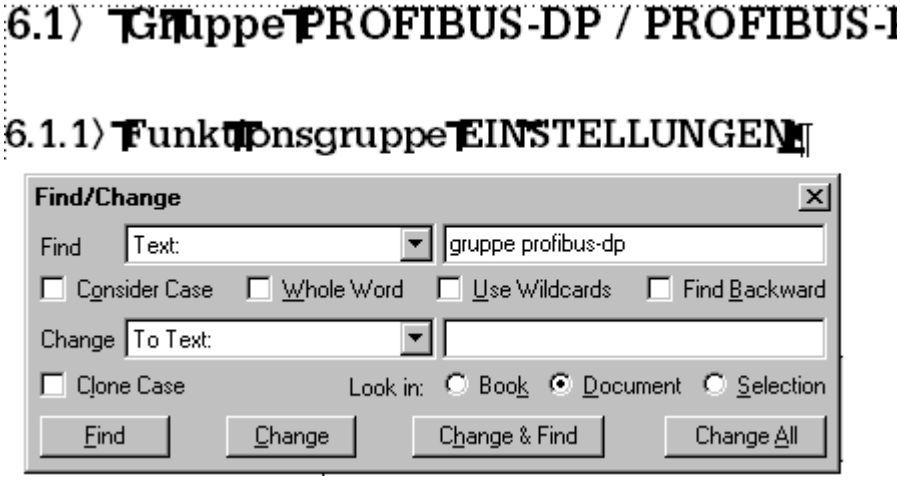
What you want to see

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 interspearsed with markers. In this example, the search reports 'not found':



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.

Table does not split at desired row

A table can not split automatically at a cetain row, if

- vertically straddled cells hold rows together. Look at all coluns 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

Watch the straddled cells

The heading of the table		

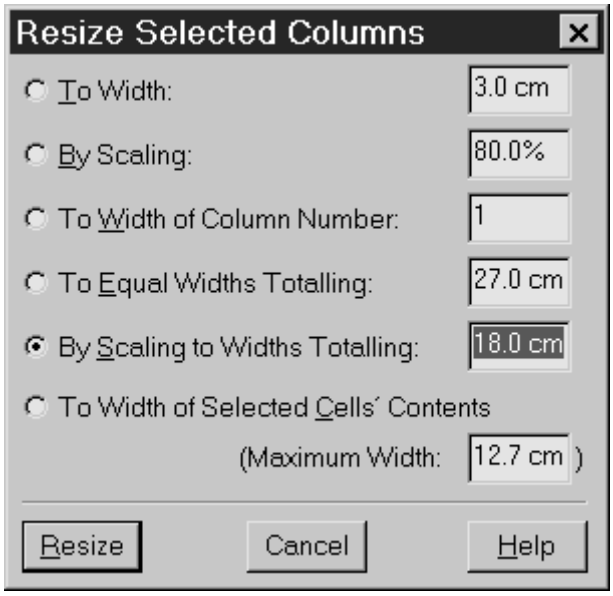
The heading of the table		
	Vertically straddled cells	
		Vertically straddled cells overlap those in column 2

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 rightmost 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



Colour issues

Inconsistent colour

One of the most pertinent errors is the inconsistent definition of colour in files. You can not get rid of this whithout major work:

Import colour from correct document

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 defintions. To tind the graphic which cuases 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 erraneous graphic can only be handled in the application in which the graphic was created.
- If the problematic graphic is an eps (Encapsulated PostScript), a TIFF or JPEG the original application can not be determined by the graphic type. Only Your intelligence can help here …

Font issues

Font xxx missing

See also *Be aware of unavailable fonts* on page A-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 permantly 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. Whether the substitution is permanent or just in this session, depend on the setting of **File > Preferences > Remember missing Font names**	OK
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). Save the file; *Deactivate* **File > Preferences > Remember missing Font names**	OK

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 occurences.*

Where is the unavailable font used?

Make a copy of your document before you start your research!

- ❒ Use the **Edit > Find/Change** dialogueto search for a Character Format. In the character defintions dialogue set all but the font familiy 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 impoted graphics (also in an eps). You need the original application to change the font. In an eps file you can at least serach with an ordinay 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 form Finite Matters to be installed in your FrameMaker. See Extensions by API clients on page 1-5 for these resources.*

Printing 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

G = Foundation Fielbus, EEx i
K = Foundation Fielbus

Promag 53 H	DN 2...100:	⟨Ex⟩ **II2G EEx de [ia] IIC/IIB T3-T6**
Promag 53 P	DN 15...600:	⟨Ex⟩ **II2G EEx de [ia] IIC/IIB T3-T6**
Promag 53 W	DN 65...1200:	⟨Ex⟩ **II2G EEx de [ia] IIC/IIB T3-T6**

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,

1 Find the file `maker.ini` (`fmsgml.ini`) file in the FrameMaker program directory.

2 Find the parameter `DisplayUsingPrinterMetrics`.

3 Change the parameter value from Off (default) to On.

EPS prints badly

If an eps looks pixelised (check with slanted lines) in the printed output, the reason might be:

- inadequate printer driver (or wrong PPD for PS-printer)
- non-PostScript printer

B

Design and typography

Overview

Legibility of printed matter is based on century old typographic tradition. Only recently these findings could be justified by research.

Technical and scientific texts are much more complex than prose and hence must use all possible means to communicate the message. This might call for abundance of some traditions in scientific writing.

See also the ETH course *Einführung in die Typografie* for more details on typography.

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 information.
- 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.

Keep these examples in mind when setting up a 'fancy layout' or an elaborate numbering scheme in your documentation.

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.[1)]

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 10 pt is a good reading size. Large pages (A3) need larger type due to larger reading distance.

Use larger type for headings (14, 18, 24 pt), smaller type for footnotes (8 - 9 pt).

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 to tight. The higher value is needed for sans serif type (e.g. Helvetica: lllness vs lllness)

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 to many different signals: limit yourself to 3 types of bullets and keep purpose constant.

---

1 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 Ghuozen Duan and Robert A. Morris, UMASS Boston in *Electronic Publishing*, vol. 2, page 47-59 (April 1989).

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).

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

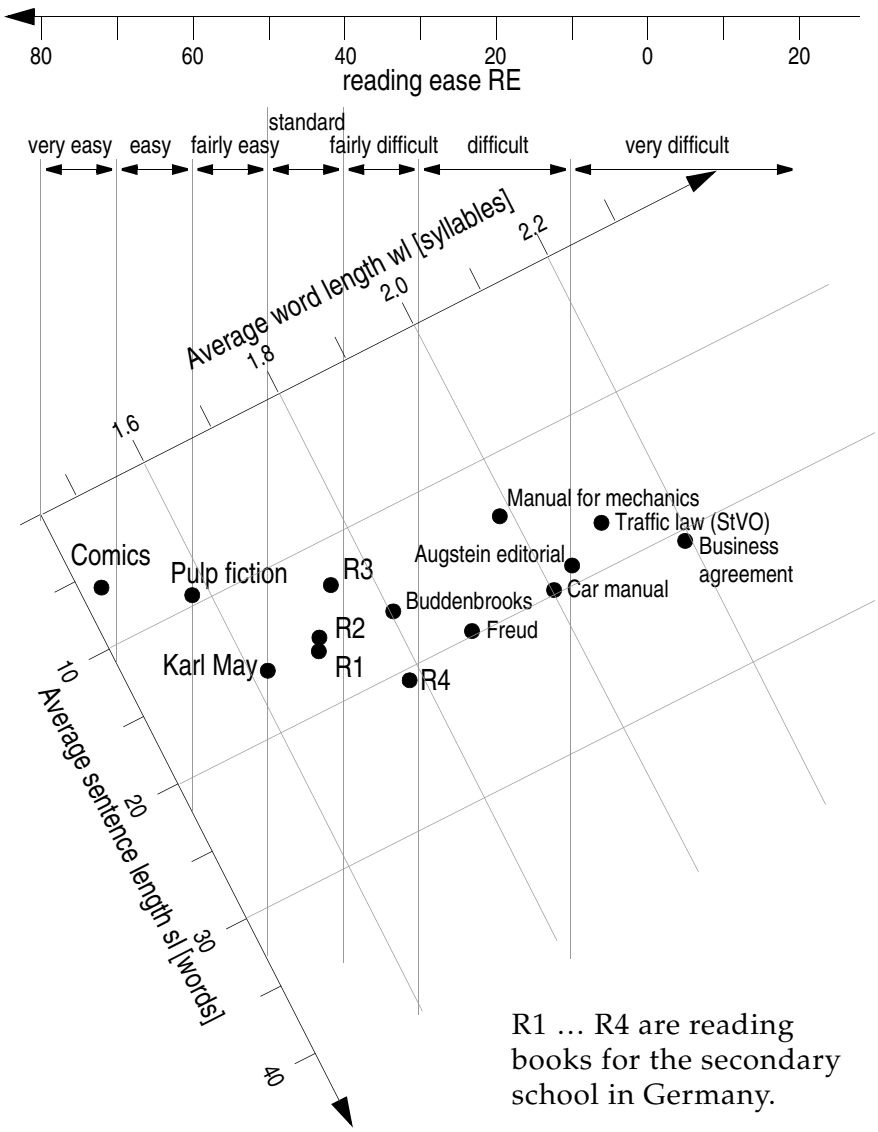
Research by Arend Mihm

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 formula[2)], which he verified on an extensive set of text samples read by a great number of people:

$$RE = 206.835 - 84.6 \bullet \overline{wl} - 1.015 \bullet \overline{sl}$$

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 (≈ +20%).

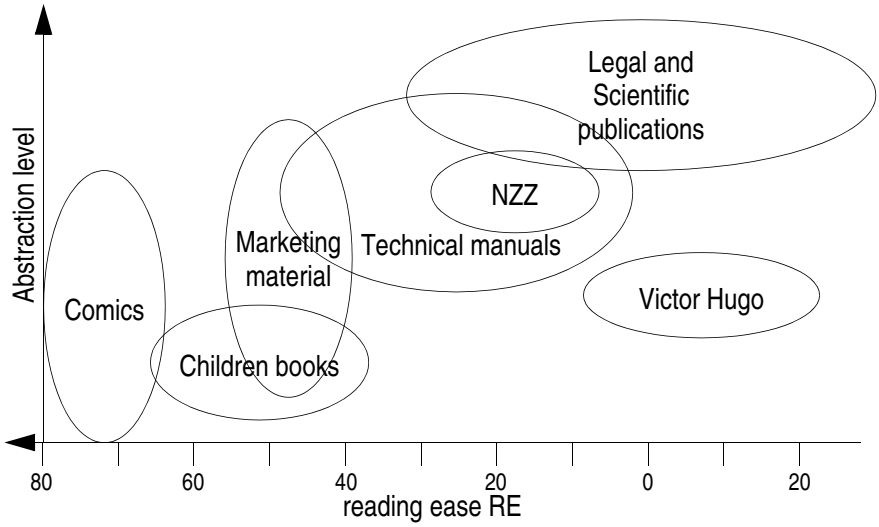


R1 … R4 are reading books for the secondary school in Germany.

2 *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

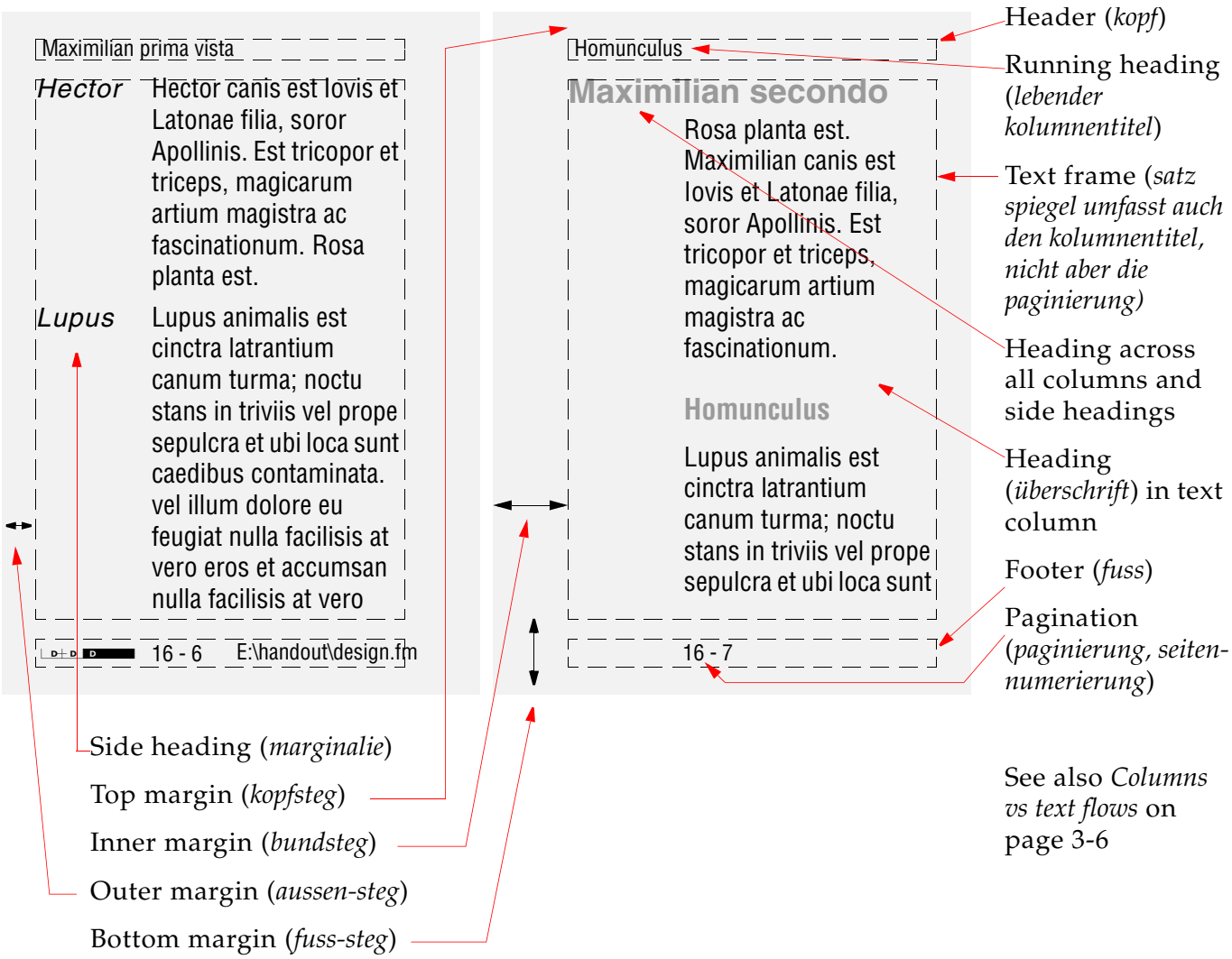
This diagram is based on the authors experience with various text sorts and tries to cope with the fact that *reading ease* is only one side of the coin. The abstraction level and the size of the vocabulary add another dimension to the subject.



Page layout

Terms

German terms are in *italics*.



See also *Columns vs text flows* on page 3-6

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 to large for layouts using side headings, such as technical and scientific publications.

Layout with sideheads

Layouts with sideheads 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 (sideheads always on the outer side) look more pleasing on first sight, this confuses the relation 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 headings

Running headings repeat the information from the headings on the page.

The running heading on the left page always repeats a higher level heading (e.g. 1-heading) than the running heading on the right page (e.g. 2-heading).

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 to much ruling. Most ruling can be omitted when proper alignment of the columns is used.
- Ruling defaults of US based DTP programs are to heavy for European eyes. A thin rule uses 0.3pt (and not 1pt 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 (an not top down!).
- Arrange table titles always at the same side (above or below) or 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.

C

Working in a team

Overview

Besides organisational issues working in a team calls for special set-up of the working environment.

Fonts are an area of danger.

Teamwork

Team responsible

- 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

```
project-directory
    arbeiten_d.fm
    arbeiten_dv7.fm
    einführung_d.fm
    firlefanz.gif
    graphic1.xyz
    graphicz.xyz
    introduction_e.fm
```

```
project-directory
    de
    arbeiten.fm
    einfuehrung.fm
    handbuch.book
    graphics_d
    firlefanz.gif
    de_v7
    arbeiten_dv7.fm
    en
    introduction.fm
    working.fm
    graphics
```

- ❒ 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 with text sensitive to translation in subdirectories to the text directory.
- ❒ 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; is 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 to weak in these cases.

Fonts in a mixed environment

- ❒ Always set **File > Preferences…** *Remember missing font names*
- ❒ Minimise your trouble with commercial printing by using Type 1 (PostScript) fonts on all platforms.

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:

- ❒ Which styles for paragraphs and highlights are needed?
  Use names, which allow easy recognition of the purpose and not the appearance (1heading rather than Big Heading). See also *Names for paragraph- and character formats* on page 4
- ❒ 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, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat..

Q **ln-narrow-list** is used for definiiton lists with short terms.Lorem ipsum dolor sit amet, consectetuer 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, consectetuer 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, consectetuer adipiscing elit, sed diam nonummy

This is a 3heading

Character formats are *1highlight*, **2highlight**, `computer`, ddd-symbols: 〉〈␣_‾

name and dingbats: ❁✪✻❄❄❄✻✻✻✻✻●❍■

D

Scientific publications

Overview

Scientific publications use all of FrameMakers features and were an initial target of the application.

This chapter gives hints which FrameMaker functions are appropriate for which task

Most references point to other chapters of the full course material.

Note: *The images in this section are all referenced. Hence you may see just gray areas when you open the FrameMaker file in your environment. You will also miss the special fonts.*

See the complete PDF for the optical illusion ...

Types of scientific publications

Script

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

- Front page repeating the text of the cover
- Dedication and probably a motto 8citation)
- Acknowledgments

Preliminaries Page numbers in roman numerals)

I Table of contents

II Abbreviations

III Summary

IV Zusammenfassung

The contents Arabic page numbers. The structure headings may vary, but this is typical:

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 abaout 1/3!

The numbering is very mixed - it uses all styles from upper case roman to lower case characters with parantheses.

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 pragraph'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 *Design and typography* on page B-1.

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 4-6) 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). If at all possible, produce an eps of the graphic and use PostScript fonts!

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 *Bibliographies with EndNote* on page 7-15) depends on the nature of your references. If you can not relay on existing data bases there is no use of EndNote. A simple table (see *Bibliographies* on page 7-11) 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 9-13).

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* on page 12-7.

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.

Boiler plate elements

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/spsoftware/) to have ready acces to any FrameMaker object (table, text, graphic, etc.)

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. Anchor symbols are displayed with a special font.

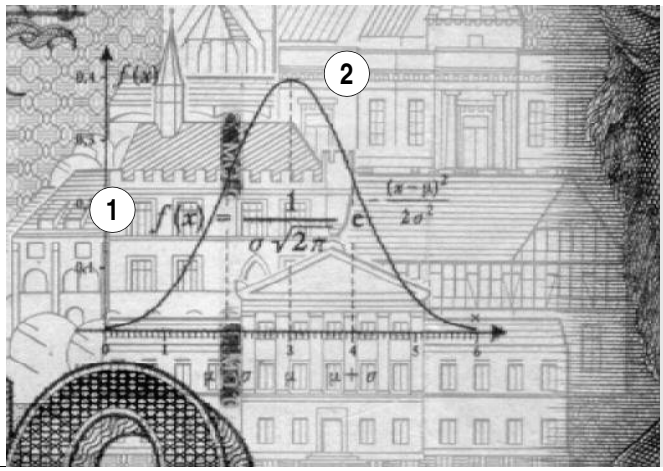


Figure 1:
C. F. Gauss on German banknotes
1 Formula of normal distribution
2 The "bell curve"

Arrangement within text column

This type of figure table (2 table columns) uses only the area of the text column

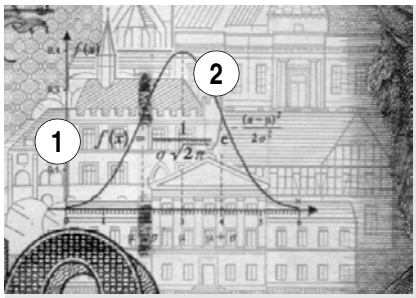


Figure 2:
C. F. Gauss on German banknotes
1 Formula of normal distribution
2 The "bell curve"

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).

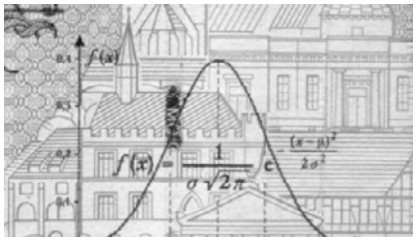


Figure 3: An example of a figure cluster with four figures in a table.
This is ft-fig-text with no numbering. Generally, legend texts are smaller than figure headings.

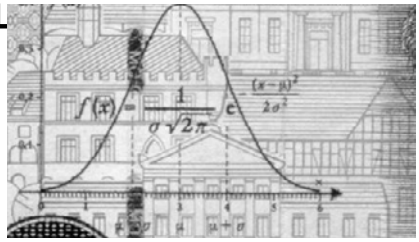


Figure 4: An example of a figure cluster with four figures in a table.
You may add here the legend text which of course normally is smaller than the figure heading.

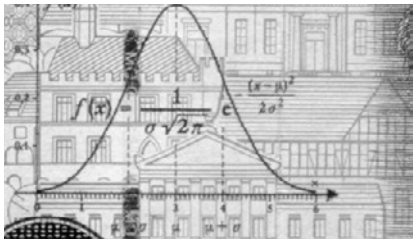


Figure 5: An example of a figure cluster with four figures in a table.
You may add here the legend text which of course normally is smaller than the figure heading.

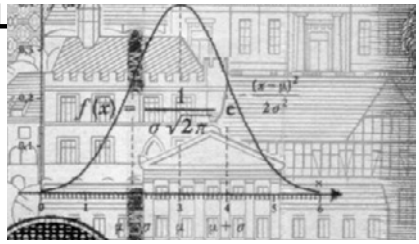


Figure 6: An example of a figure cluster with four figures in a table.
You may add here the legend text which of course normally is smaller than the figure heading.

The default numbering sequence in a table is Row first (as seen above). You can change this in Table designer, Basic category.

Graphic overlays

Collect prepared items in your boiler plate file. Here you see also white arrows to be placed on dark images.

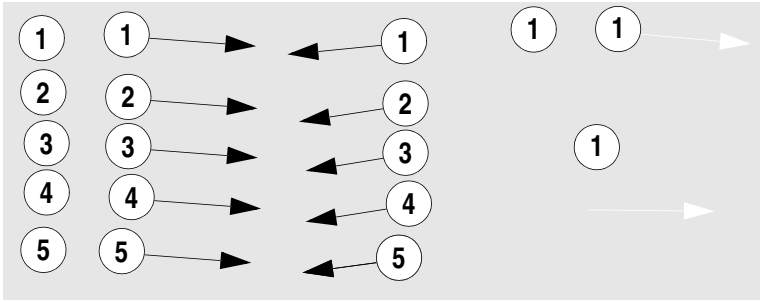


Figure 7:
Numbers and arrows for image overly

1 the fist thingy to see and this is the next line of this description
2 the second thingy to see

The elements in the picture above are grouped.

1 Use the grouped elements to copy them into your frame.
2 Place the numbers where appropriate
3 To adjust the length and direction of the arrow, ungroup the element

4 Select the tip of the arrow and move it to the desired location (you may wish to take a large zoom factor).

5 After positioning, select the arrow, the number and the circle and group them

6 You can select and change the number also in grouped state. You just need to be able to select it with the mouse (large zoom factor).

Fonts

If you plan to go to a print shop and have your paper printed, stick to PostScript (Adobe Type1) fonts. Print shops are still very reluctant in accepting TrueType fonts which are now also common on Macintosh. They may create problems on high resolution output devices.

Contact your favourite print shop as early as possible!

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:

E+H-Symbole

Symbol Ω Σ • ≤ ≥

Bibliography

The following table repeats the method described at *Bibliographies* on page 7-11.

[Daube 1989]		Daube, K., *Aufbau des OBRZ Runtime 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.

E

Importing from other applications

Overview

Plain text can be imported an 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.

Background information

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

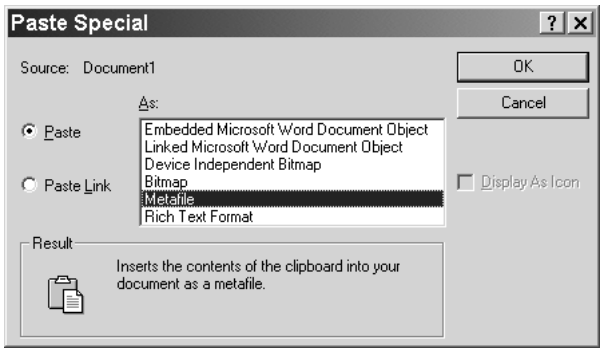
Import filters

With **File > Import > File…** FrameMaker actgivates inport 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 funtions 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 defintions. FrameMaker users are adept tothe catalog concept and hence use (in most cases) consistent nameing 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.

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.**



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 dafault for paste

The FramMaker default format for pasting is defined (on Windows) in the maker.ini file, section [Preferences]:

```
ClipboardFormatsPriorities=FILE, OLE 2, EMF, META, DIB,
BMP, MIF, RTF, TEXT
```

Note the location of OLE: this is the default for pasting anything. Hence If just pasting an object (e.g. from Excel) you get an OLE connection to that Excel object.

Note: *On the macintosh these formats are different*

Paste special in FrameMaker

When pasting a graphic this might provide the formats bmp (Bit Map), dib (Device Independant Bitmap) or EMF (Enahnced Metafile).

When pasting a textual object, this might provide emf, rtf (Richt Text Format) or text (plain text).

Object Linking and Imbedding

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 this method is called subscription.*

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 must have the same apllications installed - which is often n ot 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.

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 Imbedding* on page E-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 avector 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 E-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 distill 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.

Application of 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 stylesheet. 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 autonumbering 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" dialog 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 E-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...**

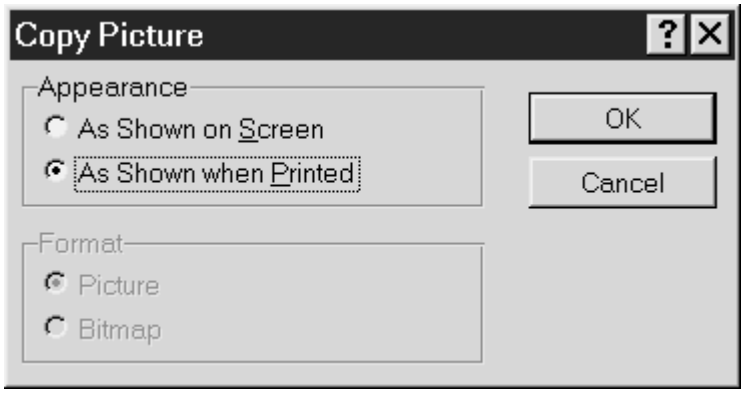
5 Select an appropriat Table format and format the rows according to the needs.

Importing an Excel graphic

To import a graphic from Excel into FrameMaker:

1 In Excel select the graphic (char...t)

2 SHIFT-Edit > Copy picture...



3 Select **as hown when printed** to get best reults

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)*

F

FrameMaker properties

Overview

In this chapter general FrameMaker properties and comparisons are collected.

The table and timeline about the history of FrameMaker is based on:

- A long e-mail from Martha J Davidson <editrix@nemasys.com> [2001-10].
- Research in the the archives of *frame.users.com* extracted with the keyword *history* [1997-05.
- For the versions > 3 I could take advantage of the manual section *What's new in FrameMaker xxx*.

Platform concept

Framemaker is available on the following platforms (operating systems)

Windows	Macintosh	UNIX	LINUX[a)]
Windows 3.1 (only FM up to version 4)	System 7 (only FM up to version 4)	IBM AIX	
Windows 95	System 8	HP_UX	
Windows NT 4.0		SUN Solaris	

Table 1:Platforms for FrameMaker

a) Only 'inofficial' LINIX ports exist.

Platform differences

Property	Windows 9x, NT, 2K	Macintosh	UNIX, LINUX
User interface	Windows, child windows, buttons, drop down lists, tabs in dialogues	Windows, child windows, buttons, drop down lists.	Windows, child windows, buttons, drop down lists
Keyboard short-cuts	Adapted to Windows. Escape-sequences	Adapted to MacOS, Escape-sequences	Escape-sequences, some other keyboard shortcuts
File format (line-ending)	CR - LF	LF	CR
Character coding	ANSI + extensions (OEM)	Mac specific	ISO Latin-1
Help system[a)]	Frame hyper document.	Frame hyper document.	Frame hyper document.

Table 2:Platform differences

a) Starting with version 6 the help system is OS specific

Document exchange between platforms - MIF

The differences require to use a special interchange format, MIF (Maker Interchange Format), which

- preserves 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 a FM 5.x MIF in a 3.x Frame version, unknown items are skipped – MIF is even downwards compatible!

Although since version 5.5. the FrameMaker file is binary compatible between the platforms, it is highly recommended to use the MIF format for this. Saving a file as MIF cleans out some ambiguities which still cumulate 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):

- Quark Xpress emulated[1)] 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 mind[2)].

	Word for Windows (6, 7)	**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

1 You may substitute the word emulated by "was inspired by".
2 Many of these remarks are still valid for Word 2000

FrameMaker history

Versions 1.0 to 3.0

From version	Version 1.11b (first known version) 1986 ??	Version 1.3 1988	Version 2.0 1989	Version 3.0 1991
User interface	File path to be typed in (open, save, import)	X-Window support. File selection lists. Remember last directory.	Japan localised version ??	Menu structure changed. 'Page' menu folded into 'Format'.
Documentation	About 100 pages 8.5 x 11" [a)].		Manual more comprehensive, size 7.5 x 9.5". Add. short guides on MIF, MML and early FDK	Add. information in supplements (tables, cond. text)
OS specifics & fonts	UNIX version only (Sun Sparc, Apollo Domain)		NeXT version.2.1 Ported to Mac (missing screen capture, macros, right-click context menu)	Probably first Windows (3.x) version. NeXt version discontinued
Document handling	Spell checking for few languages		Search includes all object types.	Conditional text introduced
Typography	¶-designer has only 1 'page' of properties		¶-designer with several 'pages'. Character styles introduced	
Page layout	One masterpage per document (page 0). 1-line header and 1-line footer; mirror for R/L.		Multiple masterpages. Text frames to define header and footer. Reference pages (boiler plate elements, definitions for TOC etc.)	'Text Rectangles' became 'Text Columns' (later: text frames).
Graphics	Graphic capabilities (except text frame). Rotate in 90° steps		Rotated text in 90° increments, graphics in any angle. Spot colour introduced.	Break each text line in a column into separate text frame (pseudo run-around). Basic colour for objects.
Tables				Tables introduced.
Import	Basic import fileters		Import filters for some text formats	MML import (softline.com)
Export	Print, print to PDF			

Table 3: Comparison of FrameMaker versions

From version	Version 1.11b (first known version) 1986 ??	Version 1.3 1988	Version 2.0 1989	Version 3.0 1991
Hypertext			Hypertext commands introduced ???	
Language			Language is ¶-property; Dicitionaries for 4 languages.	
Variables references	System variables, user defined variables		Crossreferences introduced. Character properites in variables	
Book operations; generated files	Special text file in MIF syntax to define contents of book; run in batch mode with *fmbook*. Probaly only TOC and index available.		Dialogues for book building and generated lists.	More types of generated lists.
Utilities	fmbook, fmbatch FrameReader, FrameViewer ??		No utilities on Mac	No utilities on Windows
Formulas			Equations introduced. Source of package unknown.	
SGML				

Table 3: Comparison of FrameMaker versions

a) From e-mail conversation with Martha J Davidson: *a very clear description of what the program was for, how it worked, and how to use all of its features.*

Versions 3.0 to 6.0

	Version 4.x	Version 5.12[a)]	Version 5.5	Version 6.0
	1993-09	1996-01	1997-10	2000-06
User interface	New and extended menu structure; button bar and format bar; Help extended; configurable UI; mm as display unit	Menu structure enhanced; dialogues adapted to W95; button bar enhanced; screen-display enhanced	Context menus and tool tips on all platforms; drag & drop; tabbed dialogues in Windows First fully functional japanese version on all platforms.	Platform dependent Help includes free text search; enhanced book-handling. Many dialogues still for small screens.
Documentation		Quick ref. manual integrated into user guide; enhanced help. Some information from v. 4 deleted...	User Guide reworked completely (about 1/2 as many pages). Additional information (MIF etc.) in PDF.	User Guide reworked, more hints, better examples
OS specifics & fonts	Font handling enhanced (add. sections in maker.ini); no long file names in Windows (until 5.11).	Long file names in Windows; new extensions for auto-files; OLE 2 support runs on OS/2, although version abandoned	Consistent naming (extensions) and file format (.fm) across platforms ; save as text with encoding. Linux beta 5.5.6 not continued	
Doc ument handling	(automatic) change bars introduced		Double byte support; PDF set-up (Acrobat bookmarks)	
Typography	¶- and *f*-designer reorganised; line spacing and ¶ spacing		Stretch text; missing fonts stored in document;	
Page layout	New templates; side heads; run-in heads; better options page size; enhanced handling of body-master page creation;	Text frames can include columns; sideheads enhanced; straddles; more anchored frame positions		
Graphics	Line styles; spot colour (Pantone)	Join lines & curves; text run-around (on/off)	Colour libraries; tints; more run-around properties	
Tables	Table-designer enhanced		Sort by rows or columns; save as text	
Import	More filters	Text import by reference; more filters, updated	More & better filters	
Export	RTF is the only one – not very good	Save to HTML (rud.) more filters, updated; FluidView document (continuous page)	More & better filters; save to PDF; enhanced save to HTML	PDF document information and file optimisation.

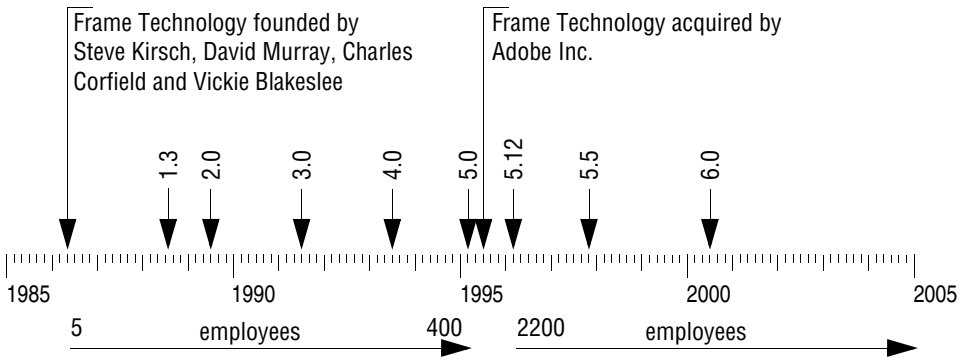
Table 4: Comparison of FrameMaker versions

	Version 4.x	Version 5.12[a)]	Version 5.5	Version 6.0
	1993-09	1996-01	1997-10	2000-06
Hypertext	More link types	Variable window settings; thumbs in index; sub menus…	Additional functions; integrated GUI	
Language	Language is ¶-property; 17 dictionaries standard; building blocks language dependent [b)]		Language is also *f*-property	
Variables references			Rename marker types; user specified marker names	Volume- and chapter number
Book operations; generated files	Automatic hypertext links possible in generated files.			Book wide find/replace and spell-check; enhanced setup of file properties (including. numbering)
Utilities	Thesaurus; view only documents	Compare documents; WebWorks light for HTML export	Create format-catalogue from local formatting	WebWorks Publisher Standard (= light) for good HTML and XML export. FrameViewer not ion CD.
Formulas	More control on typography: fine tuning location, font setting.			
SGML	FrameBuilder = FrameMaker + SGML		Product name: FrameMaker + SGML	

Table 4: Comparison of FrameMaker versions

a) Version 5.0 was shipped 1995-11 by Frame Technology, 5.1 was shipped 1995-12 by Adobe (just logo change).
b) Too deep localisation is a major problem also with the most recent version. This complicates exchange of documents between FrameMaker UI-versions (e.g. maintain a document in Germany, France and Italy).

FrameMaker timeline



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 (befor new edit starts)
document**.emg**.fm	emergency copy (some crashes)
document**xxx**.fm	generated file (for suffixes xxx see below)
document.**book**	generated book started with “document”
document.**mif**	Maker interchange file, platform independent.

Name suffixes

The following suffixes are default

	UI language		
	English	German	French
Table of contents	TOC	IVZ	
Index	IX	IND	
List of Figures, Tables	LOF, LOT		
List of paragraphs, (alphabetical)	LOP (APL)		
List of Markers, (alphabetical)	LOM (AML)		
List of References (text insets, images, fonts, unresolved x-refs etc.)	LOR		
Standard Index, Index of Authors, Subjects, Markers, References	IX, AIX, SIX, IOM, IOR		

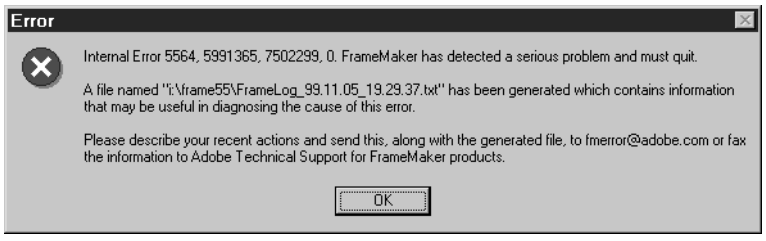
Note: *The defaults for the suffices (TOC, IX etc.) depend on the UI language. These can be changed when generating the files. However, names of building blocks(e.g. for system variables) also depend on the UI language and can **not** be changed!*

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 additionly 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.