

# PDF-Related Aspects of FrameMaker 6.0

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FrameMaker 6.0, released April 2000, is labelled as a Multichannel Publishing tool. Among other new functions (mostly related to book functionality), “Enhanced PDF Support” is listed.

This review (*updated July 2001*) focuses on these new features, and examines what they offer producers of PDFs.

The new PDF Setup multi-tabbed dialog box (previously Acrobat Setup) has four tabs: Bookmarks, Structure, Document Info and Links.

## Bookmarks

The Bookmarks tab is identical to the Acrobat Setup box we had in FrameMaker 5.5.x, the only minor difference is that when bookmark hierarchy is defined and a bookmark is demoted with the >> button, it is indented with periods, instead of spaces. As with previous releases, once you get past six levels, if this happens at all, numbers followed by the greater than (>) symbol are used to indicate the level.

## Bookmarks in Books

FrameMaker 6.0 introduced a change in the way bookmarks are handled for books; the change is undocumented, and most likely it is a side-effect of the new implementation of books.

In previous releases, a FrameMaker book had its own bookmark properties; when outputting files from a book, the book’s Acrobat setup was the one in charge, overriding bookmark setup in individual files that are part of the book.

In FrameMaker 6.0, the bookmark setup used when outputting from a book file is each of the individual document’s PDF properties.

Through the book’s PDF setup you can set the PDF properties of all files, or only of some of the files. The book file registers these properties internally (as evident when the book file is saved to MIF), but they are not used when outputting files through the book.

Opening the PDF setup dialog box in a book after selecting files, or accessing it through the book’s Print dialog box, will show PDF settings in the first selected item (or first file in book), and not the settings you will necessarily have for all other chapters. Only if you click OK, these settings will be applied to each of the chapters (non-generated files).



*A common trap is to open the PDF setup box in the book, review it and, assuming that what one sees is the right setup, to click Cancel. However, the user has merely viewed the setting of one file in the book. Had the OK button been clicked, these settings would have been applied to all selected files in the book. But by clicking Cancel, the user may well be left with files with different set-ups in the book.*

PDF settings must be actively enforced on all files in book; this is especially applicable to new files.

When updating bookmark setup through the book, bookmark setup for generated files only adds more tags, if specified, but **does not remove tags currently specified** for these generated files.

## Structure

FrameMaker 6.0 can create PDF “structure information” based on the paragraph tags and hierarchy specified.

With current Acrobat versions, the only use for structure is through “structured bookmarks”. The end-user using Acrobat Reader can right-click a structured bookmark and select Print – in which case the pages associated with the element will be printed.

When using the full version of Acrobat, right-clicking a structured bookmark also enables you to delete/extract the pages associated with the element.

These operations assume a consistent relationship between elements and pages – which might not be the case in many publications.

I find the word “structure” in conjunction with paragraph tags to be somewhat confusing. A “real” structure is based on elements, and can be validated using the rules set in the Element Definition Document (EDD); these items are only available in FrameMaker+SGML. (Interestingly, PDF-structure handling in FrameMaker+SGML 6.0 is similar to that of FrameMaker 6.0; the “real structure” that FM+SGML documents have is ignored).

As currently the only area in Acrobat where you see structure is with structured bookmarks, which are not generated by FrameMaker (unlike with PDFMaker/Word), a “structured PDF” created by FrameMaker will look like any other PDF. If you open the bookmark window and click the top-right button, one of the options listed is “New Bookmarks from Structure”. The bookmarks generated this way have the “elements” name (i.e. paragraph tags), preceded in the hierarchy by three generic bookmarks. When the sample FrameMaker “Report” document is converted to a structured PDF, for example, and the New Bookmarks from Structure command is used, actual structured bookmarks you will get are shown in the side note.

*Therefore, to fully control the bookmark setup when outputting from FrameMaker 6.0 books you need to:*

*1. Actively select the bookmark setup for all components by choosing the paragraph tags and pressing OK,*

*AND*

*2. Open generated files independently, and set the required bookmark setup (Format > Document > PDF Setup).*

```
- Untitled
- - Article_A
- - - TextSection
- - - - Heading 1
- - - - - Heading 2
- - - - - Heading 2
- - - - - Heading 1
- - - - - Heading 2
- - - - - Heading 2
```

With Books, such structures will be duplicated for each document, with a “document” top element. Depending on contents, additional possible elements are FootnoteSection, TableTitle, TableHead, TableBody and TableFoot (and a few other table-related elements).

Of course, to make these structured bookmarks even slightly useful, you would have to rename the existing generic names to each of the actual titles, and redo this procedure each time you create the PDF.

To sum up:

- PDF structure is only marginally supported in the user interface of the current Acrobat version (4.05). Structure-related functions such as search and navigation may become useful in future versions, if Acrobat is enhanced in this direction.
- The structure-related data generated by FrameMaker 6.0 is minimal, as it does not specify element attributes and does not create structured bookmarks. Manually generating these in Acrobat and renaming their titles to something more meaningful than the paragraph tag is not practical.

*The FrameMaker 6.0 manual and online help direct you to [www.adobe.com](http://www.adobe.com) for information on structure in PDF, yet nothing can be found. Searching the Adobe site as well as the entire internet results in a single document specifically addressing the implementation of structure in PDF – this seems to be an Adobe-internal white paper.*

## Document Info

FrameMaker 6.0 enables you to specify DocInfo fields, through Format > Document > PDF Setup (or when printing, through the PDF Setup button). All fields can be used by Acrobat’s Search function; the Title is displayed in Search Results window, and optionally in the document’s title bar (if the opening setting of Resize Windows to Initial Page is activated). Optionally, the Title can be spoken by a text-to-speech engine.

*FrameMaker 6.0’s online help incorrectly claims that Document Information fields “will appear when you print the PDF file”.*

This is a welcome addition, even though its implementation is minimalistic. Shortcomings are:

- It could have been useful to optionally specify that fields can automatically retrieve the text of certain paragraph/elements or variables. (In FrameMaker 5.5.0-5.5.2, this is possible by having a `/DOCINFO pdfmark` command in a PostScript text frame, with a cross-reference and/or variables; in FrameMaker 5.5.6, it is possible with the TimeSavers with FrameMaker/Windows).
- When using the Import Formats function, the Document Properties category also includes the information in the PDF Setup, Document Info and Links tabs. ***Thus, if you placed meaningful and unique fields in each of your FrameMaker files (Title, Keywords, etc.) and then imported formats from a template with Document Properties turned on, all of these fields are essentially wiped out.***

*Using the PostScript text frame approach is still possible. As the DOCINFO placed by FrameMaker 6.0 is placed in the beginning of the PostScript file, it has precedence over custom DOCINFO statements.*

- No support for custom, user-defined, DocInfo fields (these can be used by Acrobat's Search function in advanced searches).
- Only one line is supported, with no word wrapping and no horizontal scrolling – inconvenient with potentially longer fields, Keywords being the likely one.

If you don't use the FrameMaker 6.0 DocInfo dialog box, FrameMaker automatically creates a DOCINFO with the FrameMaker file name as the Title, and the user name as the Author.

DocInfo setup is registered (and used) correctly for a book. To set these fields for a book, click the top item in the book window (book title), and then choose Format > Document > PDF Setup. The dialog box which opens will only have one tab, DocInfo.

It is also possible to set Document Info fields in a number of documents in a book, by selecting them first and then using Format > Document > PDF Setup. All unchecked boxes will not be effective for the specific group.



*FrameMaker does not write Document Info fields if the first page in a document is not printed. Printing page ranges will also create bookmark problems, as FrameMaker writes all bookmarks for a given file, regardless of the specific pages printed.*

*The TimeSavers' IgnoreDOCINFO setting can be used to suppress FrameMaker 6.0's DOCINFO, if required.*

## Links ("PDF Optimization")

FrameMaker 6.0 includes a new mechanism to reduce the number of named destinations (inserted for each and every paragraph, to support hypertext links in generated files). The optional mechanism available in FrameMaker 5.5.6 was "very simplistic" (to quote a comment included in the header .ps file in FrameMaker 6.0). However, the new FrameMaker 6.0 mechanism, even though improved, is still inefficient as well as unreliable. Many named destinations which are not used in the PDF(s) are left intact, while other destinations that are required by cross references, hypertext markers or links in generated files are not present in the PS/PDF – causing links using these destinations to be invalid!

*The TimeSavers' UnBloat function can be used safely and efficiently with FrameMaker 6.0. When using it, the PDF Setup option to create named destinations for all paragraphs must be turned on.*

## Bug Fixes

I could not find a document listing bugs from earlier releases that were fixed in FrameMaker 6.0 (such documents were included with previous releases). But one bug that was addressed is the "duplicate last link bug", consistently present in all FrameMaker releases 5.0-5.5.6 – and this is a refreshing improvement.

The fix is seemingly done by artificially limiting the active area in the last paragraph (similar to the workaround that could be used with earlier versions). The result is that last link on the page becomes an exception in terms of its dimensions, compared to the other links on the same page.

## Hypertext Markers/Cross-References in Master Pages not Carried Over to Acrobat – Fixed in the First FM6.0 Patch

A new PDF-related bug introduced in the original release of FrameMaker 6.0 is that hypertext markers in master pages were not carried over to Acrobat; this applies to cross-references as well.

The 6.0p357 to 6.0p405 patch available at [adobe.com](http://www.adobe.com/support/downloads/main.html#f) fixes this. Download it from <http://www.adobe.com/support/downloads/main.html#f> (separate versions for FrameMaker and FrameMaker+SGML).

## Validation of Hypertext Markers – Better, But...

FrameMaker 6.0 validation of hypertext commands was improved, as it now checks the case of destination names when validating `gotolink/openlink` commands. However, validation is still not reliable. Main problems are:

- Often, validation “errors” are reported without any reason. Hypertext markers will not be inserted when such errors are reported, unless validation is turned off.
- When `gotopage/openpage` commands are inserted, the page numbers are not verified. A `gotopage X.fm:102` command is reported to be valid if document `X.fm` exists, but no problem is reported if that document contains only 6 pages starting with page 1.
- `gotopage/openpage` commands are validated only if they have arguments consisting of Arabic numerals. However, if a document uses other numbering styles, the commands must use that numbering style for the commands to be valid.

## Documentation Errors

The FrameMaker 6.0 manual still lists the “previouslink” and “message openfile” hypertext markers as not being converted to PDF.

## Summary: Looking Back...

When examining Acrobat-related features of FrameMaker since release 5.0 (end of 1994), one cannot but notice that the differences between releases are minuscule:

- In FrameMaker 5.5.0 (1996), the option to suppress the creation of article threads was added, as well as having these created according to columns and not to frames. In addition, FrameMaker issued the command to open the PDF with bookmarks visible if it actually creates bookmarks. (I do not consider the Save As PDF function to be a functional enhancement).
- FrameMaker 5.5.6 (1998) populates the DocInfo fields for Title (filename.fm) and Author (user name). In addition, an option to somewhat reduce the number of automatically-generated destinations is added as a header.ps setting – however, it is accompanied by a warning that using this option may result in bad links (random cross-references are affected).

## ...And to the future

There is definitely room for various improvements and enhancements in PDF-related aspects of FrameMaker. But leaving aside issues relating to user education (versions, drivers, settings, fonts, and more), various text-related limitations of *Acrobat itself* will have to be addressed, in order for PDFs produced from FrameMaker (and other applications) to be fully-functional in terms of text recognition and text-related operations.

While a marketing brochure for FrameMaker mentions PDF as “a compact yet fully searchable format”, various online PDFs that were authored with FrameMaker and are supplied with FrameMaker (or can be downloaded from Adobe’s web site) ironically prove to be only “partially searchable”.

*Unless some measures were taken to remove this information, the Creator and Producer DocInfo fields in PDFs will reveal information on the authoring application and Acrobat Distiller version used to create the individual PDF.*

*It’s interesting to note that several PDFs currently produced in Adobe and made publicly available in [www.adobe.com](http://www.adobe.com) are produced using outdated components such as FrameMaker 5.5.0 (September 2000); Distiller 3.01 was used to distill PDFs for Frame Developer Kit version 6.0 (April 2000).*

*This demonstrates the slow pace in which product updates and new releases are adopted, even when newer versions with additional functionality are practically available for free, in-house.*

*But another related aspect has to do with on-going product testing and feedback. To me, it makes sense that Adobe’s employees use the most recent versions of FrameMaker, Acrobat and printer drivers, to test them even before they are released (let alone literally years after these tools were made publicly available).*