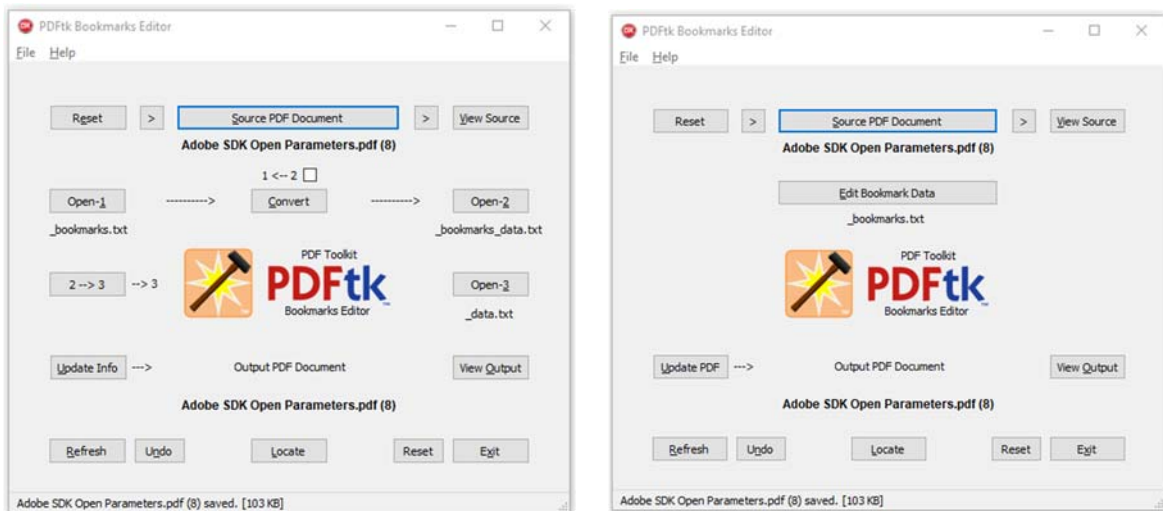


PDFtk Bookmarks Editor

Version: 1.1.0
Date: 17 Jan 2019
Platform: Windows 32-bit application
Developer: David King
Compiler: Delphi 10.2 (Tokyo)
Copyright: ©2019-2020, David King
License: GNU General Public License (GPL), Version 3
Dependencies: PDFtk Server v2.02; installed PDF viewer

PDFtk Bookmarks Editor is a free, graphical user interface (GUI) for updating PDF bookmarks using the Windows version of the popular PDF Toolkit (PDFtk) command line tool, [PDFtk Server](#).



The above screenshots show the PDFtk Bookmarks Editor GUI running in “Full” mode (left) and “Simple” mode (right). The program uses three text files to update the bookmarks in a PDF document. Text files 1 and 2 contain bookmark data in the Editor’s own 1-line format and in PDFtk’s 4-line format, respectively (see below), while text file 3 contains 4-line bookmark data plus PDF metadata and page media data in a format compatible with PDFtk’s update_info command. While the program supports editing bookmark data in either 1-line (file 1) or 4-line (file 2 or 3) format, use of the simpler and more capable 1-line format of file 1 is recommended. “Simple” mode restricts user access to file 1 only and supports automatic updating only. “Full” mode allows access to all three data files and supports both automatic and manual operation but requires some understanding of the update process.

4-line Bookmark Data Format (used in Files 2/3)	1-line Bookmark Data Format (used in File 1)
BookmarkBegin BookmarkTitle: Related documentation BookmarkLevel: 2 BookmarkPageNumber: 4	4 2 Related documentation
4 lines: BookmarkBegin, Title, Level, PageNumber	Tab-delimited Page Number, Level, Title

The source PDF can be selected via drag and drop. The program will then automatically perform a PDFtk dump_data operation to extract metadata, bookmarks, and page media data from the source PDF to text file 3 (_data.txt). The extracted bookmark data will also be copied to text file 2 in 4-line format and to text file 1 in 1-line format (unless a file with the required name of file 1 already exists).

After selecting the source PDF, the user will open file 1 for editing (click *Open-1* if using “Full” mode or *Edit Bookmark Data* in “Simple” mode). After editing and saving file 1, the required actions to update the PDF can be performed either (1) automatically or (2) by a sequence of manual button clicks (“Full” mode only). The manual method allows user access to files 2 and 3 during the update process. For example, it may be desirable to open file 2 to (Open-2) to inspect the generated 4-line bookmark data before merging it into file 3 or to edit file 3 (Open-3) to update PDF metadata (e.g., Title, Creator, etc.) before clicking *Update Info* and generating the output PDF file.

- (1) Automated: Hold down the Shift key down and click the *Update Info* (“Full” mode) or *Update PDF* button (“Simple” mode) to have the program issue a sequence of virtual button clicks to update files 2 and 3 and produce and display the output PDF
OR
- (2) Manual (“Full” mode only): Click the *Convert* and *2 > 3* buttons in sequence to convert the updated bookmark 1-line data in file 1 to 4-line format in file 2 and then copy the data from file 2 to file 3 replacing the existing bookmark data in file 3. Finally, click the *Update Info* and *View Output* buttons to generate and display the output PDF file with the updated set of bookmarks.

The sequence of operations for updating bookmarks, beginning with selection of the source PDF, can be summarized as follows (red font denotes required user actions):

Source PDF > File 1 (_bookmarks.txt), File 2 (_bookmarks_data.txt), File 3 (_data.txt) > [*Open-1/Edit*] > File 1 > [*Shift-Update Info/Update PDF*] (automated)
or [*Convert*] > File 2 > [*2 > 3*] > File 3 > [*Update Info*] > Output PDF > [*View Output*] (manual)

When done working with a source PDF, the program should be reset via the Reset button or terminated via the Exit button in order to clean up the multiple temporary .txt files (1-3) and backup (.bak) file generated when updating each source PDF. The three .txt files (1-3) should not need to be retained since the updated bookmark data can be extracted from the output PDF if needed in the future. An exception is a _bookmark.txt file (file 1) that uses logical page numbering (level 0) since logical page numbering cannot be recovered from the physically numbered bookmarks in the PDF. In general, a copy of the original source PDF also need not be retained since updating the bookmarks in a PDF does not affect the pages or any other content of document.

Note: PDF bookmarks are officially called outlines in the PDF specification/standard. The outline of a PDF document is typically displayed as a tree of bookmarks in the navigation pane when using a PDF viewer, such as Adobe Reader. PDFtk bookmark data is limited to title, level and page number. PDFtk does not provide access to other properties, such as view/zoom level of the destination page, color of the bookmark, format of bookmark text (e.g., bold, italic), or actions other than going to a local page.

Version History

Version	Date	Changes
1.1.0	14 Jan 2020	Added "Simple" mode which hides manual controls related to files 2 and 3 when automatically updating bookmarks in the PDF file. Note: The program can be configured to operate either in "Simple" mode (Mode=1) or "Full" mode (Mode=0) mode via a setting in .ini file.
1.0.1	08 Sep 2019	(1) Added Shift - 'Update Info' button click or keyboard shortcut (or click on PDFtk image) to automate the issuing the sequence of button clicks required to produce output PDF after file 1 has been edited by user. (2) Added command line argument handling to allow source file name to be passed to Bookmarks Editor when invoked from command line. (3) Modified 'View Source' to display the .bak file of the source PDF to allow both before and after versions of PDF file to be displayed when the output PDF overwrites the source PDF (default). (4) Updated the tab order of controls on the form.
1.0.0	21 Aug 2019	Initial public release

Note: Because the PDFtk Bookmarks executable is not signed with a code signing certificate (which are expensive and must be renewed annually), Windows cannot validate the publisher and therefore will flag the software as risky the first time it is launched. As long as the application has been downloaded from a trusted source, such as its project site on [SourceForge](#), the message can be safely ignored by clicking on the 'More info' link on the upper left of the first screen and then the 'Run anyway' button at the bottom of the second screen.



Details: Using PDFtk Bookmarks Editor

PDFtk's `dump_data` command can export PDF metadata, bookmarks and page metrics to a text file. PDFtk's `update_info` command can read such files which can be edited and then used to update metadata and bookmarks in the PDF document. (Note: `Update_info` cannot update page metrics.)

The PDFtk Bookmarks Editor automatically extracts bookmark data (`dump_data`) from the source PDF and provides a GUI for the user to edit bookmark data in any of the following three .txt files (1-3), copy or convert bookmark data, and issue PDFtk `update_info` commands to update the data in the PDF.

File	File Extension	Bookmark Format	
1	_bookmarks.txt	1-line	Text file for editing bookmark data in 1-line format. After editing file 1, the updated 1-line data can then be converted to 4-line format of file 2 (Convert) and then copied from file 2 to file 3 (2 > 3) for use by Update Info. Initial contents of file 1 will be taken from the existing bookmarks in the source PDF unless a file 1 is already present in the source PDF folder. When finished with the source PDF, the Editor will prompt whether OK to delete file 1 (default=Yes) if file 1 was initially populated from the source PDF.
2	_bookmarks_data.txt	4-line	Text file for holding or editing bookmark data file in native PDFtk 4-line format. Updated data can be copied from file 2 to file 3 for use by Update Info. Initial contents of file 2 will be taken from the existing bookmarks in the source PDF. When finished with the source PDF, the Editor will automatically delete files 2 and 3.
3	_data.txt	4-line	File produced by Dump Data, updated by Editor (2 > 3), and used by Update Info. Contains metadata, bookmarks, and page metrics. While file 3 could be directly edited to modify bookmarks, files 1 and 2 are intended to isolate the editing of bookmark data. When edited bookmarks are available in file 2, the updated data can be copied to file 3 by clicking button "2 > 3", replacing the existing bookmark data in file 3. "Update Info" can then be clicked to update the bookmarks in the source PDF file.

The three .txt files will start with the same file name as source PDF document but will have a different extension; e.g., if the source file is named `MyFile.pdf`, the three files will be named (1) `MyFile_bookmarks.txt`, (2) `MyFile_bookmarks_data.txt`, and (3) `MyFile_data.txt`.

Data for each bookmark consists of a page number, level and title. To facilitate editing of bookmark data, a simplified 1-line format has been defined for use with the Bookmarks Editor. The following example illustrates (1) the simplified 1-line format and (2) the native PDFtk 4-line format for bookmark entries. Either format can be used when editing bookmark data and the Bookmarks Editor can quickly convert between the two formats. Use of 1-line format is strongly recommended.

Format	Example	Description
1	4 2 Related documentation	<p>Simplified 1-line format: Page, Level and Title separated by tab characters.</p> <p>Bookmark data in file 1 is in 1-line format. The Bookmarks Editor can convert 1-line data in file 1 to 4-line data in file 2 and vice versa.</p>
2	BookmarkBegin BookmarkTitle: Related documentation BookmarkLevel: 2 BookmarkPageNumber: 4	<p>PDFtk native 4-line bookmark data format used in <code>_data.txt</code> files by PDFtk's <code>dump_data</code> and <code>update_info</code> commands.</p> <p>Bookmark data in file 2 and file 3 is in PDFtk 4-line format.</p>

The source PDF can be selected via drag and drop, button click (open dialog), or pasting its copied path from the clipboard (>). Bookmarks can then be updated in “Full” mode as follows:

1. Select source PDF. (Files 2 and 3 will be created automatically from existing data in the source PDF. File 1 will also be created by converting the 4-line data in file 2 to 1-line format unless the file with a matching name is already available in the source PDF folder.)
2. Click *Open-1*, use text editor to add/delete/modify bookmarks in 1-line format, and save file.
3. Click *Convert* button to convert file 1 data to file 2 format. Click *Open-2* button to check file 2.
4. Click *2 > 3* button to copy file 2 data to file 3, replacing the existing bookmark data in file 3.
5. Click *Update Info* to update the PDF. Click *View Output* button to display the updated PDF.

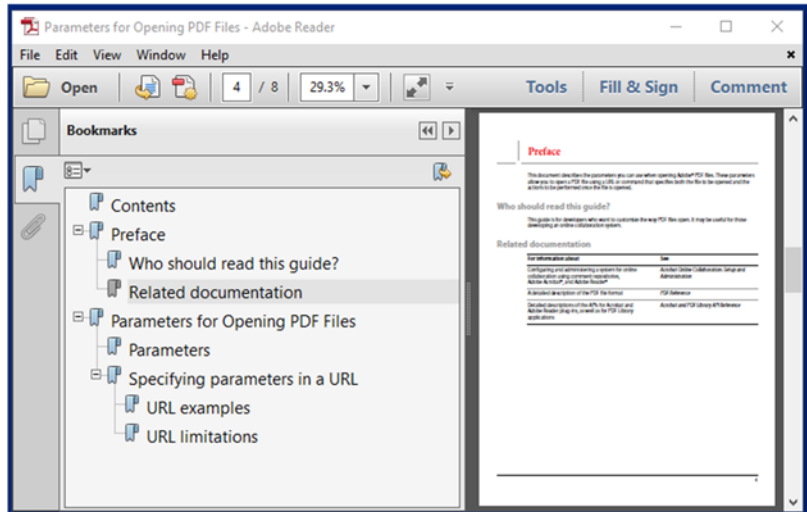
If the user does not plan to inspect or edit files 2 or 3 during the process, the user can either use “Simple” mode or have the button clicks in steps 3-5 issued automatically by the program when using “Full” mode by clicking the *Update Info* button with the Shift key held down or by clicking on the PDFtk image at the center of the form.

After updating the PDF, view the output PDF with bookmarks displayed in the navigation pane. If the output PDF is unsatisfactory or requires further changes, an update to the source PDF can be retracted by click the ‘Undo’ button which will restore the original version of the source PDF from a backup copy saved by the Editor when the source PDF was selected but without affecting the edits to bookmark data in file 1 done during the session. Alternatively, the user can simply just return to editing file 1 as long as the source PDF has not been reloaded causing the text files to be reinitialized.

File 3 (_data.txt) consists of metadata, bookmark and page media sections. A sample of such a file is shown on the left below with its updated bookmarks section highlighted, immediately following the NumberOfPages line. File 3 is the input data file for updating bookmarks and metadata in the PDF via a PDFtk update_info command. The originating bookmark data in file 1 that updated files 2 and 3 and the resulting bookmarks as they appear in the navigation pane for the updated PDF are shown on the right.

```

InfoBegin
InfoKey: Creator
InfoValue: FrameMaker 7.1
InfoBegin
InfoKey: Title
InfoValue: Parameters for Opening PDF Files
...
InfoBegin
InfoKey: CreationDate
InfoValue: D:20070411110909Z
PdfID0: 20eed2b073c43c39bcaae7ada11b774c
PdfID1: 1249e8bc520dbc43b92653c8267a1933
NumberOfPages: 8
BookmarkBegin
BookmarkTitle: Contents
BookmarkLevel: 1
BookmarkPageNumber 3
...
BookmarkBegin
BookmarkTitle: Related documentation
BookmarkLevel: 2
BookmarkPageNumber: 4
...
BookmarkBegin
BookmarkTitle: URL limitations
BookmarkLevel: 3
BookmarkPageNumber: 8
PageMediaBegin
PageMediaNumber: 1
PageMediaRotation: 0
PageMediaRect: 0 0 612 792
PageMediaDimensions: 612 792
PageMediaCropRect: 9 0 603 792
...
PageMediaBegin
PageMediaNumber: 8
PageMediaRotation: 0
PageMediaRect: 0 0 612 792
PageMediaDimensions: 612 792
PageMediaCropRect: 9 0 603 792
PageLabelBegin
PageLabelNewIndex: 1
PageLabelStart: 1
PageLabelNumStyle: DecimalArabicNumerals
    
```



```

; Doc: Parameters for Opening PDF Files, Apr 2007, 8 pages
; Author: Adobe Developer Support

; Page   Level   Title
3        1       Contents
4        1       Preface
4        2       Who should read this guide?
4        2       Related documentation
5        1       Parameters for Opening PDF Files
5        2       Parameters
7        2       Specifying parameters in a URL
8        3       URL examples
8        3       URL Limitations
    
```

Example of 1-Line Bookmark Data with Physical Page Numbering

Actual bookmarks have a Level = 1, 2, 3 etc. A bookmark with Level = 0 is allowed in 1-line format to denote the physical page number for page 1 of the next section. Use is optional if physical page numbering is used for all page numbers in the `_bookmarks.txt` file, as in the preceding example. However, if multiple sections start page numbers at 1, then logical (relative) page numbers may be used in the `_bookmarks.txt` file by including a level 0 entry for the offset of page 1 of each affected section. For example, if the pages in chapter 5 are numbered 5-1, 5-2, 5-3 and the chapter begins on physical page 110 of the document, then the following 1-line bookmark entries using logical page numbers

```
110  0    "Begin Chapter 5"
1     1    "Chapter 5 – Heading 1"
1     2    "5.1 Heading 2"
2     3    "5.1.1 Heading 3"
3     2    "5.2 Heading 2"
```

are equivalent to the following 1-line bookmark entries using physical page numbers

```
110  1    "Chapter 5 – Heading 1"
110  2    "5.1 Heading 2"
111  3    "5.1.1 Heading 3"
112  2    "5.2 Heading 2"
```

Other cases where use of logical page numbers are helpful include PDFs where pages of the front matter (cover, preface, table of contents, etc.) of the document are separately numbered from the body of the document or where data for bookmarks is being extracted from Table of Contents with logical page numbers.

When multiple sections of a document begin with page 1, use of Level 0 statements has the advantages of (1) only having to update the Level 0 statements rather than the every subsequent page number when pagination changes and (2) allowing the use in file 1 of the page numbers that actually appears in the table of contents and on the displayed or printed page. Note that converting between 1-line and 4-line formats ($1 \rightarrow 2$, $2 \rightarrow 1$) always produces data with physical page numbers. Logical page numbers cannot be recovered from the updated PDF. Therefore, a `_bookmark.txt` file (file 1) prepared using logical page numbers should be saved with the PDF if it might be needed for future updates of the document.

The following example illustrates the use of logical (relative) page numbering for adding bookmarks to a large, complex PDF document. The example is for the copy of the 448-page Mueller Report available for download from DOJ web site. The PDF consists of imaged pages of the report which have been OCR'd with only a few bookmarks added. The PDF includes both volumes of the report, each of which has separately numbered front matter (cover and table of contents) and body of the volume. The Table of Contents for the document has over 200 entries arranged in 6 levels and lists logical page numbers but has no links to going to the corresponding pages. File 1 (bottom right) contains 1-line bookmark data that was prepared by extracting the paragraph titles and logical page numbers from the Table of Contents and reformatting the extracted text to 1-line bookmark data format. The source PDF was then updated using the PDFtk Bookmarks Editor to add the 200+ bookmarks. The resulting bookmarks in the PDF and the corresponding file 3 data are shown at the top right and the left side, respectively.

InfoBegin
 InfoKey: Creator
 InfoValue: RICOH MP C6502
 InfoBegin
 InfoKey: Title
 InfoValue: Report on the Investigation into Russian Interference in the 2016 Presidential Election

InfoBegin
 InfoKey: Author
 InfoValue: Special Counsel's Office
 InfoBegin
 InfoKey: Producer
 InfoValue: Adobe Acrobat Pro DC 19 Paper Capture Plug-in
 InfoBegin
 InfoKey: Keywords
 InfoValue: 2016 Presidential Election; Special Counsel; U.S. Department of Justice; Robert S. Mueller;

InfoBegin
 InfoKey: Subject
 InfoValue: Investigation into Russian Interference in the 2016 Presidential Election
 InfoBegin
 InfoKey: ModDate
 InfoValue: D:20190422105414-04'00'

InfoBegin
 InfoKey: CreationDate
 InfoValue: D:20190417182321-04'00'
 PdfID0: 0f239702a714ba9618f2eafde8f6e54c
 PdfID1: e8f9064fcca700aea43f50510739d76c
 NumberOfPages: 448

BookmarkBegin
 BookmarkTitle: Report On The Investigation Into Russian Interference In The 2016 Presidential Election, Volume I of II (Cover)

BookmarkLevel: 1
 BookmarkPageNumber: 1
 BookmarkBegin
 BookmarkTitle: TABLE OF CONTENTS - VOLUME I

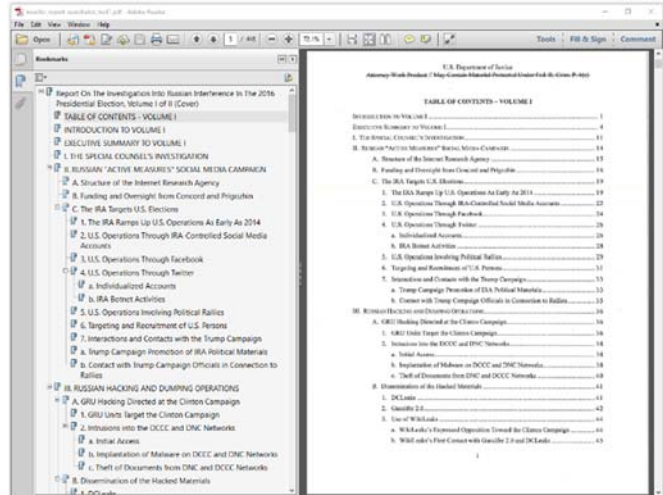
BookmarkLevel: 2
 BookmarkPageNumber: 3
 BookmarkBegin
 BookmarkTitle: INTRODUCTION TO VOLUME I

BookmarkLevel: 2
 BookmarkPageNumber: 9
 BookmarkBegin
 BookmarkTitle: EXECUTIVE SUMMARY TO VOLUME I

BookmarkLevel: 2
 BookmarkPageNumber: 12
 BookmarkBegin
 BookmarkTitle: I. THE SPECIAL COUNSEL'S INVESTIGATION

BookmarkLevel: 2
 BookmarkPageNumber: 19
 BookmarkBegin
 BookmarkTitle: II. RUSSIAN "ACTIVE MEASURES" SOCIAL MEDIA CAMPAIGN

BookmarkLevel: 2
 BookmarkPageNumber: 22
 ...



; Bookmarks for Mueller Report (448 pages), redacted - image + searchable text, U.S. Department of Justice		
; Download: https://www.justice.gov/storage/report.pdf		
;	Page	Level Title
	1	1 Report On The Investigation Into Russian Interference In The 2016 Presidential Election, Volume I of II (Cover)
	3	2 TABLE OF CONTENTS - VOLUME I
	9	0
	1	2 INTRODUCTION TO VOLUME I
	4	2 EXECUTIVE SUMMARY TO VOLUME I
	11	2 I. THE SPECIAL COUNSEL'S INVESTIGATION
	14	2 II. RUSSIAN "ACTIVE MEASURES" SOCIAL MEDIA CAMPAIGN
	15	3 A. Structure of the Internet Research Agency
	16	3 B. Funding and Oversight from Concord and Prigozhin
	19	3 C. The IRA Targets U.S. Elections
	19	4 1. The IRA Ramps Up U.S. Operations As Early As 2014
	22	4 2. U.S. Operations Through IRA-Controlled Social Media Accounts
	24	4 3. U.S. Operations Through Facebook
	26	4 4. U.S. Operations Through Twitter
	26	5 a. Individualized Accounts
	28	5 b. IRA Botnet Activities
	...	
	178	4 3. Ascertaining Whether the President Violated the Obstruction Statutes Would Not Chill his Performance of his Article II Duties
	182	3 IV. CONCLUSION
	1	0
	395	1 APPENDICES
	397	2 Appendix A
	401	2 Appendix B
	417	2 Appendix C
	443	2 Appendix D

Example of 1-Line Bookmark Data with Page Offsets ("Level 0" Bookmarks)

PDFTK Bookmarks Editor is a Delphi 32-bit portable application which uses the Windows version of PDFtk Server.

The three text files (1: `_bookmarks.txt`, 2: `_bookmarks_data.txt`, 3: `_data.txt`) are stored in the same folder as the source PDF and begin with the same file name, differing only in the extension. The labels for the three possible text files are shown in red font on the application form if no corresponding file is found in the same folder as the source PDF. When a file is available, the font color will change to black. Buttons are only enabled if the required files are available.

The three 'Open' buttons (1-3) will open the corresponding .txt file in the text editor (e.g., Notepad) for viewing or editing. The two 'View' buttons will open the source and output PDFs in the .pdf application (e.g., Adobe Reader). The 'Locate' button will open the file location of the source PDF and/or output PDF in Windows Explorer.

It is recommended that the default file names be accepted whenever saving .txt and .pdf files in PDFtk Bookmark Editor. This preserves the naming association between the .txt files and the PDF file that is critical to using the files. When producing the output PDF file, overwriting the source file will also prevent the proliferation of files which have identical page content and only differ in bookmarks.

PDFtk Bookmarks Editor expects the PDFtk Server executable (`pdftk.exe`) to be located in the same folder as its executable (`PDFtkBookmarks.exe`). On a 64-bit Windows system, the Editor will also look in `C:\Program Files (x86)\PDFtk Server\bin` for `pdftk.exe` if it is not found in its own folder. If not in either location, `pdftk.exe` must be manually copied to the Editor's folder or configured in the .ini file. Use of PDFtk Server v2.02 is recommended. PDFtk version 1.45 or later is required to update bookmarks via the `update_info` command. PDFtk Server 2.00 or later is required for inclusion of page media data in the `_data.txt` file produced by the `PDFtk dump_data` command.

The program's configuration file (`PDFtkBookmarks.ini`) allows a different PDF viewer and text editor to be specified for use by the Bookmarks Editor. This allows the use of other .pdf and .txt applications without affecting the file associations for .pdf and .txt file types in Windows.

[Applications]

```
; The following setting configures Adobe Reader to open PDF file with bookmarks displayed in nav pane
; Comment out the following two lines to use default .pdf app (e.g., Adobe Reader)
; PdfExe=C:\Program Files (x86)\Adobe\Reader 11.0\Reader\AcroRd32.exe
; PdfArg=/A "pagemode=bookmarks" %PDFFILE%
```

```
; Comment out the following two lines to use default .txt app (e.g., Notepad)
; TxtExe=C:\Program Files (x86)\Notepad++\notepad++.exe
; TxtArg=%TXTFILE%
```

[Settings]

```
; Mode: Full mode = Default (or Mode=0), Simple mode: Mode=1 (or any value other than Mode=0)
; Comment out the line Mode=1 below to set Full mode (add leading semicolon) / default mode
Mode=1
```

Note: Comment lines in the .ini file begin with a semicolon.

PDFtk Bookmark Editor – Files and Controls

The GUI is arranged in 5 rows: (1) source PDF, (2) text files 1 and 2 containing bookmark data only, (3) text file 3 containing metadata, bookmark data and page media data for use with the PDFtk update_info command, (4) output PDF, and (5) misc. program controls. The GUI has two modes, Full and Simple. Buttons can be operated by clicking on them with a mouse or by typing the associated accelerator key.

Row	Files/Controls	Mode	Key	Description / Function
	Files 1, 2, 3		N/A	<p>1 (_bookmarks.txt): Bookmark data in 1-line bookmark data format, one tab-delimited line per bookmark.</p> <p>2 (_bookmarks_data.txt): Bookmark data in PDFtk bookmark data format, 4 lines per bookmark.</p> <p>3 (_data.txt): File containing metadata, bookmark data (4-line format) and page metrics produced by PDFtk dump_data command from source PDF. When its bookmark data is updated, the file can be used as input to the Update Info function of the Editor to update bookmarks in the source PDF.</p> <p>The names of the three text files must be identical to the source PDF, except for the file extension. The files must be located in the same folder as the source PDF.</p>
1	Reset	Both	E	<p>Reinitializes the form to the point where a new source PDF can be selected.</p> <p>(1) Deletes files 2 and 3 without prompting (since they can be regenerated from the output PDF, or from source PDF if no output PDF was produced).</p> <p>(2) Prompts whether OK to delete the source .bak file if the source PDF was overwritten by the output PDF (default). If source PDF was not overwritten, the .bak file is deleted without prompting.</p> <p>(3) If file 1 was created by the program when the source PDF was selected, the Editor will prompt whether OK to delete file 1 (default = Yes). However, if file 1 already existed in the source folder (e.g., a file was intentionally being saved because it contained logical page numbering or because it had not yet been used to update the PDF), file 1 will not be deleted by the program and program will not issue any prompts to delete (user must manually delete the file). Does not exit the program.</p>
	> (left)	Both		Pastes the file path in the clipboard to the source PDF
	Source PDF Document	Both	S	<p>Source PDF document (via Open Dialog, drag and drop, clipboard). When source PDF is selected, a _data.txt file [3] will automatically be generated by running a Dump Data operation. Files 1 and 2 will also be automatically created from existing bookmark data in file 3, except for file 1 if it already exists in the source PDF folder.</p>

Row	Files/Controls	Mode	Key	Description / Function
	> (right)	Both		Copies the Source PDF file path to the clipboard
	View Source	Both	V	Opens the backup (.bak) copy of the source PDF in the .pdf application
2	Open-1 <i>or</i> Edit Bookmark Data	Full Simple	1	Open _bookmarks.txt file (file 1) in the text viewer/editor.
	1 ← 2	Full		If box this is checked, any subsequent conversion will take place in the reverse direction (file 2 to file 1). This option should rarely be used as editing is expected to be done on file 1. Note that converting from 4-line to 1-line data will irreversibly replace all logical page numbers in file 1 with physical page numbers.
	Convert	Full	C	Converts between file 1 and 2. Default conversion is 1 to 2.
	Open-2	Full	2	Opens _bookmarks_data.txt (file 2) in the text viewer/editor.
3	2 > 3	Full		Copies the edited bookmark data from file 2 to file 3, replacing the existing bookmark data in file 3.
	PDFtk Image	Both		Clicking on the PDFtk image and the center of the form will cause the program to automatically issue the sequence of Convert, 2>3 Update Info, and View Output button clicks to produce the updated PDF from data in file 1.
	Open-3	Full	3	Opens _data.txt (file 3) in text viewer/editor. File contains metadata at the beginning and page media data at the end of the file, with bookmark data in middle. It is possible to edit and update PDF metadata but page metrics cannot be updated.
4	Update Info <i>or</i> Update PDF	Full Simple	U	In "Full" mode, updates the source PDF document with the metadata and bookmark data from file 3. The default for saving the output PDF is to overwrite the source PDF. For "Simple" mode, this function is the same as Shift-Update PDF except that it does not issue the final virtual View Output click. The output PDF can be displayed by manually clicking the View Output button as in "Full" mode.
	Shift- Update Info <i>or</i> Shift- Update PDF	Full Simple	Shift- U	Program automatically issues Convert, 2>3, Update Info and View Output button clicks (instead of user) to produce the updated PDF from data in file 1. Same as clicking on PDFtk image (row 3 above).
	View Output	Both	O	Opens the output PDF in the .pdf application.
5	Refresh	Both	R	Refreshes the displayed form in order to update status of files. Note: If one of the files used by the Bookmark Editor is deleted, renamed or added via Windows Explorer while the Bookmark Editor is open, click the 'Refresh' button so the Editor can update its status of the files and associated controls on the form.

Row	Files/Controls	Mode	Key	Description / Function
	Undo	Both	N	Deletes output PDF and restores source PDF from .bak file if necessary. Does not affect files 1-3, thus allowing additional edits to be made.
	Locate	Both	L	Opens the file location in Windows Explorer. Initially the source PDF is selected. The three .txt file should follow it in the list since their file names are derived from the name of the source PDF. After an output PDF is produced, the function will alternate between the output PDF and source PDF, if the output PDF does not overwrite the source PDF. The Locate button is convenient for managing the files in case you decide you want to create a backup copy or delete a file.
	Reset	Both		Same function as Reset button in row 1 (top left). Additional button location (bottom right) is for user convenience.
	Exit	Both	X	Same function as Reset button but also terminates the program.