PrintToPDF

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What it Does

PrintToPDF is a shareware Macintosh printer driver that creates PDF (Adobe Acrobat™) files from within your application programs. You can create PDF bookmarks to your section and subsection headings, and URLs will become hot links. PrintToPDF is not as powerful as the full Acrobat package, but it creates simple PDFs for a much lower price ($20).

Compatibility

PrintToPDF has been primarily tested on PowerPC machines running Mac OS 9.0, but most of it should work with systems back to 7.0. Some of the Asian language functionality requires a PowerMac and the Text Encoding Converter extension. For the URL function, you need to have at least version 2.0 of the Internet Config extension. Of course, since it's shareware, you can find out whether it works well with your system and applications before paying for it.
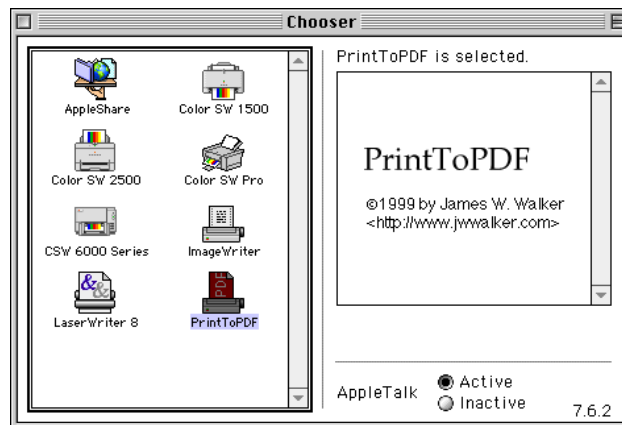
Some desktop publishing applications, such as Quark XPress, are intended primarily for use with PostScript printers. PrintToPDF functions as a QuickDraw printer, therefore such applications may not produce high-quality output with PrintToPDF.

Although PrintToPDF goes in the Extensions folder, it is a "Chooser extension", not a "system extension". This means that it has no code that runs at system startup, and is not likely to be involved in extension conflicts.

Installing or Updating PrintToPDF

If you're installing PrintToPDF for the first time, move the PrintToPDF file into your Extensions folder inside your System Folder. (If you drop it onto the System Folder icon, the Finder will offer to move it to the Extensions Folder.) Then select the Chooser from the Apple menu, and click on the PrintToPDF icon. Then close
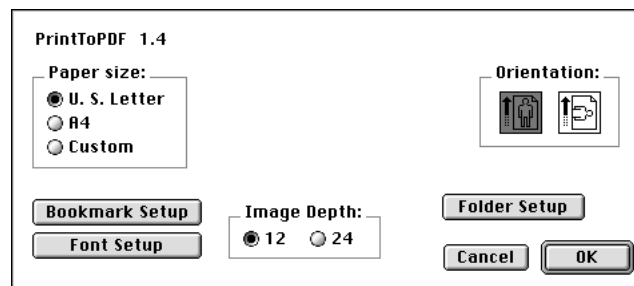
the Chooser. (The AppleTalk setting is irrelevant to PrintToPDF.)

If you are updating from a previous version of PrintToPDF, a bit of care is needed to work around bugs in Apple's desktop printing software. First, go to the Chooser and select any printer driver other than PrintToPDF. Then move the new version of PrintToPDF to the Extensions folder, replacing the old one. Then restart your Mac. After the computer has restarted, you can go back to the Chooser and select PrintToPDF.
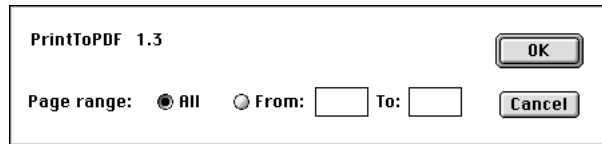
Using PrintToPDF

To use PrintToPDF, open the document that you want to turn into a PDF file, and choose Page Setup... from the File menu of the application. You should see a dialog like that shown below, but possibly with extra application-specific items on the bottom.
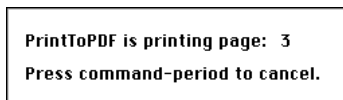

 Unless you're sure that you want to use a custom page size, choose U.S. Letter or A4 as the paper size. You should normally use the "portrait" orientation, as shown. The other settings will be explained later. Click OK.

Next, choose Print... from the File menu, and you should see another dialog, like that below. Again, there may be extra application-specific settings.

```
PrintToPDF  1.3                                    [ OK ]

Page range:   ● All    ○ From: [    ]  To: [    ]    [ Cancel ]
```
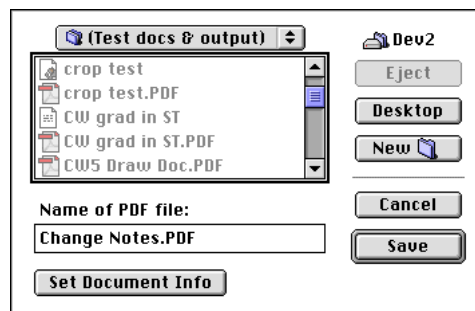
If you want to print the whole document, leave it as shown, otherwise fill in the starting and ending page numbers. Then click OK.
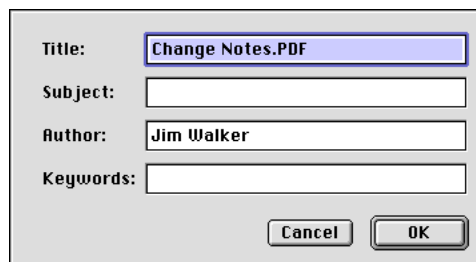
During the printing process, you will see a PrintToPDF progress dialog, and possibly also an application-specific progress dialog, depending on the application.

```
PrintToPDF is printing page:  3
Press command-period to cancel.
```

When it is done, you will see a standard Save dialog in which you can specify the name and location of the PDF file.

```
  (Test docs & output) ⬍        📂 Dev2
 📄 crop test                   [ Eject ]
 📄 crop test.PDF
 📄 CW grad in ST               [ Desktop ]
 📄 CW grad in ST.PDF
 📄 CW5 Draw Doc.PDF            [ New 📁 ]

 Name of PDF file:              [ Cancel ]
 [ Change Notes.PDF          ]  [ Save ]

 [ Set Document Info ]
```

If you click the Set Document Info button in the Save dialog, you get another dialog in which you can set certain document attributes that appear in the Document Info: General… window in Acrobat Reader. The initial value for Author comes from the user name that you set in the File Sharing control panel.

```
Title:     [ Change Notes.PDF          ]

Subject:   [                           ]

Author:    [ Jim Walker                ]

Keywords:  [                           ]

                      [ Cancel ]  [ OK ]
```

If you don't want to see a Save dialog each time you make a PDF file, click the Folder Setup button in the Page Setup window. This presents another dialog in which you can specify where you want files to be saved. When you specify a location, PrintToPDF will use its best guess for a file name. If the document you are printing

is named "MyDoc", then the file name will probably be MyDoc.PDF. If that file already exists in the folder, PrintToPDF will use the name MyDoc.PDF-1. If that name too is taken, PrintToPDF will try the names MyDoc.PDF-2 through MyDoc.PDF-9, then give up.

PrintToPDF as a Desktop Printer

If you are using Mac OS 8.5 or later, installing and choosing PrintToPDF will cause a PrintToPDF icon to appear on your desktop, as shown.

The heavy border indicates that it is your current default printer. If you click on a desktop printer icon, a Printing menu will appear in the Finder. This menu has a Set Default Printer command, which you can use to switch between different desktop printers without going to the Chooser. If you double-click the desktop printer icon, a print queue window will open. This window is not useful for PrintToPDF, because PrintToPDF does not use background printing.

If you open the Chooser and select PrintToPDF, and there is already a PrintToPDF desktop printer icon, you will see a button named New Desktop Printer. You can use this to create a second PrintToPDF desktop printer icon. The reason you might want to do this is because the current desktop printer stores the current settings. Thus, you can use multiple desktop printer icons to store groups of settings.

Fonts and Substitutions

PrintToPDF knows the names and metrics of a limited number of PostScript fonts, most of which are available in plain, bold, italic, or bold-italic style. The underline style is simulated. The built-in fonts substitute for the Mac fonts used in your document. Any Mac font not listed below will be replaced with Times.
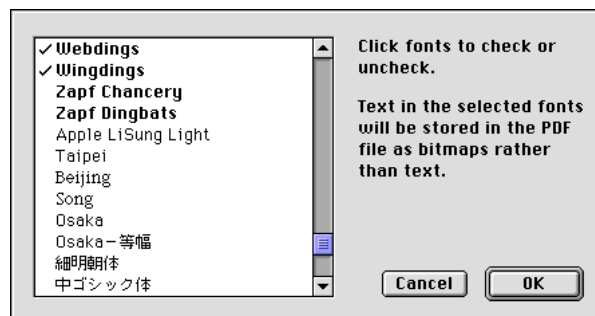
- AvantGarde, substituted for Avant Garde.
- Bookman
- Courier, substituted for Courier, Courier New, and Monaco
- Helvetica, substituted for Geneva, Helvetica, and Arial
- Helvetica-Condensed, substituted for Helvetica Compressed
- Helvetica-Narrow, substituted for N Helvetica Narrow
- NewCenturySchlbk, substituted for New Century Schlbk

- Palatino
- Symbol
- Times, substituted for New York, Times, and Times New Roman
- ZapfChancery-MediumItalic, substituted for Zapf Chancery
- ZapfDingbats, substituted for Zapf Dingbats
- HeiseiMin-W3 will substitute for most Japanese fonts
- STSong-Light substitutes for any font in the Chinese Simplified script
- MSung-Light substitutes for any font in the Chinese Traditional script
- HYSMyeongJo-Medium substitutes for Korean fonts

There are certain characters that are present in most Mac TrueType fonts but not in their PostScript equivalents: ≠, ∞, ≤, ≥, ∂, ∑, ∏, π, ∫, Ω, √, ≈, ∆, €, and ◊. When you print these characters in any Roman font but Symbol or Zapf Dingbats, PrintToPDF replaces them with the equivalent symbols from the Symbol font.

The character is present in many Mac TrueType fonts, but is not even in the PostScript version of Symbol, so there doesn't seem to be any reliable way to put it in PDF as text. Therefore I have a special case, that an isolated character in the Symbol font will be entered into the PDF as a bitmap.

There are some fonts for which no substitution makes sense, such as dingbats fonts other than Zapf Dingbats and symbol fonts other than Symbol. You can specify that PrintToPDF should treat such fonts as bitmaps (at 288 dpi) rather than text. To make this setting, go to Page Setup and click the Font Setup button, which will show this dialog:

Choose fonts from the pop-up font menu so that check marks appear next to their names. To remove a font from this special treatment, choose it again, and the check mark will go away.

Use the bitmap substitution feature only for special symbols, not for text fonts. Using bitmaps for text fonts would prevent readers from copying or searching for text in the PDF. Also, using bitmapped text can greatly increase the amount of RAM needed to create the PDF file and the amount of disk space taken up by the PDF file.

Making Pictures Magnify and Print Well

To make images in your PDFs look good when magnified and printed, you can take one of two approaches. First, you can use vector graphics (also known as "draw" type pictures), which look sharp at any resolution. Second, if you need to use bitmapped graphics (also known as pixmaps or "paint" type pictures), you can start with a large image and then scale it down.

vector graphic   bitmapped   scaled bitmap

The first of the examples above is a vector graphic. You'll find that it remains reasonably sharp however much you magnify it in Acrobat Reader. The second, a bitmapped picture, starts getting jagged at greater than 100% magnification. To make the third example, I made a bitmap twice as big as the others, pasted it into the word-processing layer of AppleWorks, and then scaled it down by 50%. This picture looks pretty good up to 200% magnification. I'm not sure if this scaling technique will work with all word processors, but it seems to work with AppleWorks, WordPerfect, and Microsoft Word.

In the Page Setup dialog, you can set a preference to save bitmapped images in 24-bit color or 12-bit color. Using 24-bit color will display photographic images more accurately, at the expense of using more RAM and disk space.

Embedding Live URLs

PrintToPDF will look for URLs in your text and turn them into links. When you click such a link, Acrobat Reader will attempt to open it in an appropriate helper application, such as a web browser. In order for this to work:

- You must have Internet Config 2.0 or later installed when printing, to help PrintToPDF identify URLs. This free extension comes with recent versions of the Mac OS and various Internet-related software.
- The URL must belong to one of these common schemes: http, https, ftp, mailto, news, nntp, file.
- The URL must not be broken across lines.
- The URL must be all one style run. That is, there must be no changes of font, size, style, or color within the URL text.
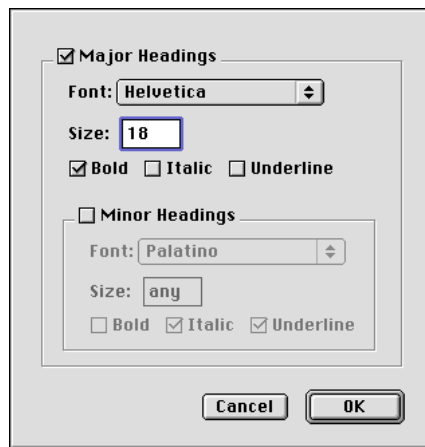
Unfortunately Acrobat Reader does not respect your Internet Config or Internet control panel settings, but has its own setting for which web browser to use. I suggest that you complain to Adobe about this misfeature.

Since PrintToPDF is a printer driver, it only sees what would be printed. For example, if you print a web page that has a link <u>Apple Computer,</u> PrintToPDF has no way of knowing that this link is associated with the URL <<u>http://www.apple.com/</u>>.

Bookmarks

PrintToPDF can turn your section and subsection headings into PDF bookmarks. To do this, you must choose a unique combination of font and size for section headings, and likewise for subsection headings. For example, in this document, each section heading is set in Helvetica 18, and nothing else is in Helvetica 18.

In the Page Setup dialog, you should see a button titled Bookmark Setup. Clicking this button will make another dialog appear, as shown below.

If you don't want to put any bookmarks in your PDF file, uncheck Major Headings. If you want to make two levels of bookmarks, check both boxes. In the Size fields, you can either type a specific font size, or type "any" to match all sizes of that font.

The style checkboxes specify the minimum required style for your headings. For instance, checking Bold means that the heading must be all bold, but if part of a heading is also italic or underlined, that's OK.

Memory Shortage

It is possible that PrintToPDF will run out of memory when processing a document with many pages or many images. (If you use the feature that represents certain fonts as bitmaps, that can vastly increase the number of images.) PrintToPDF uses memory that is not currently owned by any application or the system. You can get a rough idea of how much memory is available to PrintToPDF by looking at the "Largest Available Block" in the "About This Computer" window.

Here are some ways you could deal with a memory shortage:
- Quit all applications other than the one you're printing from.
- Set the Image Depth option to 12.
- Open the Memory control panel, increase the virtual memory setting, and restart.
- If you had previously increased the memory allocation for the application you're printing from, set it back to the suggested value.

Limitations

- Vector graphic pictures will not reproduce patterns or regions.
- Pictures in EPS (Encapsulated PostScript) form, or which otherwise rely on PostScript code, may not be rendered faithfully. Similarly, applications that are optimized for use with PostScript printers may not work well with PrintToPDF.
- Fonts can't be embedded. See the earlier section on Available Fonts. In particular, languages using non-Roman alphabets cannot be used, except for Chinese, Japanese, and Korean.
- To create bookmarks in Chinese, Japanese, or Korean, you must be using a PowerMac with the Text Encoding Converter extension.
- Ironically enough, PrintToPDF does not work well within Acrobat Reader, since Acrobat Reader does not draw text using normal Macintosh methods. Not that you'd want to create a PDF from a PDF.
- Acrobat Reader 3.0 or later is needed to view the PDFs created by PrintToPDF. Certain features may require Acrobat Reader 4.0 or later. To determine the recommended version of Acrobat Reader, open the PDF file in Acrobat Reader, use the menu command File:Document Info:General…, and look at "PDF Version". If the version is 1.2, the document should work OK in Acrobat Reader 3.0, whereas if the version is 1.3, then Acrobat Reader 4.0 or later is recommended.
- To view PDFs containing Chinese, Japanese, or Korean text, you must install the Asian Font Pack for Acrobat Reader.

Shareware Fee

After trying PrintToPDF for a couple of weeks, you should either register PrintToPDF or stop using it. Registration costs US $20 per person. Site license rates are also available. Benefits of registration:

- I will tell you how to remove the word "Unregistered" from the Page Setup and Print dialogs.
- I will have your e-mail address for notification of updates. However I will not sell or give your e-mail address to anyone else.
- You will probably feel better.
- I will certainly feel better.

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I will attempt to fix any bug that I can duplicate on my own machines, but will not buy other people's software for compatibility testing.

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