Creating PDF Files without Adobe® Acrobat®

A Brief Tutorial for Windows® Users Matt Gushee July 11, 2002

Many people believe that you need expensive software packages like Adobe® Acrobat® in order to create PDF files. Actually, you can create high-quality PDFs using free software and built-in features of Microsoft® Windows®. This document explains how to do it.

1. Introduction

Portable Document Format (PDF) is a popular and useful file format for print-oriented documents. When you want to ensure that your document looks the same to everyone who views or prints it, PDF is a good choice. PDF reader software is available free of charge for Windows, Macintosh, Linux, and other operating systems.

PDF files are sometimes called "Acrobat files," because the most popular PDF software is Adobe Acrobat; many people believe that you must have Acrobat in order to create PDF files. Actually, there are a number of programs that can generate PDF, and some of them can be downloaded for free.

This document explains how to create a PostScript file and then convert it to PDF.

2. Creating a Virtual PostScript Printer

Normally when you print a document, your computer sends data through a cable to a physical printer, which then renders the document as ink on paper. It is also possible to set up what I will call a *virtual printer*. When you want to print a document from Microsoft Word or any other Windows program, you can select a virtual printer just as you might select a real printer—as far as Word is concerned they are they same thing. But when you use a virtual printer, instead of the data being sent to an actual printer, it is stored in a file on your hard disk. You can save this file in order to print it later, email it to a colleague, or—the topic of this paper—convert it to another format such as PDF.

Of course, before you can use a virtual printer you will need to create it, and it needs to be a specific type known as a PostScript printer (PostScript is a printer language that used to be very common for desktop printers and is still widely used in professional publishing). The following steps show how to create a virtual PostScript printer in Windows. Depending on your Windows version, some of the dialog boxes shown may appear different or be missing, but the basic procedure should be the same for all versions from Windows 95 on.

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1. Open the Windows Start Menu, and select Settings - Printers.



2. Double-click the Add Printer icon.



3. Select Local printer.



4. Select a PostScript printer driver. There are usually several available, but I have found that Apple LaserWriters and HP LaserJets generally work well. If you are unsure which drivers are PostScript, look for one with **PS** in its name.

dd Printer Wizard Click the ma installation c documentat	nufacturer and model of your printer. If your printer came with an lisk, click Have Disk. If your printer is not listed, consult your printer ion for a compatible printer.
Manufacturers:	Printers:
Agfa Apple AST AT&T Brother Bull C-Itoh	Apple LaserWriter II NT Apple LaserWriter II NT Apple LaserWriter Personal NT Apple LaserWriter II NTX Apple LaserWriter III NTX \518 Apple LaserWriter III Apple LaserWriter III
	Have Disk
	<back next=""> Cancel</back>

5. If you have previously installed the same type of printer, you may see this dialog box. Select Keep existing driver unless you know you are installing a new driver.

dd Printer Wizard	
	Apple LaserWriter II NTX A driver is already installed for this printer. Would you like to keep the existing driver or use the new one? Your programs may print differently if you use the new driver. <u>Keep existing driver (recommended)</u> <u>Feplace existing driver</u>
	< Back Next > Cancel

6. You will be given a choice of printer ports. Select FILE:.

-1 comment	Click the po Next. <u>A</u> vailable po	t you want to use with orts:	this printer, and then click
And the second s	COM1: COM2: FILE: LPT1:	Communications Communications Creates a file on ECP Printer Port	Port Port disk R
			Configure Port

7. The final step is to name the printer. It does not matter what you call it, as long as the name is meaningful to you. Also, if you normally use a physical printer, you probably will not want to use the virtual printer as the default, so you should select No here.

Add Printer Wizard	
- A manufacture	You can type a name for this printer, or you can use the name supplied below. When you have finished, click Next.
	Printer name:
	PS File
	Do you want your Windows-based programs to use this printer as the default printer? CYes CNo
	<back next=""> Cancel</back>

When you have completed the above steps, you should have a virtual PostScript printer that you can use from any Windows application.

3. Printing to a PostScript File

This section uses examples from Microsoft Word, but the procedure should be very similar for any Windows application.

1. Select File Print from the main menu.



Print			?
Printer			
Name:	General HP DeskJet 1600C		Properties
Status:	ActiveTouch Document Loader		
Type:	Ø PS File		
Where:	14		Print to file
Comment:			
Page range			
• <u>A</u> ll		number or copies.	1
C Current (page C Selection		1
C Pages:			Collate
		│ ┌┶┲ [₽] │ ┌┷┲ [₽]	in conde
Enter page	numbers and/or page ranges		
separated c	y commas. For example,		
		Zoom	
Print <u>w</u> hat:	Document	Pages per sheet:	1 page 👻
P <u>r</u> int:	All pages in range	Scale to paper size:	No Scaling 📃 💌
		2	207
Options		OI	< Cancel

3. Select any convenient location and name for the PostScript file (called simply a "printer file" in this example).

Print to file					? ×
Save in:	Desktop		•	• Too <u>l</u> s •	
History	My Docume My Comput My Network Avpics	ints er « Places rices			
My Documents	e.				
Desktop					
Favorites					
	I File name:	pdfsansacro.prn		-	
	Save as type:	Printer Ciles (t. em)			
	ouro da <u>o</u> per	Printer Hies (*.pm)		<u> </u>	Cancel

4. Click OK, and your document will be "printed" using the virtual printer, and the result will be saved to a file. Note that the printing procedure may take several seconds.

4. Converting PostScript to PDF

The final step is to convert your PostScript file to PDF. If you convert files on a regular basis, you may wish to install the Ghostscript package, freely available from http://www.ghostscript.com/doc/AFPL/index.htm. Ghostscript includes a PostScript-to-PDF conversion utility called **ps2pdf**. You should be aware that Ghostscript can take considerable effort to set up and use properly. Fortunately, however, there is a free and easy-to-use converter on the web. Here's how to use it:

- 1. Start your web browser and go to http://www.ps2pdf.com/.
- 2. Select the **Convert** link from the main menu.



3. Use the web form to select a file, then press the Convert button.

PS2PDF com	PS to Pl	DF Converter
The Online Converte:	r Two hundred th	nousand conversions and c
	Convert	
Once you have a created a po upload it to our site and our s postscript file see the <u>FAO</u> p	ostscript file on you: servers will convert pages.	r computer all you have to d it to pdf. For help creating
Select a postscript compatib	le file to convert:	
C:\WINDOWS\Desktop\p	dfsansacro.prn	Browse
And then press Convert		

4. When the conversion is finished, you should see a page like the following. Just click on the link, and you've got your document in PDF format!

Conversion results are:	
%%[Page: 1]%%	
%%[Page: 2]%%	
/// Page: 3 1///	
%%[Page: 5 1%%	
%%[Page: 6]%%	
%%[LastPage]%%	