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PRINTtips

PDF from A to Z



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In the last few years, portable document technology has created one of those quiet evolutions with significant consequences. You may not realize that when you download and print an interesting article from the Internet or view a soft proof we have sent of your printing project, that portable document technology is at work. You may encounter it several times each day without understanding its current use and potential.

A Brief History of Portable Document Technology

In 1990, No Hands Software introduced the first portable technology, called **Common Ground**. Adobe Systems followed in 1993 with **Carousel** (later renamed **Acrobat**), Farallon Computing released **Replica**, and other companies also contributed to the technology.

Adobe's Portable Document Format (PDF) was a third version of its popular PostScript file format, intended to be independent of the hardware, software, operating system and fonts used for file creation. Adobe conceived of PDF as a device for viewing files and printing to desktop devices, and so omitted the PostScript code needed for production printing. However, by 1996, at the request of the printing and



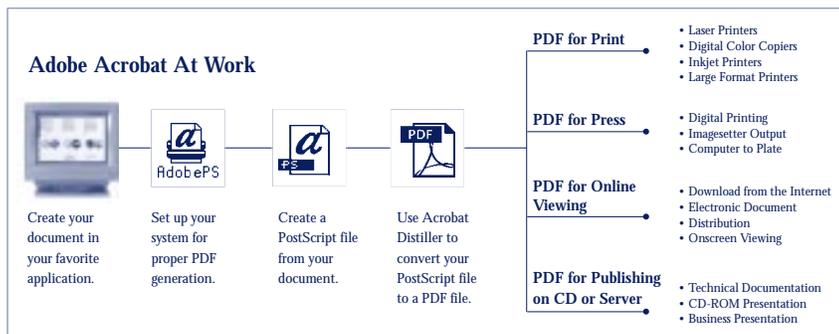
publishing industry, Acrobat 3.0 had been upgraded to support color separations and other requirements of high-end printing.

New uses for PDF continue to develop, and now include file transfer, proofing, PostScript utility, on-screen presentations, document archiving, information gathering via forms, electronic document management and web applications.

What is PDF?

In technical terms, PDF is a proprietary, universal electronic file format modeled after the PostScript language. PDF is platform-, application- and device-independent. A PDF document can be viewed, navigated and printed using any computer, whether or not the computer has the fonts and software used to create the file originally. Used correctly, PDF is a powerful, flexible and very useful document technology.

A PDF file contains all the components required for output: a view file; embedded type; bitmaps and



“Used correctly, PDF is a powerful, flexible and very useful document technology.”

“The safest way to create a PDF file for high-end printing applications is to use Distiller.”



compressed vector images of graphic objects. It may also include links for variable forms data; sound, QuickTime and video information; and hypertext linking.

PDF files are also compressed during creation, making them smaller than PostScript or native application files. And the size difference can be dramatic – as much as 90% – depending on the mix of vector and bitmap images in the file and how the file will be used.

How Does A PDF File Differ From PostScript?

A PDF file offers several advantages over a PostScript file:

- **Complete** – PDF documents contain all the data required for display and output (images, fonts and page layout) embedded directly in the file rather than linked.
- **Compact** – PDF compression and lack of programming commands makes them smaller than PostScript files. Therefore, PDF files can often be output faster to an imagesetter or platesetter.
- **Portable** – PDF files are page-, platform-, application- and device-independent. PDF documents can be easily separated into individual pages and imposed, and a different software program can generate each page of a PDF file.
- **Reliable** – Page elements and text flow cannot be changed accidentally because the PDF object-oriented data storage method does not allow for repagination if an element on a page is modified or deleted. PDF documents also can specifically be protected against modification.
- **Searchable** – PDF files can be indexed, catalogued, searched and hyperlinked and used in both print and non-print forms.
- **Editable** – PDF files can be edited with Acrobat Exchange or with plug-ins.

- **Versatile** – A single PDF file can be used for digital proofing, for imagesetting to press plates, to print to a monochrome or color laser printer, to view on the Internet and to archive and retrieve as part of a document management system.

Ways to Create a PDF File

The safest way to create a PDF file for high-end printing applications is to use **Distiller**, a part of the Acrobat suite of programs. Since Distiller only works on PostScript files, you must first create a PostScript file with embedded fonts. You can then distill the file after selecting the appropriate job options for font embedding, file compression and other characteristics. Remember that Distiller uses different job option settings depending on whether the PDF is being optimized for high-end press output or output to a copier/printer.

There are also short cuts to creating a PDF file. One is to use the **Save** or **Export** function in a native application such as Adobe Illustrator 5.x and above; PageMaker 6.5 and above; or Quark XPress 4.x. You can also use **PDFWriter**, a print driver supplied with Acrobat. However, be aware that these short cuts may not produce a PDF file that can be used for all high-end printing applications. For example, one limitation of PDFWriter is that it does not convert Encapsulated PostScript (.eps) files, Photoshop clipping paths or imported Illustrator files. Therefore, PDFWriter has limited use in creating PDF files.

We Can Help You with PDF

From our perspective, there are many advantages to using a PDF workflow for high-end printing. However, we do understand that you may not wish to purchase the **Acrobat** suite and that there may be times when using a PDF short cut option in your native application will not produce a file of sufficient quality for us to use. When this happens, call us at (513)248-2121. We can make a PDF using our copy of Acrobat Distiller, and we will help you prepare a PostScript file for that purpose.

A PDF Conversion Strategy

Because PDF files are searchable, their use is growing for electronic document management. Even if you haven't considered an electronic document management system, you may want to use the ideas below to prolong the "shelf life" of your documents and their content. Then if you institute a PDF conversion strategy at a later date, it will be easy to catalog and move your documents into the system.

1. **Use PostScript Type 1 fonts instead of TrueType in your documents.** TrueType fonts are converted to Type 1 when a PDF file is created. For best results, start with Type 1 fonts and avoid potential font conversion problems.
2. **Keep your vector originals.** If you are including a .gif or .jpg graphic in HTML for web pages, remember that they will be of insufficient quality for any other application. Save your higher-resolution or vector originals.

3. **Convert your vector originals to PDF.** Because PDF files embed fonts, they are smaller than .eps, .pict and PostScript. PDFs can be opened within Illustrator or Freehand; PageMaker allows importing PDF files without modification.
4. **When in doubt, save as PDF.** If one of your press-ready jobs is taking up a lot of storage space in native application, you may be tempted to delete it. Instead, turn it into a PDF. Compared to native application files, PDFs are very compact. And though you lose bitmap data in the conversion, having a searchable reference with all text and vector graphics intact may be a valuable future resource.
5. **Create an archive of your own.** PDF files are easy to index, catalog and store. When you are ready to institute electronic document management, your PDF files will be ready.

TRICKS & tips



A Vocabulary of the Graphic Arts

Acrobat Distiller: a software program used to convert any PostScript file into PDF. Part of the Acrobat suite.

Acrobat Exchange: a software program used for viewing and editing PDF files in Acrobat 3.0. Function combined and Exchange eliminated in Acrobat 4.0.

Acrobat Reader: a software program used to view a PDF file. Part of the Acrobat suite, distributed at no cost by Adobe.

Bitmap Images: graphic images formed by pixels. Each pixel contains data that describes whether the pixel is black, white or a level of color. Bitmap images are edited by manipulating groups of pixels.

Device Independence: ability to use one file for digital proofing, film, imagesetting, monochrome or color laser printing.

Media Independence: the ability to use the best media for the current purpose. Enabled by having files in PDF format.

PDF Publishing: to publish in print or non-print form. Converting documents to PDF allows searching on key words for retrieval from archives.

Pixels: picture elements – an addressable area on an array.

Vector Graphics: also called object-oriented graphics. Created with mathematically defined curves and line segments called vectors. Vector graphics are edited by moving and resizing the entire graphic or the lines and segments that compose the graphic.

Words



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Q. *What are the basics of creating a PostScript file?*

A. To create a PostScript file, you must first have an active PostScript print driver installed. Verify that the driver is active, then follow these directions:

To create a PostScript file on a Macintosh:

1. Within any application, choose **Print** from the file menu.
2. Select the File option in the Destination area of the Print dialog box, and click the OK button.
3. Name the PostScript file, and select a location for it.

To create a PostScript file with Windows 95/98:

1. Select START, then go to SETTINGS then to PRINTERS.
2. Select a PostScript printer.
3. Right-click on the printer icon and choose PROPERTIES.
4. Click the DETAILS tab.
5. Drop down the PRINT TO THE FOLLOWING PORT list; choose FILE.
6. Click OK.

Now enter any application.

1. From within any application, select the printer that you have just set up; print as normal.
2. Windows will prompt you for a file name and allow you to browse for a file location.