P**RIN***tips*

PDF in Print...
...File Submission Made Easy

Regular readers of Printips know that over the years we've consistently recommended PDF as the file format of choice for printed documents. We were early adopters because of the significant benefits to our customers that extended beyond print to data exchange, archiving, and publishing on the Internet. Because of these benefits, PDF is now firmly established as the worldwide standard for these diverse applications:

- *Publishing.* For documents created by our customers, PDF facilitates the exchange of final, print ready pages to be printed, or the elements within those pages (such as advertisements). When we are creating the documents, PDF is routinely used for proofing. PDF files used for publishing are known as PDF/X files.

- *Archiving.* Records managers, archivists, and industry compliance professionals can preserve and protect documents as well as add key words that enable searching. PDF files used for archiving are known as PDF/A and in May 2005, were approved by the International Organization for Standardization (ISO) for document preservation.

- *Design.* Architects, engineers, and manufacturing design professionals who work with interactive 3D designs can embed Universal 3D (U3D) files into PDF files, making it easy to distribute, review, or repurpose 3D content.

- *Engineering.* Architects, engineers, construction professionals, and manufacturing product

teams use the PDF/E file format to exchange documentation and drawings, including 3D content.

- *Accessibility.* People with disabilities such as vision impairment or limited mobility can access PDF documents on any hardware or software platform when they are available in PDF/UA (PDF universally accessible) format.

- *General use.* In January 2008, ISO accepted PDF as a formal, open standard for representing electronic documents and named it ISO 32000-1:2008. The purpose of the standard is to allow users to exchange and view documents independent of the environment in which they were created or viewed.

An early history of PDF
PDF was the vision of John Warnock, one of the founders of Adobe Systems, as a way to manage information internally. By creating a file format independent of the computer and its operating system, documents could be transported, viewed, and printed anywhere within the company. That

vision, first referred to as Interchange PostScript (IPS), was discussed at a Seybold conference in 1991. IPS became PDF 1.0 and was announced at Comdex in the fall of 1992, winning a Best of Comdex award. This was followed in June 1993 by Acrobat, the tools needed to create and view PDF files – Acrobat Exchange, Acrobat Distiller, and Acrobat Reader.

"...why PDF is our first choice when you are submitting files for print."

It took until 1996 for Acrobat 3 and the corresponding PDF 1.2 to include enough features (such as support for the CMYK color space) to be useful for prepress. 1997 and 1998 saw the release of plug-ins from other developers that added to the prepress tools, the first adoption of the PDF standard in a prepress workflow (Agfa's Apogee), and the release of the PDF/X standard.

The significance of ISO taking over the PDF standard is just that – PDF now moves from a *de facto* to a sanctioned international standard. Since 2002, PDF/X standards have been overseen by the Ghent PDF Workgroup (GWG), an international assembly of industry associations, vendors and experts who offer specifications and education in PDF/X for the international graphic arts community.

Print ready PDF files

All this background is our way of helping you understand why PDF is our first choice when you are submitting files for print. But we also need you to understand what kind of PDF file to submit, because for commercial printing applications, not all PDF files are the same.

"But we also need you to understand what kind of PDF file to submit..."

The best way to make a print ready PDF file is to use Adobe Acrobat or a similar program that is specifically for graphics files (such as Global Graphics Jaws PDF, now called gDoc Creator). Two other Adobe products, InDesign and Illustrator, will create PDFs, as will Quark XPress.

Microsoft Publisher files can be saved as a PDF by using the 2007 Microsoft Office add-in called *Save as PDF*. These programs provide settings that preserve the integrity of the original document for image resolution, font information, and color separations.

Freeware or shareware programs, though advertised as creating PDF files, often are for applications like sharing information by attaching the file to e-mail or for posting on the web. The goal of such programs is to keep file size as small as possible, so the resulting PDF files may lack sufficient image data or fonts to print correctly.

Here is a simple test to determine whether your layout program can create a print ready PDF: if the program does not give you the option to change settings or select a PDF type, then the resulting PDF is a digital proof rather than print ready.

Before PDF: the importance of native file construction

As versatile as a PDF file is in avoiding file output problems, it cannot eliminate all possible errors. According to Adobe, these are the Top 4 problems encountered by printers when outputting PDF files submitted by customers – and coincidentally, the problems we see the most:

1. Image resolution is too low.
2. Fonts are not embedded.
3. Wrong color space used.
4. Trim or bleed information is incorrect.

Other problems include a spot color misnamed or accidentally converted to a process color; too much image compression causing quality loss or artifacts in or around the image; incorrect page size; and problems with transparent objects.

To avoid these problems, we suggest you do the following:

- *Page setup*: determine the number of pages you will need depending on whether you are printing a single-sided or two-sided document, a folded document or a multi-page document; set the page size correctly to account for folding; set margins for printing on standard size cut sheets; extend images that will bleed by $1/8$ inch beyond the trim line.

- *Color mode*: set the color space for CMYK, not RGB; define spot colors by PMS number or as CMYK builds; set black to print as black rather than a CMYK build; add bindery marks (such

as die lines, folds, scores or perf marks); set screens and tints at a minimum of 5% and a maximum of 95%.

- *Images:* include only images that are at 300 dpi resolution in the size they will appear in the document; crop images in an image editor before inserting in the document; convert RGB images to CMYK.

- *Fonts:* use the font with the characteristic (such as bold or italics) you desire rather than applying a style; use fonts from a reputable source.

We also suggest that before you submit a file to us, you make a PDF and then a proof, rather than proofing from the native application. Doing this will reveal more quickly whether the PDF is indeed print ready.

Editing PDF files

Because we have used PDF files in our production workflow for so long, we have acquired software tools specifically for editing PDF files. We can use these tools to make minor alterations – for example, if you discover a typo, we can usually fix it – and to handle technical problems so the file can be output.

Despite the power of our PDF editing tools, there are a few file problems we won't tackle. If the color space is RGB, we will return the file to you because we want you to view the color after converting to CMYK or a spot color. If the $1/8^{th}$ inch allowance for images that bleed is missing, we will return to the file to you so you can increase the image size or decide for yourself how to create the image extension. If an image resolution is too low, we will return the file to you for a new image.

Unleash the power of PDF

We hope this discussion will help you prepare perfect print ready PDF files. If you find you have questions, call 513-248-2121, and we'll do our best to clear way the confusion.

"...extend images that will bleed by $1/8$ inch beyond the trim line."

Page Imposition

When your document is a booklet, rather than a brochure or flyer, it often requires an extra prepress step called *page imposition.* Page imposition is the arrangement of individual pages on a press sheet so the finished pages will be in order when the booklet is assembled.

When you are creating the pages for your booklet and working sequentially from page to page, you creating a *reader spread* – pages presented in the order they will be read. During the prepress step of page imposition, we change your reader spread into a *printer spread* by assembling individual pages to print on the press sheet. How we assemble the printer spread depends on the total number of pages in the booklet and the size of the press sheet.

In general, it is much easier for us to change a reader spread to a printer spread if the file format is PDF.

IDEA CORNER

"... a reader spread – pages presented in the order they will be read."

Transparency

Transparency in PDF files refers to images or text or similar objects on a page that "show through" to another image. Transparency is typically used for drop shadows, to create a tint or screen, or to lighten parts of an image so that the text on top is easily read.

PDF *flattens* files, meaning any layers that aren't visible are removed and the rest consolidated in one layer. If you create a PDF from a native application and end up with a white outline showing around the drop shadow or the image with the transparent background, then your PDF file creator doesn't support transparency.

Here are some instances where a transparency is not supported in a PDF:

- *Printing a file to PostScript then using Acrobat Distiller to convert the file to PDF.* PostScript does not support transparency.
- *EPS (Encapsulated PostScript) files.* Since EPS files are PostScript files, they cannot contain a transparent object.
- *PDF 1.3 or earlier versions.* PDF 1.4 was the first version to support transparency.

Two workarounds to restore transparency are to place the text on a separate layer on top of the graphics, or to use clipping paths to remove the background from the image.

Q. *What options do I have for submitting my files to TechneGraphics?*

A. We offer several options for file submission:

1. File transfer function (FTP) available on our web site
2. Electronic media such as CD or flash drive
3. Attachment to e-mail

Because it is fast and secure, we prefer FTP through our web site. It is also easy. Browse in your computer for the file you want to send, select it, and it will be immediately uploaded to our web site (our username and password are both tgi). Then email us so we will know that your file is ready for us to download.

We know attachments to e-mail are popular, but there are some considerations to using e-mail. The attachment may be blocked by our security system, may be refused by your Internet service provider because of file size limitations, or may be delayed in arriving. So bookmark our web site and use FTP every time.