

The graphics arts industry as a whole has traditionally been... well... a pretty traditional bunch. On the whole many of us refuse to jump on the bandwagon for the *next big thing* that will revolutionize the industry. Margins are too tight and time is too short to mess with your livelihood.

So while printers and prepress providers have been using PDFs in production for some time, the design side of the industry, on the whole, has lagged behind when it comes to adopting a PDF workflow.

For a printer, PDF format offers some real benefits. It's efficient, reliable, and "locked." In fact, most high-end workflow software uses PDF as a core file format. So it was natural for us to use it in the file transfer part of the workflow

Designers often use PDFs for their own proofing, but until recently, it was far too easy to create a bad PDF that wouldn't output correctly for the printer. So many people stuck with the tried and true method of sending source files in the program that created them along with fonts in linked images.

That has changed as newer versions of Acrobat have made clean PDF production much easier than in the past. Acrobat 6 introduced the ability to create files in the PDF/X format and included preflight tools and the ability to preview and print separations. For the first time, it became easy for non-technicians to create and proof a print-ready PDF file.

If you're not sure whether a PDF workflow would work for you, read on. For more information about how to create clean PDFs go to our website:  
[www.jsmcCarthy.com/downloads.asp](http://www.jsmcCarthy.com/downloads.asp)

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## The PDF Workflow: Advantages

### PDFs are cheaper and faster

- Printing costs may be reduced because prepress charges are generally less with *properly-created* clean PDFs.
- In the PDF workflow, last-minute changes (AAs) are handled by having the designer send new PDF files for the revised pages. It takes less time to do this than to have us make changes to the source file, so AA charges are reduced. Since the designer is making his or her own revisions, this reduces the possibility of communication errors and can eliminate the need for additional paper proofs.
- PDF files are smaller than the source files, fonts, and images, making them easier to transfer over the Internet.
- Jobs that are printing on a tight deadline can be turned around faster in a PDF workflow. PDFs uploaded to the JSM Remote Proof system are *immediately* processed and give the designer the ability to *immediately* check their processed files online through a web browser.
- Newer versions of Acrobat Professional include built-in pre-flighting software so designers can check their PDF files for problems. The earlier a problem is found, the cheaper it is to fix.

### PDFs are reliable

- Properly created PDFs include all fonts and images. Bad fonts and missing images account for the majority of problems that stop a job in the preflight stage; PDF files tend to be far more reliable.
- Text is "locked" in place so font conflicts that may cause re-wrapped text, font substitutions, or kerning problems won't happen with properly created PDFs.

- Acrobat Distiller acts as a software RIP (the part of a printer that processes a file) when it creates a PDF. This makes it far less likely that the file will fail with a PostScript error during later processing.
- In a PDF workflow a designer can proof the PDF and expect that the final printed piece will match. This isn't always the case with traditional source documents where font issues can make the file that we see appear very different from what the designer intended.

### PDFs are a standard format

- PDFs are cross-platform so a prepress operator on one platform will see the exact same file as a designer on another.
- A PDF can act as a common format if the source program isn't supported by the printer. Got something done in "Print Master Super Deluxe"? If you can print from it, you can make a PDF. The PDF may still require additional work, but this is usually a better option than completely recreating the file in another program.
- The PDF/X format is an industry standard. A single file, properly saved as a PDF/X-1A, can be sent to different printers or publications that accept PDFs and it will work for all of them. The tools to create and certify a PDF/X format file are built into Acrobat 6 and 7. Many publications like *Time* and *Newsweek* only accept files in PDF/X-1A format.
- For those ready to take that step, PDF/X-3 files can be used in a color-managed workflow. When properly done, this allows a single color-managed RGB file to be correctly separated by a printer for their specific CMYK printing conditions.

# The PDF Workflow: Disadvantages

## PDFs are not editable

- A PDF is not easy to edit, which limits the type of work that the prepress department can do to the files if mistakes are found. Last-minute changes are more difficult to make with PDFs compared to source files. Usually the designer needs to send a new PDF for any pages that require revisions.
- A bad source file will produce a bad PDF. The designer in a PDF workflow has more responsibility to make sure that the files are correct. (Note: In prepress we view this as an advantage.)

## In special cases source files still work better

- Designers who work with a large number of images on big projects sometimes use an FPO (or OPI) workflow. They will place low-res images in files and have the printer swap them with high-res images at print time. With some preparation, PDFs can work with an OPI workflow, but the PDF format doesn't work with standard FPO images not created by an OPI server.
- Jobs with special folding requirements, like pocket folders, boxes, or other packaging, won't work well in a PDF workflow

unless the designer has an exact template to work from and is very careful to create the document at the correct size with the correct trim and fold marks.

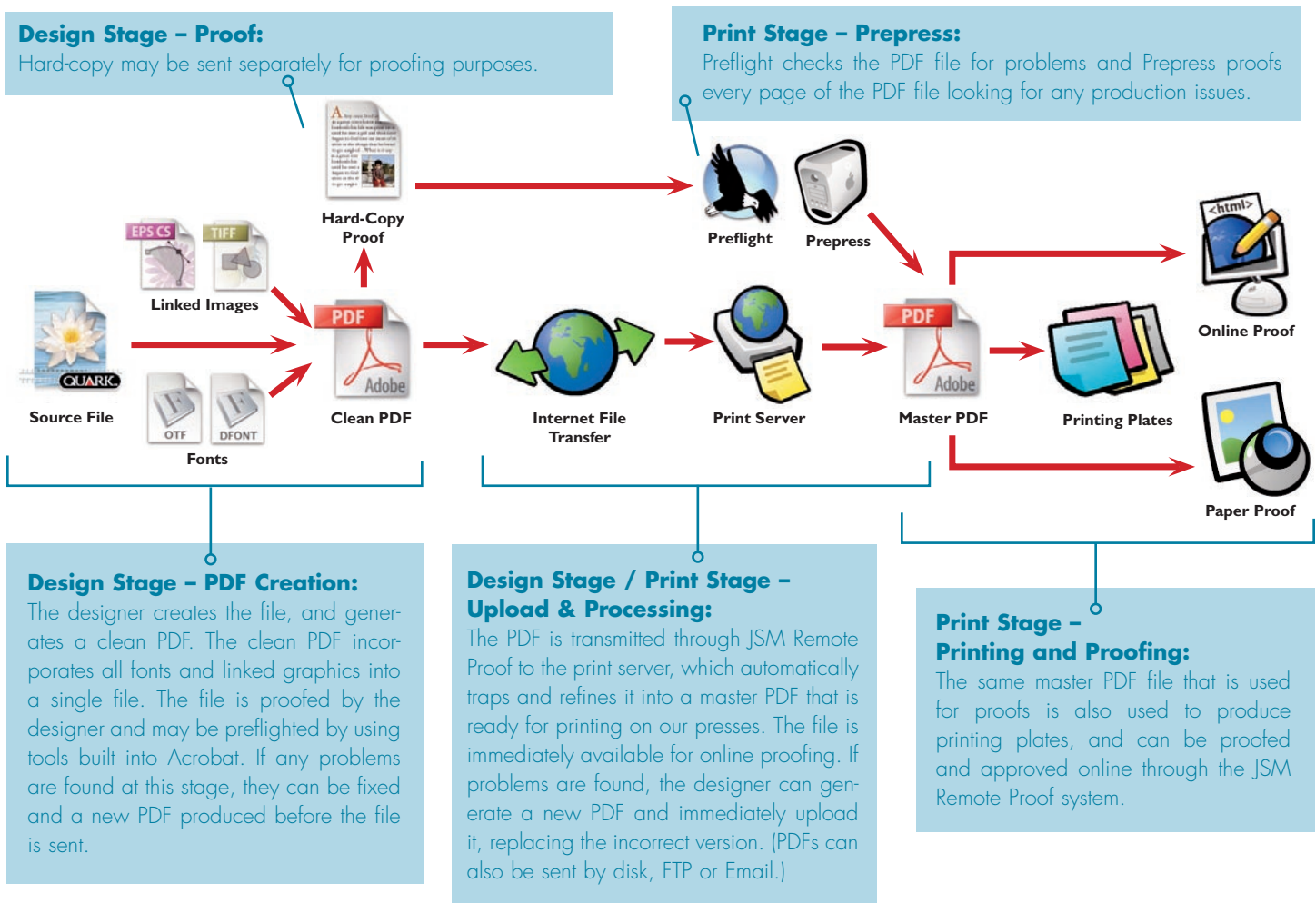
- Jobs with special plates such as glitter, spot varnishes, spot AQ, foils, or unusual diecuts must be set up correctly by the designer before the PDF is made.

## Creating a clean PDF requires proper training and tools

- Creating a clean PDF requires some additional training. A PDF only works if it is properly created. In most cases a bad PDF is harder to fix than a bad source file, and there are many, many, many ways to create a bad PDF. [See our website for more information on how to create a clean PDF.](#)
- To create a clean PDF you need the full version of Adobe Acrobat or need to use InDesign CS to create your files. Other PDF creation utilities or the built-in export filters from other design programs will not always create a reliable PDF file.
- The PDF workflow is different and many people fear change. Besides, the old way sort of mostly worked, didn't it?

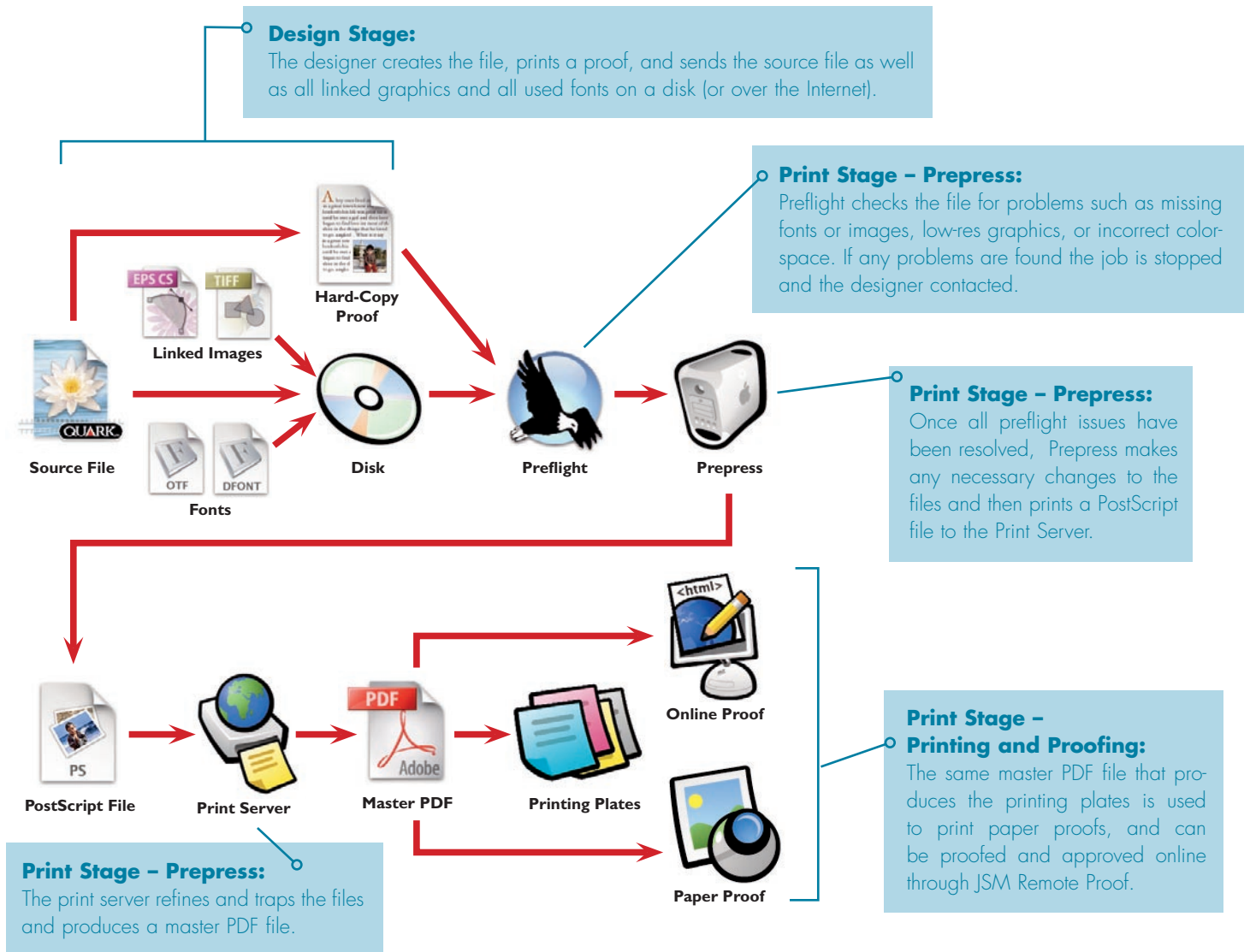
## The PDF Workflow Diagram

This is what happens in a typical PDF Workflow when files are sent to J.S. McCarthy.



# A Traditional Workflow Diagram

For comparison, here is how the system would work in a traditional workflow. The files are prepared in a program like Quark XPress or InDesign and those source files are sent to the printer along with linked images and fonts. Those files are preflighted (checked for errors), and if everything is good, the file is prepared and printed to PDF in the Prepress Department.



## Common Problems with the Traditional Workflow that Don't Affect the PDF Workflow

- It is easy for a designer to forget to send the correct images and fonts needed to print the file.
- For everything to work, the file must be processed with the EXACT same fonts it was designed with. As a file moves from place to place, it may be worked on with many different versions and types of fonts. This can lead to text shifting or changing when the file is edited or printed.
- Problems with the way that fonts are handled make it difficult to switch platforms. A file that is prepared on a PC won't necessarily print well from a Mac and vice versa.
- Some font licenses don't legally allow the fonts to be sent to a printer unless they also own the same version of that font. It

is practically impossible for a printer to own a copy of every type of every font out there so these jobs either require a PDF workflow, font substitution, or that the license be violated.

- When a problem is found that requires additional fonts or images, it can stop further work on the file until they arrive. A problem with a single page in a PDF only affects that page.
- The prepress department has to have and know how to use the program that created the file. Many printers cannot afford to support dozens of different programs.
- The earlier in the process that a problem is found, the easier and cheaper it is to fix it. The traditional workflow makes it easy for problems to hide until the *end* of the process.

# Terms, Buzzwords and Technobabble

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## Workflow

A workflow is the process you use to get work done. In this case, the prepress workflow is an industry term for the process of what happens between the time we receive your files to the point where we produce printing plates.

## Preflight

This is the process of checking files for missing fonts and images or other issues that could cause problems when the job is output. Preflighting is usually done at J.S. McCarthy as soon as a job arrives, to give us as much time as possible to fix any problems that arise.

## Prepress

This is the process of preparing a document for output. It can involve color correction, size change, imposition, trapping, and general clean-up of a source document. It is also the name of the department that does the work on your files to prepare them for press.

## Source Document

This is the original file used to create your print job. Usually this is from a program like Quark XPress, InDesign, or PageMaker. To work with source files, Prepress must open and print them in the program that created them.

## PDF/X-1A

This is a standardized form of PDF that disallows any information in the PDF that doesn't relate to printing. A file must meet very specific requirements to be certified as a PDF/X-1A: all fonts and images must be embedded in the file; only CMYK and spot colors are allowed; and information about trapping and intended printing conditions must be included in the file. Acrobat version 6 and later include the ability to easily create PDF/X documents.

## PDF/X-3

This format works just like the PDF/X-1A format but it also allows the use of RGB or Lab color, provided that those images are properly tagged with ICC color profile information. This allows a single tagged RGB file to be printed in any number of press conditions. Like David Hasselhoff, this format is more popular in Europe than in the U.S. Unlike David Hasselhoff, it is gaining popularity in the U.S. for those who are interested in an RGB color-managed workflow.

## Clean PDF or Print-Ready PDF

These terms apply to PDFs that are ready to use for commercial printing, as opposed to PDFs that were created for the web or for low-res proofs. A print-ready or clean PDF will be in the correct color space and will contain all the fonts and high-res images needed to print the file. A PDF/X-1A file is always print-ready, but not all print-ready PDFs will pass PDF/X-1A certification.

## Links

### J.S. McCarthy

Our website has step-by-step instruction sheets on how to create a clean PDF for most popular graphic programs. It also includes Acrobat settings and free tools to make the process easier.

[www.jsmcCarthy.com/downloads.asp](http://www.jsmcCarthy.com/downloads.asp)

### PDF-X

This is the official site of the trade group that manages the PDF/X specifications. You can find tools to create and information about PDF/X and learn why the specifications were developed.

[www.pdf-x.com](http://www.pdf-x.com)

### Ghent PDF Workgroup

This is an industry trade group which publishes specific settings and preflight tools for the use of PDF/X files in newsprint, magazines, and several different types of commercial printing.

[www.ghentpdfworkgroup.org/en/quick\\_information.php?main=10](http://www.ghentpdfworkgroup.org/en/quick_information.php?main=10)

### Adobe

Adobe created the PDF format and makes the tools that are usually used to create PDF files. This link goes to the section of the site dedicated to using PDFs in the design and printing industries.

[www.adobe.com/products/acrobat/creativepro.html](http://www.adobe.com/products/acrobat/creativepro.html)