

The Adobe PDF workflow: Saving time and money with PDF in print

Executive summary

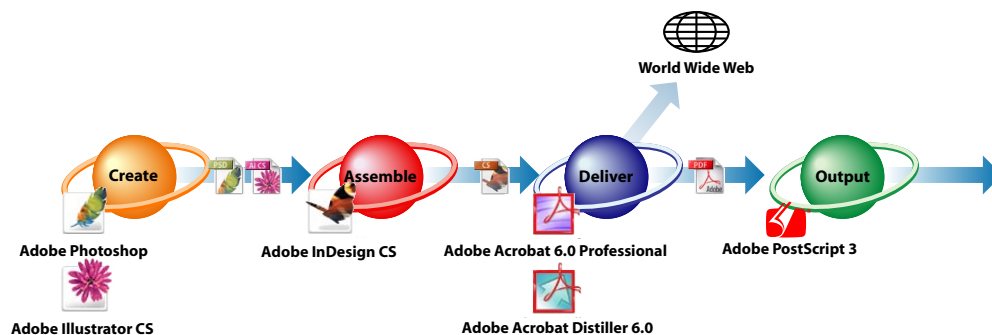
Today's creative professional demands faster turnaround, cheaper prices, and higher quality. The promises of technology make these demands seem reasonable, because Internet print services, high-bandwidth delivery mechanisms, and digital presses allow much faster output with no loss of quality. However, that increase in efficiency requires that the creative professional be ever more diligent in creating files that will image correctly the first time.

A PDF workflow is the right tool to deliver that efficiency. In a PDF workflow, all of the components of a print job are captured into a single file. This approach makes it possible to proof, deliver, and print from the same, compact Adobe® PDF file. Preflight tools contained within Adobe Acrobat® 6.0 Professional assure the designer and the print provider that the project will produce the excellent results expected.

Furthermore, Adobe Acrobat 6.0 Professional offers a suite of tools that improve any print workflow. Review and Comment tools allow designers to communicate directly with customers during the proofing cycle. The built-in preflight and verification tools provide proof that a PDF meets the specifications for a particular print vendor. Last, the on-board color separation engine can take the job all the way to imaging for final output on press.

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A PDF workflow

With the Adobe Creative Suite, you can create assemble and deliver your projects. With Adobe PDF, you can deliver that project with confidence that it will print correctly.

Print today

Printing has changed dramatically since the introduction of the computer to the workflow. It has put powerful design tools into the hands of more people, sped the process of preparing jobs for print, and provided cheaper options for creating the final, printed piece. However, competition among those people creating for print and those who produce the printed material increases as more people become able to provide cheaper, faster, and better service. Staying ahead in print today means creating a workflow that leverages the advantage of a digital workflow while avoiding the pitfalls.

It's about money and time

When digital prepress first made its debut in the mid-eighties, a promise was made that it save money and time when compared with traditional methods of publishing. However, the reality is often the reverse. As digital, creative tools become easier to use, more people are building files intended for professional-level printing. However, designers and printers approach the process from different perspectives and have different goals. These differences cause miscommunication in the delivery of work, which results in significant losses of both money and time.

For example, mistakes in the delivery of a project may stop it completely:

- Missing linked graphic elements
- Missing linked text elements
- Missing font files used in the layout or in a graphic
- Unknown page size information
- Unsupported native application files

Furthermore, mistakes in the project may not become obvious until the job is imaged:

- Low-resolution pixel-based graphics
- Incorrect color modes
- Hidden problems in linked graphic files
- Unintended spot colors that require additional printing plates
- Overprinting errors

All of these (and many more) problems require some sort of intervention. Someone has to diagnose and correct them, adding an unplanned expense to the job. If the creative professional has to do it, then the lost time may cause the job to miss a deadline. In either case, a customer becomes more likely to look for another vendor. Since maintaining existing customers is far less expensive than developing new ones, this is a bad situation.

It's about process

A project moves through several stages in a print design workflow. Both designers and printers need to find ways to speed things up so that they can adhere to short timelines and tight budgets. Since the cost of labor, ink, paper, and equipment can only be controlled so much, the process itself has to be explored for savings.

Preflight is a necessity in today's workflow. If implemented correctly, preflight catches problems at a stage when they can be fixed at much less cost than after the job has gone to print. However,

an ad hoc preflight system that is designed to work with any incoming file format is very complex and requires highly trained personnel. When the need is to speed the movement of projects along in the workflow, both the designer and the printer need standard ways of working that allow them to automate as much of the process as possible. Without that standardization, jobs continue to reach a bottleneck at the preflight phase.

Furthermore, a certain number of steps cannot be avoided. Imposition, trapping, and imaging are all still necessities in the process of printing. Print vendors are looking for ways to standardize and automate that aspect of their businesses. The end goal is to remove as many of the human-touch steps as possible from the print-production workflow. By accepting a wide variety of file formats, print vendors must continue to have a person work on the files. However, by accepting work in only a limited number of source file formats, print vendors exclude potentially lucrative customers. Printers are seeking ways to allow customers the creative freedom to use the tools they like, while enabling an automated workflow. If successful, an automated workflow will return real dollars and cents to the designer in the form of reduced printing costs. Meanwhile, the printer can increase profitability and create a healthier business.

It's about creative flexibility

Not all design is done with a single desktop application used on a single operating system. As more people enter the world of print design, as more design is created for non-paper media, and as systems become less expensive, the possibilities have grown. There are tools dedicated to producing design solely for use in a Web and multimedia project. However, the same design for a Web project may need to be used in a print project. Although it is better to use a toolset like the Adobe Creative Suite, which allows creation of a variety of media types in a more fluid way, it is sometimes necessary to work from an application that was created for a specific type of media. The output from such applications must frequently be used for a variety of purposes.

Moreover, there are many tools on the market today that *are* built specifically for print design, and each has its own set of strengths and weaknesses. Not all them work the same way or provide the quality of output required by a printer's high-end equipment. Designers may not have the option of moving to another package (especially in the short term), yet they need to be able to submit work from those applications to a print workflow. Such designers are often left with few print vendors from which to choose.

It's a competitive world

All of this is made worse by the fact that margins are tight in the print world, and design customers have ever increasing needs for fast turnaround of material. They, too, have been sold on the concept of faster, better, and cheaper in the print world. Somehow, creative professionals need to be able to create files for the print shop with confidence that they are built correctly, have been validated for a particular workflow, and will image correctly.

A PDF workflow

A PDF workflow allows the standardization required to take full advantage of a digital workflow for print. PDF is uniquely suited to the task of collecting the many pieces of a print project, delivering those pieces, and acting as a vehicle for creating the final printed work.

The source-application workflow

In a source-application workflow, several files are collected into a folder, compressed into a package, and then sent to the print vendor. The printer then decompresses the file set, collects and distributes the pieces, preflights those pieces, and then moves to the next step of the process. Each file type needs a somewhat unique workflow to address or diagnose problems specific to that file type.

Once the file moves into production, the process repeats itself. Each different file type has a specific set of needs and challenges to address. Although each application may be excellent for its design capability, keeping up with the various file formats and versions of those file formats is a constant strain on resources within the print shop.

An Adobe PDF workflow

A PDF workflow addresses and eliminates these problems. In a PDF workflow, the creative professional converts all of the various source files, fonts, and graphics into a single, widely accepted Adobe PDF file.



A PDF workflow

By combining all of the various source files into a single, compact Adobe PDF file, errors are reduced

Using a PDF workflow offers the following benefits:

- The conversion process essentially tests the files. Since creating a PDF is similar to printing a file, problems can be spotted before the file is sent to a print vendor.
- The file is complete. An Adobe PDF file is an all-inclusive file. It contains all of the fonts, graphics, and specifications necessary for printing.
- The file is compressed. Adobe PDF offers a variety of compression options, so that the file will be smaller than the collection of files used in a source-application workflow.
- An Adobe PDF file can be created with particular Adobe PDF settings and then validated as proof that it meets the specifications of a particular vendor.
- Adobe PDF is a common platform that enables a standardized workflow within the print shop.

By accepting Adobe PDF files, printers can begin to make assumptions about the project file. If a designer produces a file that adheres to the correct specifications, and can be validated as doing so, then that file can move very quickly through the preproduction process and get to press more quickly. In a perfect workflow, an Adobe PDF can bypass all of the preflight and quality-assurance steps and go *directly* to press.

Using a PDF workflow

A basic PDF workflow takes these four steps:

1. Preflight the project.
2. Properly create the Adobe PDF.
3. Preflight and validate that PDF.
4. Submit the file.

The end result is a file that the printer will trust and feel comfortable accepting.

Preflight the project

Although a PDF workflow will improve a print project's likelihood of succeeding, it is still important to be sure that the source files are built correctly. Preflight is a process of methodically checking a project to look for problems. This process is especially important in a PDF workflow, because some problems, like low-resolution graphics, cannot be resolved by simply converting the project to PDF. By preflighting the project before creating the PDF, such issues are resolved long before the press deadline looms or intervention charges begin to mount.

There are a number of preflight options if your tool does not offer built-in preflighting, such as the functionality in Adobe InDesign. However, preflight can also be as simple as creating a checklist and examining the file set in a structured way.

Things to examine:

- Font files. Make sure they can be embedded into a PDF file.
- Linked graphics. Be sure all links are up-to-date.
- Embedded graphics. Make sure all graphic files are linked instead of embedded.
- Resolution. Make sure pixel-based graphic files have enough resolution to print correctly.
- Scaled or rotated graphics. Applying these effects may create problems during imaging.
- Color mode. Use CMYK or Spot color unless you are in a color-managed workflow.
- Number of plates. Check the number of plates that the project will require.
- Bleeds. Make sure that elements that abut the edge of the page bleed correctly.
- Page size. Set the pages size(s) correctly for the printed job.
- Overprinting objects. Look at objects that overlap to see that they interact correctly.

A simple checklist is a good start to be sure that any hidden problems in the files are spotted and corrected. The exact tool doesn't matter, as long as the files are examined consistently. A problem report is also useful to help plan future projects by capturing and learning from mistakes.

Properly create the Adobe PDF

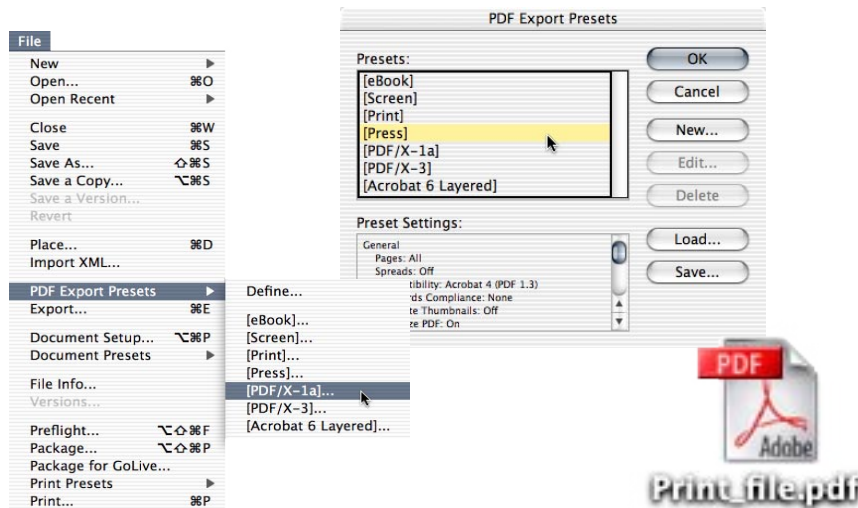
There are two ways to create files for an Adobe PDF workflow. The first is to produce a PostScript file and hand it to Adobe Acrobat Distiller® 6.0 for conversion to PDF. Because PDF is a flexible file format, the settings for creating the file are important. In most cases, print vendors will determine their specific needs and supply an Adobe PDF Settings file, also known as a *job options* file. This file automatically configures Adobe Acrobat Distiller 6.0 to meet certain needs

How PDF files are created

There are seemingly many ways to create PDF files, such as using PDF Maker in Word or choosing File: Print and selecting Acrobat PDF as a printer. However, these actually do create PostScript and hand it to Distiller. It just happens in the background. It is still important to use the correct settings to produce PDF.

within the workflow. For example, a PDF file for printing should not use JPEG compression for photographic images, and so a set of Adobe PDF settings for print would not use JPEG compression on any images in the file.

The second method for generating Adobe PDF is to export it directly from an Adobe application such as InDesign or Illustrator. In either case, the end result is a PDF file that conforms exactly to the specifications for the PDF file format. Again, the flexibility of PDF requires the PDF file to match the needs of a particular print vendor.



PDF settings

Allow you to determine that you are creating the correct Adobe PDF for your needs.

Although either method of creating an Adobe PDF will work, a discussion with the print vendor is paramount to a successful PDF workflow. If for no other reason than to assure the print vendor that the files are being created in a consistent workflow, the discussion should occur *before* any PDF files are created. Some print vendors, for example, may require Adobe Acrobat Distiller 6.0-generated PDF files that are compatible with a certain version of Acrobat. Producing PDF files outside of that specification will cause them to fail in the print shop, damaging the process.

PDF Transit

Using Adobe PDF settings in Adobe Acrobat 6.0 is an easy way to produce Adobe PDF files that conform to a specification. However, some printers have begun to offer an easier method for their clients to create Adobe PDF files for a specific workflow right from the Print menu of their design applications. PDF Transit installs as a small software package that gives a computer the ability to work in the following workflow:

1. The client select the PDF Transit printer driver as if it were any other printer.
2. PDF Transit creates a PDF file based on specific, vendor-driven specifications.
3. PDF Transit launches a Web browser connected to the vendor's server.
4. PDF Transit allows internal proofing at the client site as a first step.

For more information about PDF Transit

See the PDF Transit Web page:
www.adobe.com/products/pdftransit/main.html

5. The client fills out the job ticket online and submits the file.
6. The print vendor verifies the receipt of the file with an e-mail response.
7. The print vendor prints and delivers job.

This direct connection is especially appropriate for many direct-from-digital printing solutions, because they are often used in a fast-turnaround situation. Adobe PDF in this situation allows for high quality in that fast-turnaround setting.

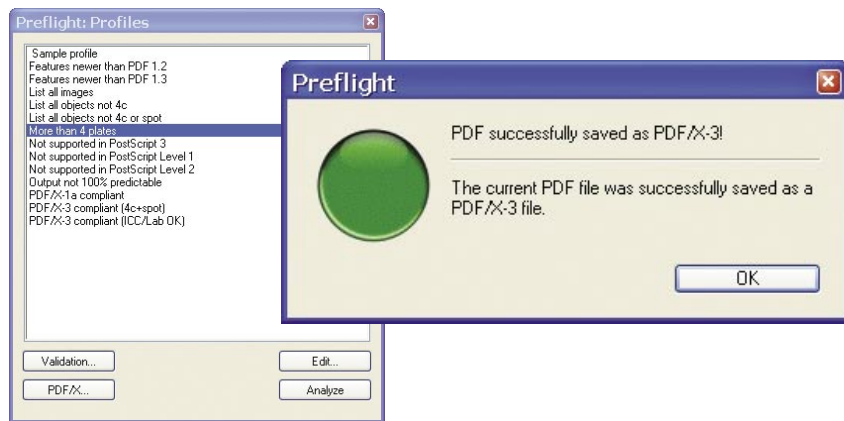
Clone PDF

There are a number of options from vendors other than Adobe for creating PDF. These creation options may be appropriate for some uses of PDF, such as files meant for quick delivery, but they may not be good for a print workflow. For example, Mac OS X can produce a PDF file without Adobe Acrobat Distiller. That PDF file may work well for sharing a memo or letter. However, Adobe PDF is borne of more than twenty years of expertise and history in creating tools for the creative and print professional. Adobe strongly recommends that PDF files in a professional print workflow be created with Adobe Acrobat Distiller 6.0 or directly from other Adobe applications.

Preflight and validation

In order to submit a PDF file to a print workflow, a designer needs to be able to demonstrate that the file was created correctly. It isn't enough to create the file with a certain style or set of Adobe PDF settings and then offer verbal assurance that this was done. In some formal way, a print vendor has to know that the file will image correctly.

In Adobe Acrobat 6.0 Professional, the preflight functionality provides that assurance. After using the preflight tool on a PDF file, the file can be validated with a stamp to indicate that it conforms to a specific profile. The profile, much like a PDF style or Adobe PDF setting, represents a particular vendor's workflow needs and is usually created by that vendor. Since any change to the file will flag the validation, a printer can rest assured that an incoming file with the correct validation will print correctly.



Preflight validation

Validation allows you to know that the file will print correctly.

PDF/X

PDF/X is a subset of the PDF file format that helps remove the guesswork from PDF-for-print creation. It offers both creative and print professionals a way to settle on a standard group of PDF settings. One of the advantages of PDF/X is that it is a true standard, described by the ISO. As such, it is a specification that can be used by a variety of different applications and vendors without requiring any one vendor's toolset. This flexibility makes it attractive to those seeking an open, standard method of working.

PDF/X comes in two flavors that are in use today. PDF/X-1a and PDF/X-3 are similar but offer slight differences, and so they can represent the wide variety of possible workflows. Adobe Acrobat Distiller 6.0 can create a PDF that conforms to either version of the standard, and Adobe Acrobat 6.0 Professional can convert a PDF file to conform to the standard and then validate that it does.

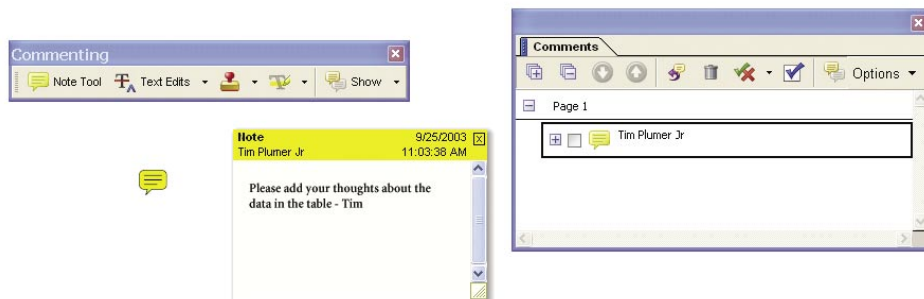
Other ways to leverage PDF in a print workflow

Creating Adobe PDF for final output is one way to save time and money in a PDF workflow, but it is not the only way. By converting files to PDF, you can take advantage of the format in three other ways:

1. Proofing
2. Internet delivery
3. Archiving
4. Security

Proofing

Adobe PDF is a great option for proofing, because it eliminates the need for interim proofs on paper. Adobe Acrobat 6.0 Professional has many new features that automate the proofing process and make it easier and faster to move a document through the proofing cycle. To start, Adobe Acrobat 6.0 and Adobe PDF allow for a faster, cheaper method for concept and layout approval. With an e-mail-based review, a designer can send an Adobe PDF across town or across the country in a matter of minutes. With the Commenting tools in Adobe Acrobat 6.0, a client can add feedback directly to the Adobe PDF file and then send it back to the designer with the click of a button. Once all of the comments have been returned, the designer can reject or accept them, sort them, filter them, and then store them as a record of the changes requested.



Proofing

The Commenting tools in Adobe Acrobat 6.0 Professional make the review and comment process easier, faster, and cheaper.

Adobe Acrobat 6.0 Professional and Adobe PDF can also be used to proof for color. In a color-managed workflow, management profiles can be attached to the elements in the authoring application, such as Adobe Photoshop®, Illustrator®, or InDesign®. These profiles, called ICC profiles, ensure that the color is seen and printed consistently across a variety of devices. Adobe Acrobat Distiller 6.0 retains ICC profiles that are attached to elements in a design project, so that color management works with the resulting Adobe PDF file. If such profiles are missing in a project, Adobe Acrobat Distiller 6.0 can be configured to add them as the PDF file is created, thus providing color management for such projects.

Those who use the tools in Adobe Creative Suite have an added advantage, because Adobe Acrobat 6.0 uses the same color engine as the rest of Adobe Creative Suite. Design elements look the same during creation, during layout, in a PDF for proofing, and in the print-ready PDF. Add to that the fact that Adobe Acrobat 6.0 has digital signature functionality built into it, and the entire proofing and approval process can be moved to a PDF workflow. These advantages represent significant cost-savings over a traditional, paper-based proofing workflow.

Internet delivery

One way many organizations are looking to reduce costs is to provide more material directly to the public through the Web. Adobe PDF gives the ability to convert projects directly from the print-ready version to a Web version of the same content. In Adobe Acrobat 6.0 Professional, the PDF Optimizer tool converts a print project directly to a compressed version appropriate for posting to the Internet or sending through e-mail. The need to produce several different versions of the same project is reduced or eliminated entirely.

Because Adobe PDF can contain multimedia content such as movie files, Flash files, and sound files, print projects can go a step further when delivered as Adobe PDF files. With these elements, a file created for print becomes more engaging and dynamic. The ability of an Adobe PDF file to connect to a server for updated, dynamic content helps keep material up-to-date and relevant.

Archiving

Adobe Acrobat 6.0 Professional has tremendous searching capabilities built into it, making Adobe PDF an excellent option for archiving complete projects or revisions of a project in an electronic format. Because the PDF file format is a de facto standard, with actual ISO standards based on it, it is a reliable and durable way to store documents. Information in a PDF file is accessible, can be searched with the Google search engine, and will maintain the quality of design that went into the file when it was created. Since it's electronic, backing up the file is as easy as copying it from server to server.

Security

An Adobe PDF file is a secure way to share and transmit work. With Adobe Acrobat 6.0 Professional, adding security to the file is easy to do and makes it less risky to share files. A PDF file can be either locked to prevent it from being opened or set so that changes, printing, or copying of content is disallowed.

Conclusion

The end result of using Adobe PDF is a more competitive workflow that allows both the designer and the print vendor to offer a high quality of work at a lower cost to customers. In today's cost-conscious world, that can mean the difference between success and failure. Adobe PDF and Adobe Acrobat 6.0 Professional enable such a workflow by providing the tools to make it a reality. For the creative professional, Adobe PDF is a way to capture all of the aspects of a project in a single file for submission to a print vendor. By creating an Adobe PDF file with specific Adobe PDF settings, verifying those settings with the preflight tools in Adobe Acrobat 6.0 Professional, and sending that file to a print vendor, the designer submits a job with the confidence that the job will print correctly the first time. After submitting the job as an Adobe PDF, the designer can then repurpose the same file for use with an alternate delivery vehicle such as the Internet. A print vendor who accepts Adobe PDF files also has the confidence that the file is constructed to meet the requirements of a particular workflow. In both cases, the time and cost of the job are dramatically reduced because entire steps are eliminated from the print process.

FOR MORE INFORMATION

For a comprehensive overview of Adobe Acrobat 6.0 Professional, see the Adobe Acrobat page at www.adobe.com/Acrobat

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10/03



Tools for the New Work™