

GRAPHIC EXCHANGE

DIGITAL CONTENT CREATION FOR PRINT, VIDEO & THE WEB



Thinking
inside
the box



PDF Color Production Grows Up

by Michael Kieran

The age of Acrobat represents a third phase in the evolution of Adobe Systems. Founded in 1982, for its first decade Adobe generated most of its revenues from licensing the PostScript language to manufacturers of output devices. In its second decade, most of

Acrobat 6 will undoubtedly help Adobe maintain its unique position as an applications developer whose control over a document description language makes it almost as important as an operating system vendor.

the money came from its industry-leading applications, including Photoshop, Illustrator, Premiere and GoLive. Well, okay, maybe not GoLive.

As it enters its third decade, Adobe is changing again, morphing into an enterprise software vendor with a focus on the efficient delivery of visually accurate documents across all media and throughout organizations of any size. Acrobat and PDF (the Portable Document Format) are crucial to this strategy, so it's

been interesting over the past few years to see how Adobe has tried to balance the disparate requirements of corporate users with those of graphic arts professionals.

With the release of Acrobat 5 in 2001, Adobe definitely lost some credibility in the minds of design, prepress, and printing professionals. Despite its robust support for corporate document sharing, review and authentication, Acrobat 5 did little to resolve some of the long-standing complaints from graphic arts users, especially its lack of color separation features and preflighting tools.

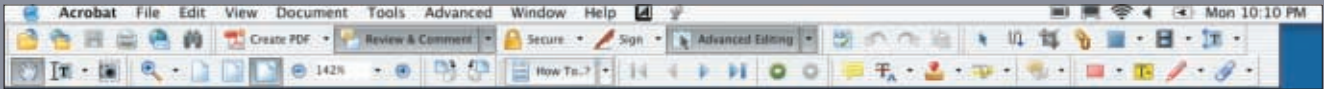
DON'T WORRY, BE HAPPY

At first glance, the recent release of Acrobat 6 looked like more of the same, with Adobe's marketing materials touting the product's new tools for streamlining business documents for review and approval. Fortunately, this time graphic arts users have not been ignored.

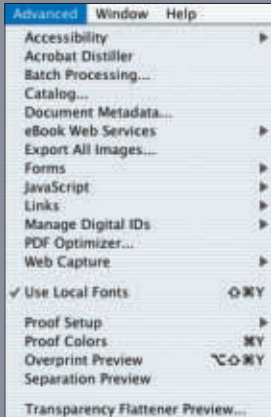
First, Adobe has split the product into four components:

- The free Acrobat Reader has been renamed Adobe Reader, and has added support for PDAs, video, and other rich media.
- Acrobat Standard (priced at US\$299/~CDN\$420, upgrade from v4 or v5 for US\$99/~CDN\$140) is the main product, and it's aimed at corporate workgroups wanting to collaborate in the

New look, new tools, new specs for prepress or the web

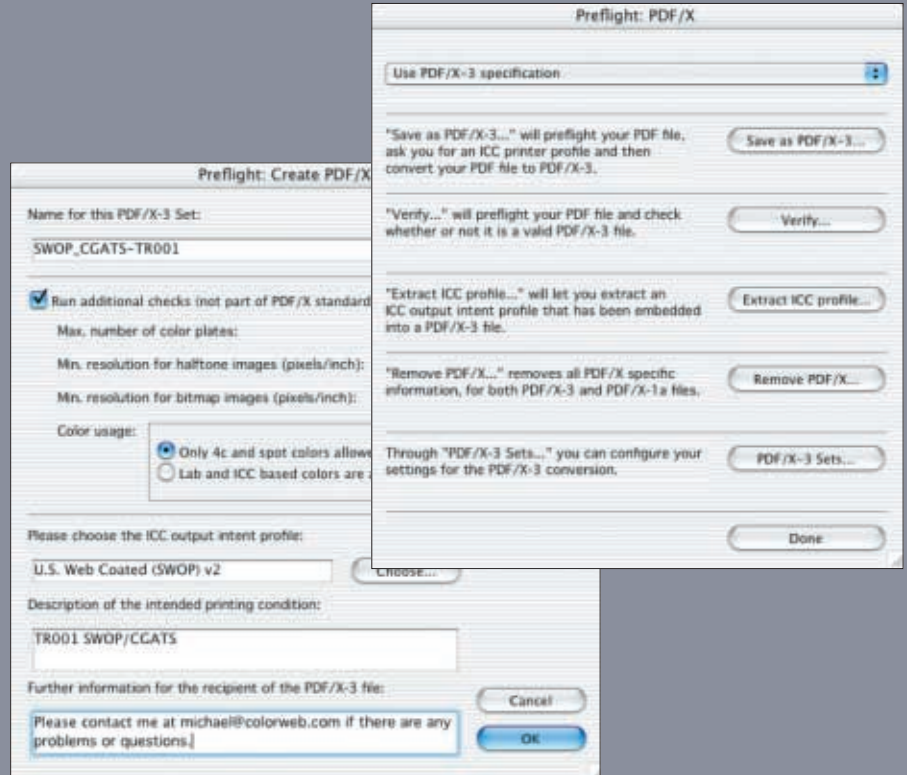


Even the overloaded *TOOL BAR* doesn't show you all the important features in Acrobat 6, proving that something can be part of the solution and part of the problem at the same time.



The *ADVANCED MENU*, packed with options for eBooks, forms, JavaScript, links, proofing and many other features, reveals Acrobat's complexity.

Acrobat's *PREFLIGHT* and *VALIDATION* options are tightly integrated into the dialogue box for generating PDF/X files. In addition to the diagnostics performed as part of a defined standard, such as PDF/X-3, you can specify other checks as well as provide contact info.



process of producing and sharing documents.

- Acrobat Professional (US\$449/~CDN\$600, upgrade cost US\$149/~CDN\$200) builds upon the Standard version, adding valuable graphics features such as layers, preflighting, and support for the PDF/X standard.

- Acrobat Elements is a low-cost adjunct to Microsoft Office that makes PDF a seamless part of the corporate document exchange process, but it's only available to Windows-based enterprises with 1,000 or more users.

Acrobat Standard is the product Adobe thinks will meet the requirements of most people wanting to generate PDF files, specifically all those except graphic arts and engineering professionals. I think Adobe is wrong.

Both the Standard and Pro versions provide enhanced document commenting and review features, a Capture function for scanning documents directly into PDFs, improved zoom and navigation tools, and one-button PDF generation from the Windows versions of MS Office, Explorer and Outlook. Acrobat Standard certainly provides a huge range of document collaboration fea-

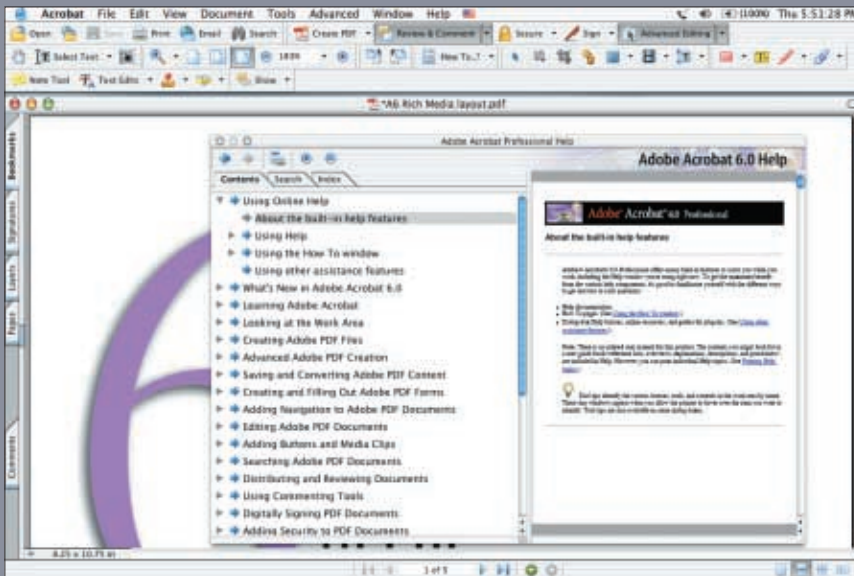
tures and can be used with both office-oriented and graphics applications.

But — and it's a big but — only the Professional version provides the ability to generate files conforming to the PDF/X standard, an essential feature for exchanging color information accurately. The ability to create a PDF and then have it print with the right colors is just as important to a marketing manager using PowerPoint as it is to a magazine publisher using QuarkXPress. In addition, Acrobat Pro can preview and generate color separations, provides enhanced job ticket functions, and has the ability to create PDFs (on a PC) from AutoCAD, MS Project, and Visio.

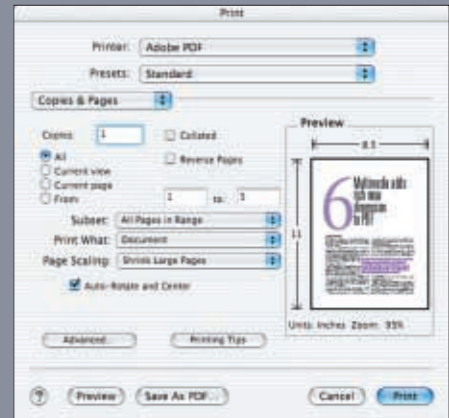
THE INTERFACE — COMPLEXITY VERSUS EASE OF USE

The first thing you notice on launching Acrobat 6 is that the user interface has migrated to the palette-centric approach of Photoshop and Illustrator. This is a mixed blessing; at one point, nine palettes were open on top of the document I was reading, and although "Dock All Toolbars" moved most of them to the top of the screen, it was still hard at first to remember the functions associat-

New look, new tools, new specs for prepress or the web



Acrobat 6's new **HELP WINDOW** includes access to a context-sensitive How To pane, which provides much-needed tips and suggestions, as well as the complete 600-page reference manual (in PDF, naturally). Unfortunately, you can't hide it; instead, you have to close the window to make it disappear, which is quite inconvenient.



As with all Acrobat 6's redesigned dialogue boxes, the **PRINT WINDOW** is clean-looking and reasonably easy to navigate. However, in the OS X version, the Preview and Save As PDF buttons don't work.

ed with each of those little icons. Thankfully, many frequently-used features are grouped by function into pull-down menus for creating PDFs, reviewing and commenting, security, digital signatures, and advanced features.

There's a reason Adobe has gone to such lengths to change the face of Acrobat. This is a complex, multi-faceted program, with hundreds of features in often distantly related domains. For instance, some corporate users value Acrobat because it lets them exchange spreadsheets and other business documents with complete peace of mind through its support for digital signatures, strong encryption, and other document authentication features. Meanwhile, many graphic arts users have never even looked at Acrobat's document security features, but would have been apoplectic if the latest version hadn't added support for JPEG2000 compression.

It's hard to keep everyone happy, but for the most part Adobe has made sensible compromises. The majority of interface decisions seem to have been well thought out, although some choices are still less than intuitive — such as continuing to isolate Distiller as a separate application (which can be called from Acrobat's Advanced menu), a defect that I was hoping would be resolved in this version.

But overall, I like the new interface, in part because it masks

some of Acrobat's complexity, making it a little easier to focus on the tools most important to me — those for creating reliable, graphically sophisticated, high-quality, device-independent color publications.

EXPLICITLY FOR GRAPHICS: PDF/X

To understand the buzz around Acrobat 6's support for PDF/X, consider the fact that the vast majority of jobs submitted to commercial printers today do not contain ICC color profiles and can therefore be said to exist, technically speaking, in a color space called RandomRGB. By contrast, capturing images in a known color space (or importing them into a color-managed workflow on a calibrated and profiled monitor) eliminates the ambiguity in color values right from the start.

The PDF/X standard is a subset of PDF that provide two ways of ensuring reliable printing during the blind exchange of press-ready color publications:

- The PDF/X-1a spec is for CMYK and spot color workflows targeted to a specific set of printing conditions. All images and fonts must be embedded, and all images and other color objects are converted to a single output profile (such as a specific set of standard printing conditions).

- The PDF/X-3 spec is a little more flexible with regard to

color management, with support for CIE L*a*b*, RGB, or in fact any color space described by an ICC profile. Its primary advantage is that a variety of different ICC source profiles can be retained within a document all the way up to print time, rather than smunching everything into some lowest common denominator flavour of CMYK.

One little anomaly is that for some reason, all the PDF/X settings in Acrobat are tucked away inside the Preflight dialog box, rather than being part of the Save As dialog (where more users would take advantage of them). However, the migration to PDF/X is bound to reduce production problems with color, fonts and trapping.

Preflighting has become especially important in this release. Adobe has done a good job here, providing a flexible set of preflight profiles, rules, and conditions that can be customized. The resulting preflight report can be embedded directly into a PDF to provide information about potential trouble spots.

New in Acrobat 6 is the ability to preview and print color separations, a feature whose absence has been noted since the release of Carousel 1.0 more than a decade ago. To preview separations, you start with a calibrated and profiled monitor, specify a CMYK working space in Acrobat's Preferences dialog box, then select the Advanced>Preview Separations option. However, to actually print the separations you must then use the options in the File>Print>Advanced dialog box.

Acrobat 6 improves compression of images by supporting the JPEG2000 standard, which uses wavelet mathematics to achieve better image quality for a given file size reduction than conventional cosine-based JPEG. Acrobat 6 also improves overall performance through a technique called object stream compression, which consolidates small objects (each of which isn't compressible by itself) into streams that can then be efficiently compressed.

Many people will be happy to see that Adobe has added a layer feature (although for some reason, layers are called Optional Content Groups instead of, for instance, "layers"). The layers can be placed on top of a PDF without permanently affecting underlying content, which makes them useful for publishers working with foreign language editions, multiple pricing zones, engineering drawings, and other complex documents.

NEW FEATURES CAPITALIZE ON UPDATED PDF SPEC

To add new features to Acrobat 6, Adobe updated the PDF language to version 1.5 (the specification for which you can view at its developer site, partners.adobe.com). There are many significant enhancements to the language, including JavaScript integration and support for audio, video and other "rich media" (as described in Bob Connolly's article beginning on page 19).

Many of the new features in PDF 1.5 provide the infrastructure for corresponding capabilities in Acrobat 6, including object stream compression, layers, color separations, and QuickTime and MP3 support. The PDF 1.5 spec also supports direct creation

of job tickets in JDF (Job Definition Format), which can be stored inside a PDF file.

Adobe has made progress in resolving a unique dilemma in its data architecture — the fact that PDF files are primarily concerned with a document's appearance, not its structure, while today's dominant information trend is to distinguish between data objects and their labels by encoding everything within the XML (eXtensible Markup Language) architecture.

Adobe's answer, introduced with Acrobat 5 (which employs PDF 1.4) is "tagged PDF", a way of shoehorning XML-compliant tags into text and graphic objects inside a PDF. The PDF 1.5 specification adds features to streamline the dynamic rendering of PDF documents from XML and makes it easier to publish and archive metadata for search and retrieval using the open XMP (eXtensible Metadata Platform) spec. Adobe has also announced that later this year it will deliver a new tool for designing XML and PDF templates and forms, and an XML toolkit for developers to provide easy access to PDF file content from common scripting languages and Java.

A SOLID UPGRADE

Acrobat 6 packs a lot of punch and will undoubtedly help Adobe maintain its unique position in the software industry — namely, an applications developer whose control over a document description language makes it almost as important as an operating system vendor.

More important, Acrobat 6 provides a rich set of tools for sharing visually complex documents, a job that can be a lot harder than it sounds. Whether collaborating over the wording of a contract or verifying the way spot colors in a magazine ad convert to CMYK, people can now use Acrobat for all kinds of review and approval activities. And with its enhanced rich media support, Acrobat is certain to find new applications in the delivery of video and multimedia.

On the downside, the shipping version still has a few display bugs and other glitches, including erratic Macintosh support for rich media. And Acrobat 6 won't run at all in Mac OS 9, which could be a real problem for shops that use third-party Acrobat plug-ins or those who don't migrate to QuarkXPress 6 for OS X. It's also disappointing that Adobe decided to provide online annotation features only in the Windows version, though it can be argued (and has been online, at great length) that this is in part due to limitations in Apple's operating system.

Despite these limitations, Acrobat 6 is an important upgrade, enhancing document sharing and collaboration for office workers while moving graphic arts users ever closer to the ideal of a universal master that can be faithfully output in any medium. 🍎

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