

Adobe Acrobat 6 Professional

New PDF options protect your design data. By Ron LaFon

When I write an article such as this for *Cadalyst*, proofs come back to me via PDF, showing the colors, typography, and layout as they will appear on the printed page that you're now reading. As long as I have a reader that translates the file, it doesn't matter what computer or graphics subsystem the document was created with or what I use to view the file. This remains the case when the file is sent to a high-end typesetting machine for reproduction. Even image-rich documents transmit in short order via broadband connections. The new file-size reduction features of Acrobat 6 and the new PDF 1.5 specification reduce the file size significantly enough so that such documents can be used by those who have slower Internet connections.

At its core, the PDF is a PostScript file that provides mechanisms that describe how a page should be displayed and printed. PostScript is a resolution-independent page description language that can produce a document at the full resolution of any PostScript device capable of outputting it—the resolution is dependent on the device, not the document.

As part of document storage and retrieval systems, and on the Web, PDF files have revolutionized how we work and access information. PDF files are standard fare as help and technical documentation, in document storage and retrieval systems, and as forms, applications, and statements. In design collaboration, the preparation and printing of publications and manuals, proofing, and even Web-based forms and ordering systems,

PDF files have proven effective at saving time and labor—and therefore money. Here we look at a handful of applications designed to generate PDF files from CAD drawings.

ADOBE FOCUSES ON ENGINEERS



With the introduction of Acrobat 6 earlier this year, Adobe Systems expanded the capabilities of the Acrobat family of products and the variety of PDF-related products that are now available.

What was once known as the Adobe Acrobat Reader is now the Adobe Reader. The name change for this freely distributable software was sparked by confusion among users who thought that the reader was the full-fledged Acrobat product. Adobe Reader is just that, a reader, capable of displaying PDF files on whatever platform you run it on. This is how most people interface with Acrobat files, but it can't produce or edit PDF files. Adobe Reader is available for a broad range of platforms in a variety of languages.

Acrobat Elements provides easy digital document creation for all enterprise users who need to distribute business information. Acrobat Elements offers PDF creation from Microsoft Office, Outlook, and the Windows desktop. It's available only for Windows and only via volume licensing. Contact Adobe for pricing options.

Acrobat 6.0 Standard (\$299, \$99 upgrade) addresses the needs of users with collaborative requirements who need to manage and automatically track review sessions and use digitally signed documents to establish authenticity. Acrobat 6.0 Standard is available for both Windows and Macin-

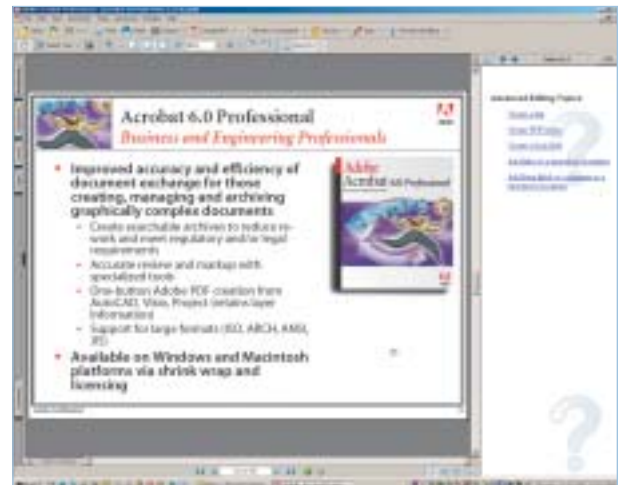
Acrobat 6.0 Professional now offers a streamlined Windows interface.

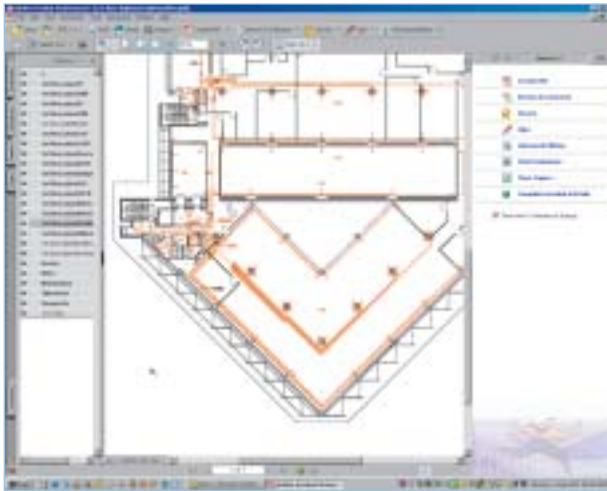
tosh systems.

Finally, Acrobat 6.0 Professional (\$449, \$149 upgrade) is oriented toward business and engineering professionals as well as creative professionals. It offers improved accuracy and efficiency of document exchange for those who create, manage, and archive complex graphic documents. With this product, you can create searchable archives, accurately review and mark up PDF files using specialized tools, and create PDFs with retained layer information with a simple one-button push from applications such as AutoCAD, Visio, and Project. Of special note is support for formats such as ISO, ARCH, ANSI, and JIS.

Creative professionals will appreciate the ability to preflight files to ensure proper output, support for PDF/X, and the ability to easily print files for color separations. Acrobat 6.0 Professional is also available for Windows and Macintosh platforms in many languages.

Though Acrobat 6 directly supports a number of applications, including AutoCAD 2000–2002, this integration doesn't yet extend to AutoCAD 2004. Of course, you can create PDF files using the Adobe PDF





The Convert to PDF dialog box appears inside AutoCAD 2002. It lets you flatten the entire drawing or select specific layers for the PDF.

Acrobat 6.0 Professional lets you create PDF files from within AutoCAD 2002. This image is zoomed in Acrobat. Note the layer list on the left side of the frame, where you can turn layers on and off. The drawing is 1ST FLOOR LIGHTING.DWG, which ships with AutoCAD 2002. I selected all the layers when creating the PDF file.

printer driver from this and any other software application with the ability to print. Look for a forthcoming upgrade from Adobe to address AutoCAD 2004 compatibility.

A broad range of new capabilities appear in Acrobat 6. Among them is the ability to embed active media, such as Flash, QuickTime movies, MP3, WMF, and other media files, in a PDF document. Be sure to learn the tricks of the trade if you add one of these files. If you place the active media file within the PDF by reference, when you click on it, it connects to the referring Web server and displays the file within Acrobat. You can also embed the multimedia file into the PDF so it's contained in the PDF and not on a server. You can also attach multimedia to the PDF. The multimedia is then stored in the PDF but displayed in a separate player window.

This capability is part of the new PDF 1.5 specification. In addition to embedded multimedia, it now supports OCG/Layers (optional content groups). OCG/Layers groups content for selective viewing and printing, supports complex mapping of objects to groups, and allows special use cases such as language and zoom factors. Acrobat 6 also supports tagged PDF 2.0 by adopting the W3C specification for HTML table accessibility, along with supporting vertical text and annotations. My personal favorite in the PDF 1.5 specification is Object Stream Compression, which significantly reduces file sizes for PDF documents. Using it, I reduced a PDF file from more than 250MB to one that's only

17.5MB, with no apparent loss of quality for on-screen display. As software applications incorporate support for the new PDF specification, its benefits will have an even broader impact.

Adobe combined XML and PDF in this new release to enable data integration as well as high-fidelity presentations. In a move to standardize a standard, Adobe is basing business logic, routing, and integration with core business systems on XML.

It's no easy task to create a much more powerful application while streamlining and simplifying its use, but with Acrobat 6.0, Adobe accomplishes both quite well. Though Adobe Systems originated the PDF file format, it's not the only software vendor to address PDF production and capabilities. See the box on p. 20 for just three examples of the many PDF-capable products available for use with CAD programs. Others not discussed include Informative Graphics Net-It (www.netit.com), FinePrint pdfFactory Pro (www.fineprint.com), Motive Systems M-Color, and JAWS (www.jawspdf.com). Again, a Web search provides a wealth of options and information on PDF and using PDF in CAD and engineering environments.

HOW SECURE IS SECURE?

Certainly any proprietary data, including designs and other intellectual property, that leaves the workplace for any reason is considered to be at some level of risk. A multitude of security levels should be applied to any sensitive electronic document to make it extremely difficult to acquire your data. A recent report by Harris Interactive indicates that some 90% of engineering professionals share files with outside organizations, vendors, and customers, among others.

PDF files on the Web also demand security, and many of the features in Acrobat

address such concerns. You can now track the history of a document. Those who view a given document can comment on or sign off on it. With PDF files generated from within AutoCAD, you can turn layers on and off, or flatten all drawing layers into one. You can also choose to show only certain layers, such as electrical, to a client.

A PDF can contain a wide range of data. Through the security options in Acrobat 6 Professional, the data available to individual users can vary, which is one of the very useful features in Acrobat 6.

Security in PDF files is a complex issue well beyond the scope of this article. For more information, check out the archives of Adobe Systems (www.adobe.com) and CADzation (www.cadzation.com) and also do a Web search for "PDF Security." You'll be surprised at the abundance of information available.

It's been well over a year since I donated my fax machine to the Atlanta Literary Festival. Just to cover myself, I bought a USB modem so I could send and receive faxes if I really needed to. I shouldn't have bothered—I have yet to start it up. I don't miss the fax machine or its expenses. Ubiquitous and elegant, PDF files have long since become an integral part of my workflow. Rendering my fax machine useless is of little importance in the overall scheme of things, but examples such as this throughout the industry are both significant and profound in their effects. *Highly Recommended.* ■

Ron LaFon, a contributing editor for Cadalyst, is a writer, editor, and computer graphics and electronic publishing specialist from Atlanta, Georgia. He is a principal at 3Bear Productions in Atlanta.

ADOBE 6.0 PROFESSIONAL PDFs for engineers

star rating: 5 stars out of 5

pros: Smaller files; better security; more licensing options.

cons: AutoCAD-to-PDF utility doesn't support AutoCAD 2004 yet; takes longer to create PDF files than other options.

price: \$449

Adobe
800.833.6687
www.adobe.com