

Acrobat Insider for AEC Professionals

Tips and Tricks for Adobe Acrobat 7.0

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Share 3D designs faster
and easier with
Acrobat 7.0 Professional.

Enter the Third Dimension

Acrobat 7.0 Professional Makes Working with 3D Content Easy and Convenient

by Michael Dakan

Communicating with team members and clients can sometimes be challenging because they don't have access to all the software you use — particularly advanced CAD applications. But with Adobe® Acrobat® 7.0 Professional, you can insert 3D models directly into Adobe PDF documents, and people using free Adobe Reader® can interact with and comment on your designs.

In this issue of *Acrobat Insider for AEC*, I explain how to insert 3D files in Universal 3D file format (U3D) into Adobe PDF documents, create and manage custom 3D views, and add bookmarks to make it easy for recipients to view and manipulate your 3D models interactively. (To learn more about U3D files, see the [3D Industry Forum website](#).)

Important: To get the most support for 3D files, you need to use Acrobat Professional v. 7.0.7 or later (you can [download the update here](#)). Also, remind recipients of your files to update to the [latest version of Adobe Reader® 7.0.7](#), available for free from the Adobe website, as well.

Add 3D Designs to an Adobe PDF Document

The 3D design you add can come from a variety of sources. You can:

- Use new [Adobe Acrobat 3D](#). (To learn more, see [Acrobat Insider for Manufacturing](#).)
- Export U3D files directly from [Bentley MicroStation V8](#).
- Create 3D models using tools from other third-party vendors that support U3D output from a variety of source CAD and graphic file formats.

APRIL 2006



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We want to hear how Adobe Acrobat has helped you and your team work together better.

IN THIS ISSUE

Views, bookmarks, and other tools in Acrobat 7.0 make it easy to share 3D content with team members and clients.

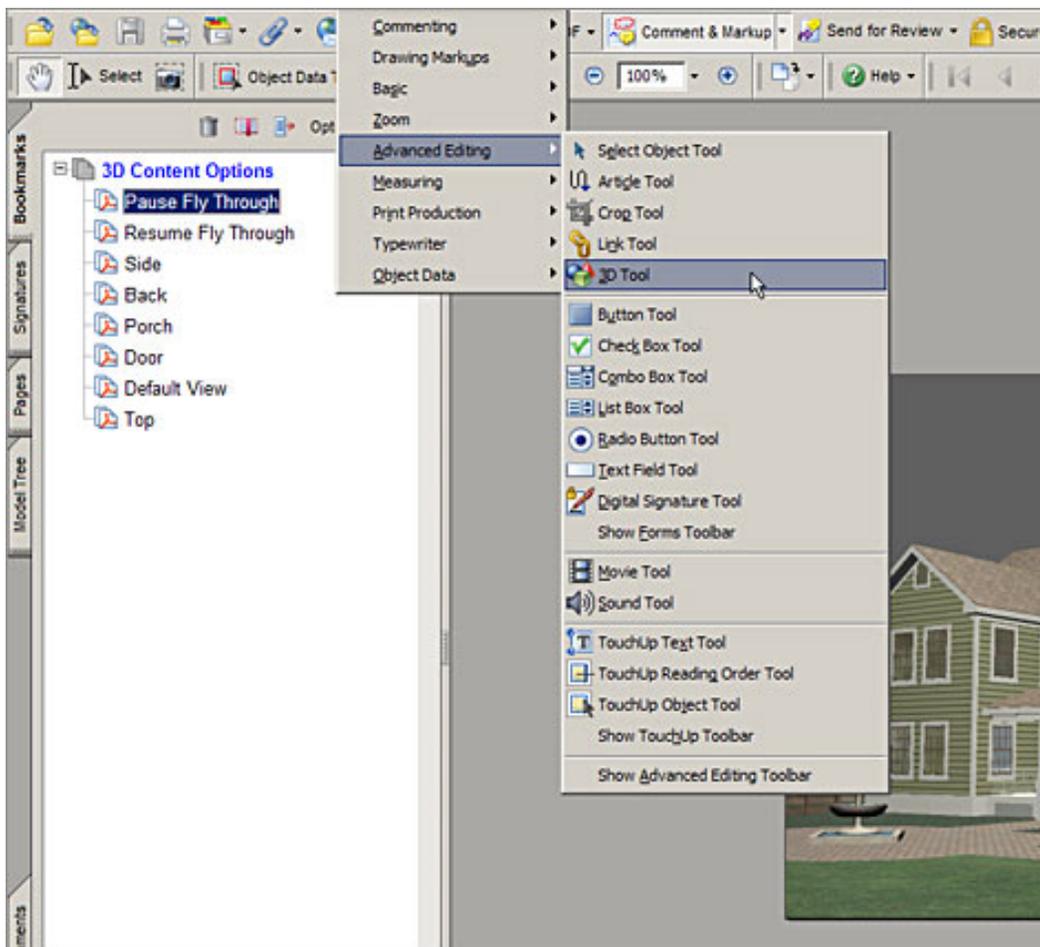
THIS MONTH'S TIPS:

Reduce the size of files created from CAD drawings.

You can also create Adobe PDF pages containing 3D designs within Acrobat 7.0.

To add 3D designs to an Adobe PDF file, select Advanced Editing from the Tools menu, and then select 3D Tool. The cursor turns into a crosshair pointer. Drag the pointer to create a rectangle where you want to place the 3D content. In the Add 3D Content dialog box, specify the U3D file to add. Under Default Script, you can specify a JavaScript file to run that restricts how users can interact with the model.

Under Preview Image, you can select a static image that will appear when the Adobe PDF file is first opened (in previous versions of Acrobat, this image was called a "poster"). It can be a view you select from the 3D design itself, or it can be a photorealistic image in a separate graphics file, such as a JPEG or bit-map raster image. This image is what the user clicks to activate the 3D content or start an animation.



Use the 3D Tool command to add a 3D file to an Adobe PDF document.

After you've added the 3D design to the Adobe PDF document, you can modify it. Using the Select Object or 3D tools, double-click the image. In the 3D Properties dialog box, you can specify startup actions, change the content, select a new preview image, resize or move the content, and more.

IN THE NEXT ISSUE

Learn how the U.S. Green Building Council (USGBC) and Adobe have teamed to streamline the LEED rating system documentation and certification process.

SUBMIT A TIP

We welcome your tips for AEC-specific uses of Acrobat 7.0 Professional. If we publish your tip, we'll send you a *Cadalyst* t-shirt.*

REQUEST A TIP

Have a question about Adobe Acrobat 7.0 Professional? A suggestion for a future edition of *Acrobat Insider*? Send it in; we'll address the most popular requests in upcoming issues.

JOIN AN E-SEMINAR

Interested in learning more about how Acrobat 7.0 Professional makes working with 3D content easy and convenient? [Sign up for a complimentary eSeminar](#) to see how.**

LEARN MORE

Find out more about how the Adobe Acrobat family of products can streamline processes, improve document security and more at Adobe's [AEC Web site](#) or [click here](#) to view an OnDemand online presentation.

Also, don't miss these

Navigate 3D Designs Using Views and Bookmarks

You can use the interactive navigation tools, such as Rotate, Pan, and Zoom, to display the 3D content in a variety of ways. If you want to make a particular view available to your users, such as the front or side, you can define a new named view using the Manage Views feature. Such views enable users to quickly jump to an area of interest that then serves as the starting point to interactively navigate the 3D design.

For example, suppose you're conferring with clients by phone. By creating custom views of a 3D design in an Adobe PDF and sending it to clients before the call, you can guide the discussion of specific design issues and illustrate the design options that you want to present.

Adobe Acrobat 7.0.7 Professional also includes the Cross Section tool, which enables you to create a sectional view of a 3D model. This tool works just as it does in Adobe Acrobat 3D, helping you communicate design and documentation concepts and details easily and effectively.

To help others use the 3D tools, you can add instructions in the document itself with the Text Box or Typewriter Tool — for instance, "Click the image to view the interactive 3D model" or "To see the inside of the building, select Interior from the Views list."

As we've discussed previously, adding bookmarks is another way to help recipients navigate your Adobe PDF documents more easily (see [Acrobat Insider #8](#)). This also applies to 3D designs. You can add a bookmark that goes to a 3D view. First make a new bookmark by selecting New Bookmark from the Options pull-down menu in the Bookmark pane. Then right-click the new bookmark, select Properties, and click the Actions tab. Select the action Go to 3D View and click the Add button. In addition to going to a bookmark, you can add an action that runs JavaScript and starts or pauses an animation.

upcoming conferences:

[ASCE Structures Congress](#) (May 18-20 in St. Louis, MO)

[Bentley User Conference](#) (May 21-25 in Charlotte, NC)



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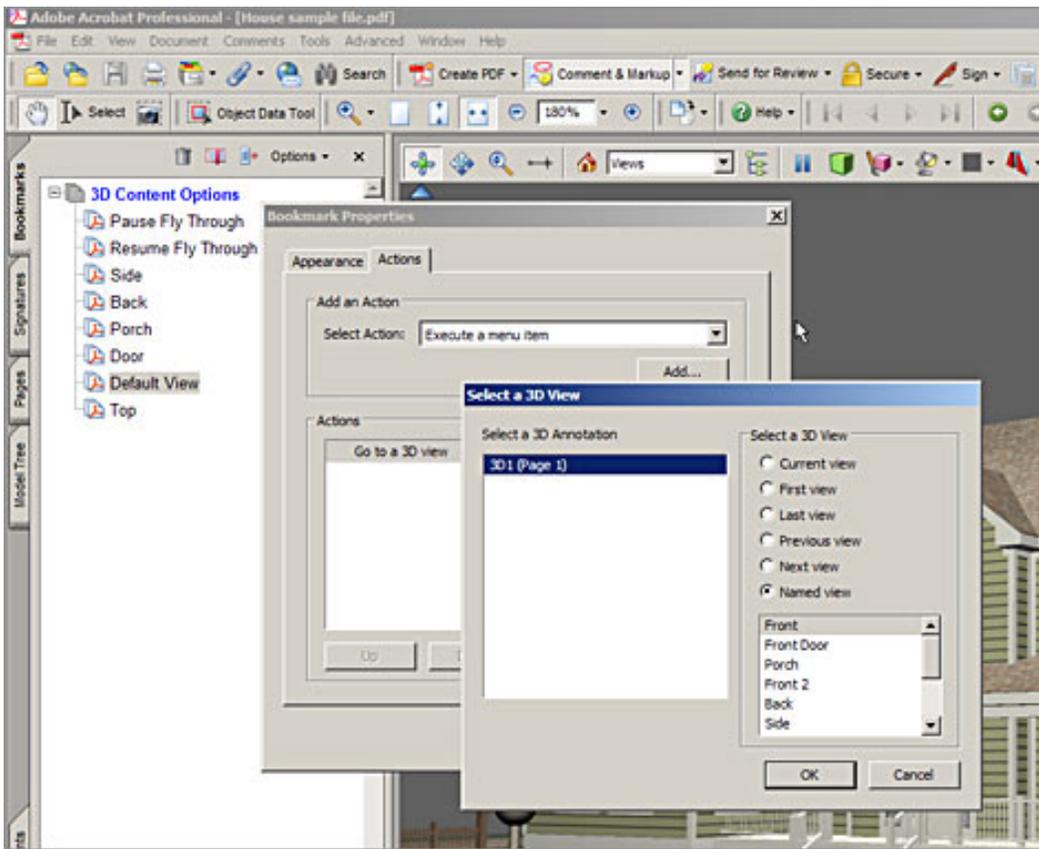
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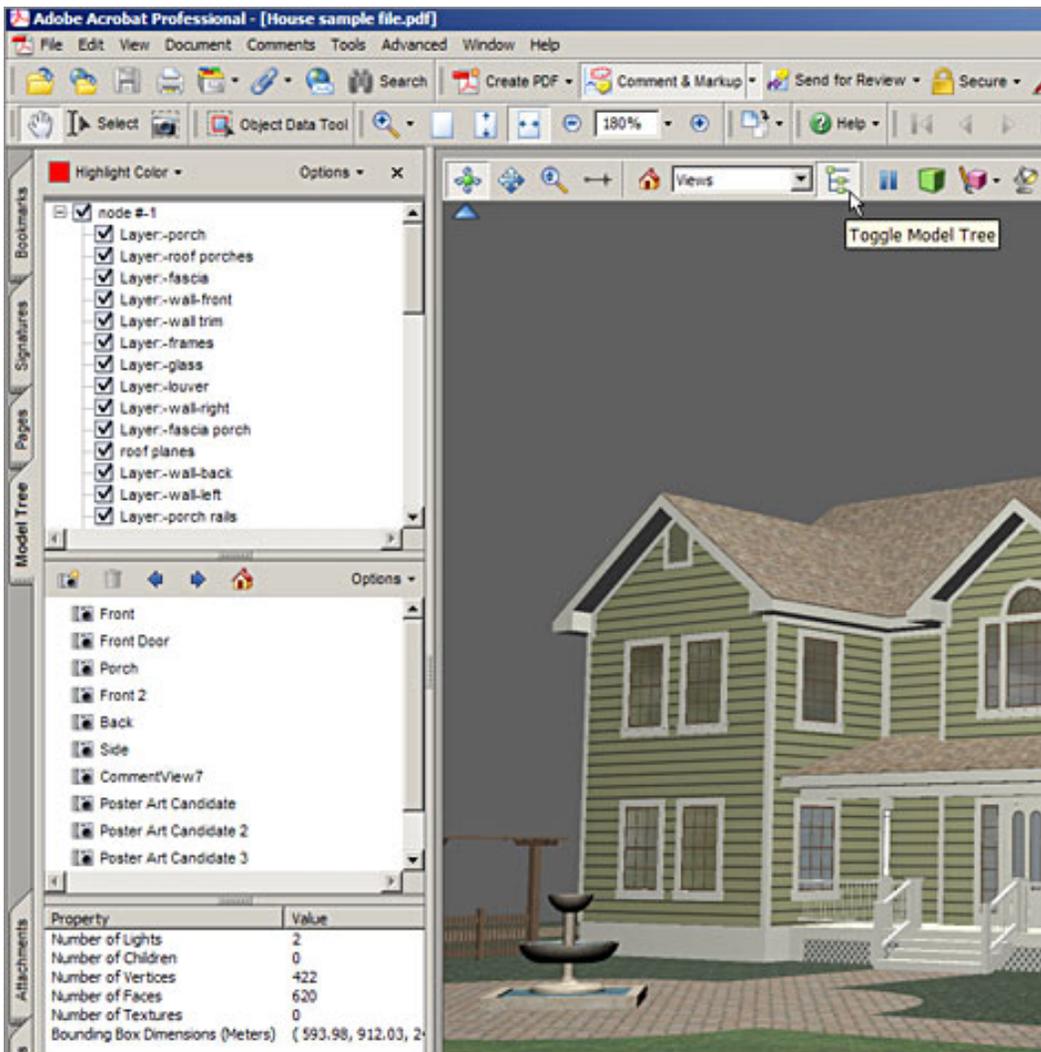


Use bookmarks to guide users to different views of your 3D model.

Collaborate and Help Protect Your Work

In past *Insiders*, we've discussed using Adobe PDF files to manage review and comment cycles as a project progresses ([Acrobat Insider #4](#)) and to control the security and use of your valuable design information ([Acrobat Insider #7](#)). Reviewers can add notes and comments to 3D designs exactly as they would to other PDF content, and tracking the feedback is just as easy. With the security tools in Acrobat 7.0, you can help protect proprietary information by adding passwords and limiting what recipients can do or change in your files.

Used together, these comprehensive and versatile tools can make your job easier — and make you more productive. They help you communicate design concepts and construction methods more effectively, they make the design and documentation process run more smoothly, and they enable your team and clients to understand your work more clearly.



Click the Model Tree button on the 3D Toolbar to display all the views in the model.

Upgrade to Acrobat 3D

The 3D tools built into Acrobat 7.0.7 may be all that you need to add, enhance, and control 3D content in Adobe PDF documents. But if you want to **create** 3D content for use in Adobe PDF documents and you often work with 3D designs and presentations, I would strongly recommend that you investigate [Adobe Acrobat 3D](#). Acrobat 3D enables you to create complete 3D PDF files quickly and easily from CAD and other 3D formats, and it automates many of the steps involved in working with and manipulating 3D content.

Tips and Tricks

Reduce File Size

Several readers have asked how to reduce the size of Adobe PDF files created from CAD files, particularly CAD files with a raster file attached as a background image. There are a few things that you can experiment with in Acrobat 7.0 and in your CAD program to reduce file size to a more acceptable level.

First, be aware that a raster image used as a background in a CAD file can be

quite large, especially if it's a high-resolution aerial photograph underlying an entire drawing. Predictably, the size of these background images directly affects the size of the Adobe PDF files that include them. To reduce the size of the Adobe PDF, you can try inserting a lower resolution image as a background and cropping the image so that it occupies only the area of your drawing where it's needed.

Next, search Help in Acrobat for "optimize" and read the topics "Reducing Adobe PDF file size" and "Using PDF Optimizer." These tips for balancing file size vs. readability will help you reach an acceptable compromise in the compression settings used in the conversion process.

Another way to trim file size is to create the Adobe PDF file by using the Print command in your CAD program instead of the PDFMaker command or button. Be aware, however, that this technique removes much of the intelligence of a CAD file, such as layers and scale, because it bases the Adobe PDF file on the image on screen at the time the file is created and ignores all other CAD information in the original file.

Have you discovered a good way to reduce file size and still maintain high readability in your Adobe PDF files made from CAD drawings? If you have, write up your tip and [send it in](#). If we publish it, we'll send you a free *Cadalyst* t-shirt!

About the Author

Michael L. Dakan, AIA, is an architect, author and independent AEC technology consultant. Twice monthly he writes Cadalyst's [AEC Tech News](#) e-mail newsletter. Contact him at michael.dakan@cadalyst.com.

Details and Availability

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For a full list of [features and system requirements for Acrobat 3D](#), visit Adobe's Web site. Microsoft® Windows 2000 with Service Pack 2, Windows XP Professional or Home Edition, or Windows XP Tablet PC Edition is required for use with Acrobat 3D. Acrobat 3D for Windows, available on CD-ROM or by download, is \$995.**

*Supplies are limited.

**Seminars subject to change or cancellation without notice. Seats are limited.

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