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Feature Stories  
CADALYST Labs Reviews  
CAD Spectrum  
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Solutions Columns  
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## AEC Tools

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## Essential Presentation Tools

Hardware and software you need to create digital multimedia presentations.

By Ed Goldberg

More than a year ago I noted that the AEC market was becoming interested in digital multimedia presentations. Since then, I have given several seminars on this subject at the AEC Systems and Computers for Construction shows. To my surprise, not only architects and engineers but also contractors and construction managers depend on digital multimedia presentations to help market their work. To help you get up to speed with the variety of tools available, here's my list of essential software and hardware tools for digital presentations.

### 3D Modeling

#### Rhino

If it can't be built in Rhino, it probably can't be built.

That is what most people think about this excellent 3D modeling program from Robert McNeel & Associates. Best suited for mechanical engineering and industrial design, this NURBS modeler exports to AutoCAD and VIZ. At \$895, it's a steal. Try the downloadable evaluation copy. Once you purchase Rhino, you can download the new Flamingo renderer to make your projects look super.

### Easy Visualization Tool

#### SketchUp

This powerful yet easy-to-use tool from @Last Software quickly illustrates your design concept in 2D or 3D. DWG, DXF, and 3DS import and export make transfer to other programs a breeze. Version 1.3 includes an excellent animation capability. Try out the profile and jitter line feature to make visualizations look hand-drawn. If you need to show a client a quick animated shadow study, this program can do it. Cost is \$495, and a free 8-hour evaluation is available. See Cadalyst's August 2001 review at [www.cadalyst.com/reviews/software/cad/0801sketchup/sketchup.htm](http://www.cadalyst.com/reviews/software/cad/0801sketchup/sketchup.htm).

### 3D Modeling and animation

#### Autodesk VIZ 4

My preferred visualization and animation program is Autodesk VIZ, formerly known as 3D Studio VIZ (figure 1). Not only does this program work well with Autodesk Architectural Desktop and AutoCAD, it also offers the easiest construction method and options of all the tools in its price range. Autodesk VIZ 4, the latest version, includes a new generation of global illumination rendering technology for more accurately simulating lighting effects in a scene. You simply position the lights in a scene the way you would in the real world and automatically obtain natural-looking results. The integration of global illumination technology into VIZ's production rendering system eliminates the need to use Lightscape.



Another new feature that helps produce realistic lighting effects is support for the industry-standard IES (Illuminating Engineering Society) data formats for describing the performance of luminaires (lighting fixtures). You can obtain luminaire photometric data, or even complete 3D luminaire models, from manufacturers' Web sites to use in scenes. VIZ 4 also comes complete with a ready-to-use library of common lighting fixtures.

The VIZ 4 interface is more similar to that of MAX 4, and VIZ 4 program files are compatible with MAX 4. A new polygon-based modeler provides greater efficiency

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There are  
some things  
an acrobat  
can't  
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**Figure 1. Autodesk VIZ makes photorealistic visual images quickly and easily from Architectural Desktop files.**

and performance, and the ray-trace rendering is significantly improved. Expect to pay around \$1,995 for this professional program. You can also see our [prerelease coverage](#).

### Digital Picture Editing Photoshop 6

Whether you're creating a Web page, coloring in an AutoCAD BMP file, importing a photo from your digital camera, or modifying a scan of your latest project to hide a mistake in engineering, this program from Adobe can handle it. Basic Photoshop is not hard to learn, but for more complex operations, you may want to take a course at your local community college. If the \$500 street price is too high, Adobe's Photoshop Elements is available for \$99. This program provides basic image-editing tools and introduces the interface and tools you'll find in the full version of Photoshop. Jasc Software's Paint Shop Pro ([www.jasc.com](http://www.jasc.com)) also costs around \$99 and should satisfy most office needs.

### Digital Slide Shows PowerPoint

Probably the most important digital presentation tool you can own, Microsoft's PowerPoint creates digital slide shows. This tool is used by practically everyone in business, from the largest corporation to the smallest shop. Although easy to learn, this program does have some hidden tricks. For example, when you hold down the <Ctrl>-P key combination, a pencil icon appears. This icon lets you redline your presentation while you give it. Another tip: in the Save As Type list in the Save As command, select Web Page to bring up a wizard that automatically creates a Web page from your slide show. Power Point (\$298) is an excellent buy as part of a Microsoft Office suite.

### AEC Multimedia Presentations QuadriSpace

QuadriSpace has developed an effective way to present AEC designs to clients and colleagues. The QuadriSpace AEC Presentation Suite integrates dynamic, real-time views of 3D models and CAD drawings with standard presentation elements so you can fully examine your design. VIZ and AutoCAD or Architectural Desktop models appear together in the same presentation page. QuadriSpace's linking capability lets you interactively walk through the plan and see the results in real time in the VIZ 3D visualization.

The three components of the Suite—Presenter, Viewer, and Exporter—help you easily create and distribute presentations. Presenter, a simple presentation-authoring tool, works with standard model and drawing formats. Exporter lets you quickly bring 3D Studio MAX/VIZ models into Presenter. Viewer lets you distribute your presentations to remote clients. Take a look at the Web demo to see how useful this brand-new product can be. The entire suite sells for \$995.

### Video Editing Pinnacle DV500 and Pro One

Five years ago, a good real-time DV (digital video) editing system cost \$25,000. Today you can get professional quality for a fraction of that cost. Pinnacle offers an extensive line of editing systems. Its low-end professional system, the DV500, just dropped in price to \$595. This hardware/software system edits DV movies in real time and can record to an inexpensive, dedicated 7,200rpm IDE drive. The DV500 comes with all the software you need to edit movies, music, CD-ROMs, and DVDs, including Adobe Premiere and Impression, a CD-ROM and DVD editor.

Pinnacle's new Pro One editing system (\$1,100) does everything the DV500 does, and also edits 3D effects in real time (figure 2). I use these systems to make presentations that play automatically from a CD-ROM.



**Figure 2. The Pinnacle Pro One full-slot compression board with break-out box comes with an assortment of video-editing software.**

### Portable Digital Projectors InFocus LP 130

A portable digital projector is one of the most important pieces of presentation hardware you can own. With weights down to three pounds, and lumens (brightness) at 1100, projectors such as the LP130 let you present anywhere in minutes. The LP130 supports true XGA resolution (1024x768) for good image clarity. The projector complies with several video standards and attaches to DVD players, VCRs, HDTV, and computers or laptop. Projectors retail for around \$3,500.

### CD and DVD Recorders

Just about everyone owns a CD-ROM burner today, and DVD burners are starting to sell in the \$500 range. Using the Pinnacle systems mentioned earlier, or Sonic's DVDIT, you can create CD-ROM and DVD presentations that run automatically. For about a quarter per disk, you can produce a self-running CD-ROM presentation that contains pictures, animations, movies, and data files. My 1.5-hour seminars use 200MB of space on a CD-ROM.

## Digital Cameras

### Canon

A digital still picture camera is indispensable, and digital camcorders provide even more flexibility. Canon makes both types. If your budget supports only one camera, get one that takes both movies and stills. Three megapixels should be more than enough for any still camera. If you get a digital camcorder, be sure it has an IEEE 1394 DV (Firewire) output.

You can use a movie camera to show traffic flow, an engineering operation, or an interview with someone at the permit department. Digital still cameras and camcorders can connect easily to a multimedia projector, allowing you to display high-quality images or video suitable for a presentation.

## Large Audience Presentation

### GTCO InterWrite Meeting Suite

The InterWrite Meeting Suite lets you operate your computer from a large white board or from digitizer tablets. MeetingBoards are available in 50 and 70 sizes. The LX version (50, \$1,595; 70, \$1,995) comes with Interactive Mode software, and the Pro version (50, \$2,495; 70, \$2,995) also includes PC Whiteboard Mode and CopyBoard Mode software.

Interactive Mode lets you operate any Windows application or access the Internet using a connected projector and PC. Annotate, edit, and highlight with the system's electronic pens and eraser. Save your notes and print or e-mail them to anyone instantly. PC Whiteboard Mode lets you write on the MeetingBoard with dry-erase markers contained in the pens. A connected PC saves your notes stroke for stroke. CopyBoard Mode lets you write on the MeetingBoard with the dry-erase markers and print directly to a connected printer—no PC required.

## Call for tips

If you have any multimedia presentation tips or hints that you would like to share with *Cadalyst* readers, please e-mail me at [ed.goldberg@cadalyst.com](mailto:ed.goldberg@cadalyst.com).

## [^ TOP OF PAGE](#)

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[@Last Software](#)

[Adobe](#)

[Autodesk](#)

[Canon](#)

[GTCO](#)

[InFocus](#)

[JASC Software](#)

[Microsoft](#)

[Pinnacle](#)

[QuadriSpace](#)

[Robert McNeel & Associates](#)