DataCAD Boston Users Group

May DBUG Meeting
May 15, 2003
Host: Gregory Smith, GSD Associates
North Andover, Massachusetts

Figure 1: *3D model in Object Viewer w/generic background.*

About 20 DBUGers enjoyed barbecued steak tips on the patio of GSD Associates in North Andover as the excellent appetizer before the serving of the "real meat" of the meeting. Greg Smith welcomed the group to his office in his second year of hosting DBUG in what hopefully will become a favorite annual meeting site. After introductions, Evan Shu announced that the June meeting would be DBUG's first-ever in New Hampshire at Samyn-D'Elia's offices in Ashland on June 18th. Mike Smith announced that his new book, *DataCAD Advanced Construction Drawing & Visualization,* would be ready in about a month and sold through Tech-Ed concepts <www.tecedu.com>.

Use of Scaled Photographs in DataCAD Building & Site Design Drawings

Greg started the presentations with a fascinating case study that resulted from the new ability to combine aerial photographs with DataCAD drawings.

GSD Associates was presented with a 47 acre site in Andover which is in a wetlands area and has had a checkered past as a waste dumping ground. Their task was to see if they could come up with a feasibility plan to develop a reasonable housing land use for the site. Since field surveying for this acreage would be extremely difficult and expensive, they looked into aerial surveying and found it to be surprisingly affordable, partly because their whole area was already being surveyed continually by an outfit out of North Adams, Mass. called *COL-EAST* (1-800-FLY-TOPO). GSD Associates was able to get a detailed aerial photograph of the site, as well as a topo map developed using photogrammetry techniques.

By importing these photographs into DataCAD, they were able to trace the boundary of the wetlands area with some degree of accuracy and thus create a housing plan that would put some 270 condo units on the site in a land use agreement with the town conservation commission.

In part II of this lesson in using photographs and DataCAD, Manny Jasus gave a presentation of how a detailed o2c model could be "dubbed-in" a site photograph
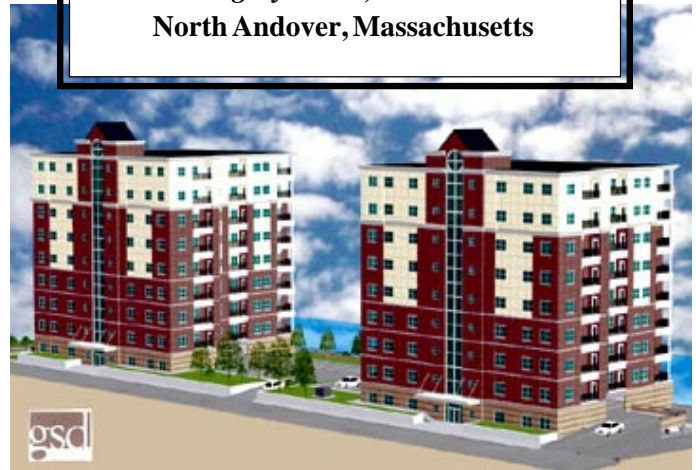
to produce quick but effective rendering. After creating a fairly detailed 3D model in DataCAD and applying materials, the model was brought into the Object (o2c) Viewer (*Figure 1*). The site photo was also brought in as a background, but in this case, simply to accurately position the model so the size and perspective of the views would match.

Next, the background was removed, and the model ray-trace rendered and the resulting bitmap saved. Now the model bitmap was brought into *PhotoShop 7* and just the model was cut-out (using the magic wand tool) and put on its own layer. Next the same site photo background was imported also on its own layer. Fine adjustments in positioning could also be made, plus color balance and brightness/contrast effects of the model and the background could be adjusted separately so as to create the best match. The result of this technique creates quite a realistic new photograph presentation of what the new proposed building would look like on the site. *(Fig. 2 & 3)*

Figure 2: *rendered model is now placed within site photograph.*

Figure 3: same model now placed in aerial view photo of site.

Figure 4: ZiPCAD for Palm PDAs.

Affordable 3D for Building Design

Jeff Tagerman of CADvantage was on hand to finally give his long awaited presentation on doing affordable 3D Design presentations and animations. At the meeting he hosted in March, he had previously shown his techniques to create 3D models from 2D building plans.

Armed with those 3D models, he showed how these models can be quickly made into full rendered presentations, using the *Arcon* program which came with *DataCAD Plus*. His cheap trick was in realizing that Arcon can be used almost as a completing independent program from DataCAD Plus. It will read DC5 drawings directly as well as use any of the standard bitmap material and texture libraries.

The joy of Arcon is that it has a drag-and-drop interface where materials and textures can simply be placed on your 3D form of choice. It also has a built-in sun study feature that can be set for any time and any position on the globe. It also has a animation program where the user sets the major viewpoints that will serve as "key frames" for the animation and sets how fast or slow the movement will be as well as the final output resolution. Once this is done, the program can be set to "cook" over lunch or over-night as the case may be to produce a polished final animation. He showed us a detailed animation he had produced of a deluxe His & Her bathroom. Jeff said that even if you never ordered DataCAD Plus and don't ever plan to buy Spirit, you should still try to get your hands on one of the many free DataCAD Plus demo CDs that were floating around, just so you can get your hands on the hidden jewel of the Arcon program.

ZiPCAD for Palm PDAs

Software Developer and Architect Richard Coutts was on hand to demonstrate his newly released program, *ZiPCAD* <www.zipcad.com>. This program is designed for handheld PDAs using the Palm OS 3.1 or above (as opposed to the Pocket PC types) and is created especially for architects who do field surveys. You can think of it as a simplified CAD program that gives you the tools you
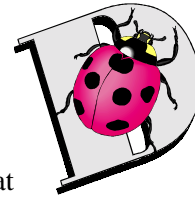
need to do scaled floor plans at the same time you are taking measurements in the field. He related how *PocketCAD* <www.pocketcad.com> for Pocket PCs really started out as a CAD *viewing* program primarily and has gradually added CAD drawing tools. ZiPCAD on the other hand was started primarily as a *drawing tool* to actually create CAD drawings in the field. He has field tested his program with other architects and by himself enough to know that floor plans can be created in ZiPCAD faster than one could do the same thing on a sketchpad with a clipboard and pencil.

In ZiPCAD, by using the stylus you can draw a line on the screen and *then* give it the appropriate dimension as measured in the field. You can then work around the perimeter of the room adding windows (with casings) and doors or openings, all to scale as measured. Various standard CAD tools are provided such as walls, cut, close, unlimited undo/redo. He has worked hard to make the interface intuitive like most Palm products. You can insert text notes using the "Graffiti" system. When you are done, the basic plan can be imported directly into your DataCAD (or other CAD) program in DXF format, saving you many hours of time and frustration from the usual routine of trying to transcribe your handwritten sketches and notes into a CAD plan back at the office. No more going back to the site (or worse yet: guessing) over missing dimensions or perimeters that won't close!

Rich is continuing to work on developing the program and if sales start to take off, he can put in more development to add features. Currently, he hopes to soon add a feature to import DXF plans as well as export them out. You can download the demo and the manual at <www.zipcad.com> to see how it works firsthand before buying. The regular cost is $149.95 with a special DBUG discount of $30 off until Father's Day, June 15th — just put "DBUG1" in the coupon line when purchasing.

All in all, another full-plate program for DBUG with discussions lasting until around 9:30 p.m.

— Meeting Notes by Evan H. Shu, FAIA