



DataCAD Boston Users Group

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A Committee of the Boston Society of Architects

January DBUG Meeting
DBUG Meeting
January 31, 2003
Host: Geoff Langdon, ArchitecturalCADD
Avalon in Peabody, MA

Introductions & Announcements

Geoff Langdon welcomed ten souls thirsty for knowledge (and conviviality) on this snowy Friday evening at his new townhouse residence at Avalon Essex in Peabody. After finishing up on his last afternoon seminar on a “DataCAD Users Guide to AutoCAD,” Geoff made sure our hungry bodies were well fed with an assortment of pizzas, and then the rest of the sustenance commenced.

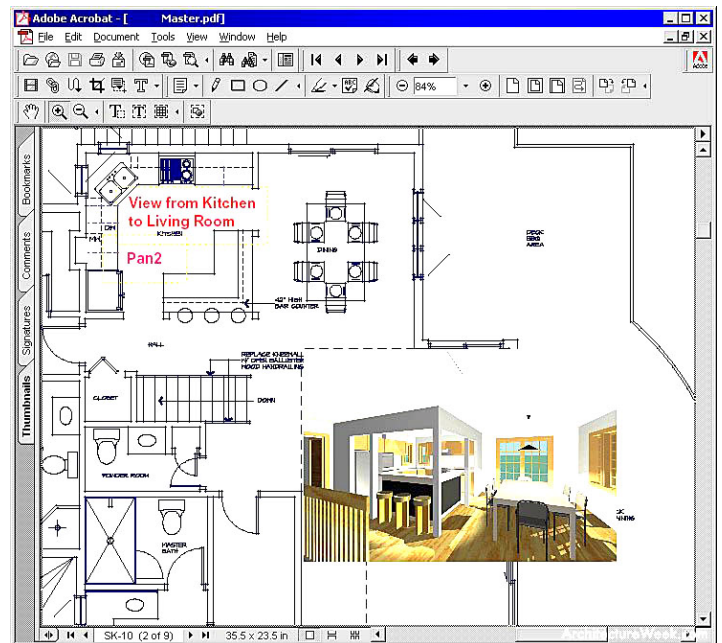
Geoff began with the story of his harrowing past year and the forced departure from his former residence, Roseledge, due to a nasty owner divorce dispute. But luckily, Geoff, Cindy and Spielberg (their pet komodo dragon lizard), relocated safely to this nice new location that receives full southern exposure for proper passive solar heating efficiency. After introductions and announcements (the 2003 DBUG schedule was issued and Deb Pierce put in a plug for the BSA's *Small Firms* monthly committee meetings), Geoff began with a potpourri list of his latest projects: a 3D visualization project to convert a bus depot in Lynn, Mass. for retail use; an upcoming BSA workshop to be co-led with barrister/architect Chuck Heuer on the “Technology and Liability of Sharing Drawings;” his latest Lotus ScreenCam Tutorials; and a review of his variety teaching venues — now primarily devoted to Suffolk University.

PDF is the Key

Geoff presented the case for PDF (*Portable Document Format*) as the new standard medium for architectural documents. Not only will PDFs accurately give any system the “right view” of a document but they are extremely compact in size and they can be given various security controls to prevent viewers from opening (without a password) or copying or printing a document. He noted that DataCAD continues to hold a unique position as the only CAD program with direct import to PDF (although AutoCAD and ArchiCAD are reported soon to follow), but that DataCAD is the only one which can produce overshoots and wiggle line CAD documents in PDF (without post-processing of the CAD file).

He gave us a run-through of Ed Wolfstein’s stellar set of PDF documents that incorporate DataCAD plan and

elevation drawings combined with *Visual Reality* renderings, and *Quick Time VR* animations for 360 degree views of spaces. The set shows how a variety of sheets and renderings and animations can be linked into one PDF file for easy presentations to clients or groups. For more details on this subject and for more views of Ed’s beautiful drawings, you can also see Evan Shu’s article, *PDF Workout* in *ArchitectureWeek* online magazine at the following link: http://www.architectureweek.com/2002/0925/tools_1-1.html.



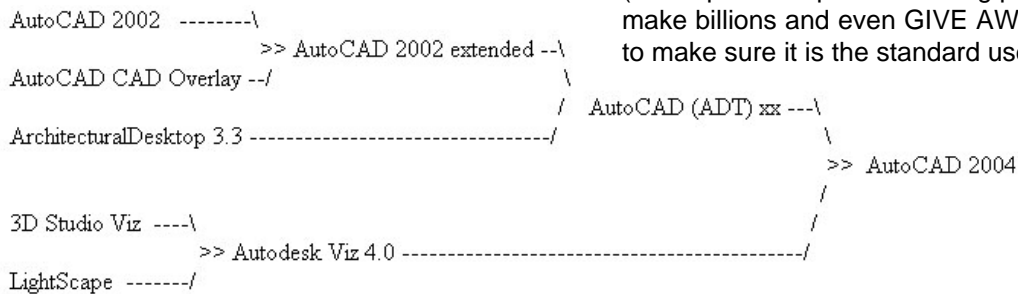
Geoff touched on the subject of *PDFWriter* vs. *PDF Distiller*, which are two different printer drivers for Adobe Acrobat. He says that many installations which guide you toward the Distiller choice but that for straightforward printing, the PDF Writer will get you there with less fuss. If you have any program that you want to put a document into PDF format, all you need do is select PDFWriter as your printer and with a few normal selections in the Printer Setup window, it will print to a file at a location of your own choosing. Distiller gives you more fine control of various settings, such as how bitmaps will be printed. Evan Shu noted that PDF files are compact for vector and font data but can get very large when bitmaps are incorporated. So Distiller gives you the option of “dialing down” the bitmap resolution requirements to minimize on file size.

The Future of AutoCAD

Geoff then gave the group a most interesting analysis of where he felt the future of AutoCAD, and thus the mainstream CAD world was headed. He described two dramatically different AutoCAD future visions, pre-Revit and post-Revit. He noted that if you understand their overall strategy, you will better understand some of their recent head-scratching decisions, such as dropping support for AutoCAD 14 users. Geoff disagrees with those skeptics who say that AutoCAD bought Revit to kill it, but instead says that they indeed bought it to be their new vision of AutoCAD's future. This is obviously a huge gamble by Autodesk so that if AutoCAD doesn't kill Revit — Revit could very well end up killing AutoCAD, if that gamble does not work out.

Here is a lengthy excerpt from Geoff's webpage <<http://www.architecturalcadd.com/reviews/autocadfuture.html>> that tells more of the story:

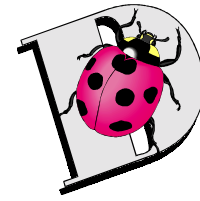
“As recently as February 2001, Autodesk developers stated their vision as “no more ObjectEnablers”, and that essentially, a future developed ArchitecturalDesktop-like program would BECOME AutoCAD. At that time they also acknowledged that LightScape was being discontinued with the features melded into a future version of “Viz”, which, in turn, would become part of a further yet version of AutoCAD.



“Only one month later, in March 2001, Autodesk bought Revit, restructured their whole company making the AEC products their central operation and started emphasizing “Building Lifecycle” products, and touting the benefits of the “Single Building Model” concept of creating 3D “architecturally intelligent” models which in turn automatically produce interrelated plans/sections/elevations/details in a coordinated way.

“Apparently four major things came together to cause this huge change of tack:

“1. Autodesk top management became aware that “architectural CADD” is not just the tiny market of architects and architecture, but instead the keypoint for many different professions in the whole building construction industry (largest industry on the planet. Thus, with a “smart architecturally intelligent” product, they could capture the whole



chain from surveying to land use studies to site design to space planning to architectural design to structural engineering to mechanical engineering to lighting design to interior design to construction management to building product procurement to facilities management to even public safety.

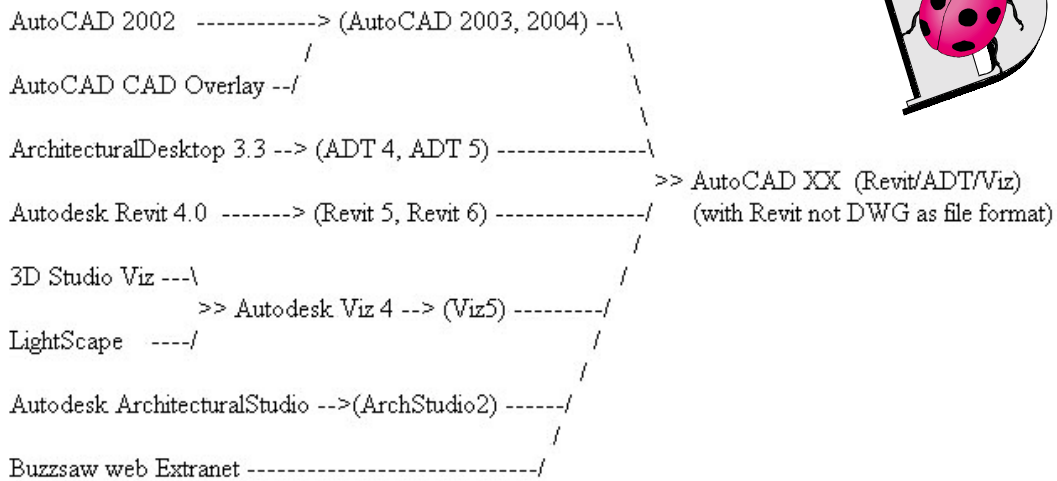
“2. As they suddenly realized how important ArchitecturalDesktop would be to their new approach, the also found that the software, as is, was simply not up to the task, as the programmers were having difficulty even getting ADT to work properly with other stories (called ‘levels’).

“3. A competitor with extraordinary technology (Revit) which solves the multi-story level problem with ease and potential expandability in a more efficient file format, suddenly became financially acquirable (as the start up was running out of its venture capital).

“4. They realized that with the ability for an architect, interior designer, builder, etc. to specify building products by simply drag and dropping them into a drawing from a manufacturers web site, that someone taking even a tiny percentage of commission on all those standard objects (that represent specific building products) could stand to make billions and even GIVE AWAY the CADD programs to make sure it is the standard used.

“Thus, the new long distance plan is to scrap AutoCAD, AND ArchitecturalDesktop in favor of their new Autodesk Revit technology. Since this process is going to take several years (we estimate at least four years), the plan is to continue selling all eight products and see which technologies they can meld into a new Autodesk smart 3D program. They will offer an upgrade path to users of AutoCAD, ArchitecturalDesktop, as well as Revit, and include a number of familiar interface features from each to encourage them to upgrade. Done slowly, it means that the transition could be expanded to several different future versions for each program (meaning a continuing revenue stream of upgrades and training). Along the way, another benefit for Autodesk (or problem for users) is that the file formats will change, making even the current AutoCAD 2002 not capable of opening such “smart” files, meaning that existing AutoCAD users will be FORCED to upgrade (similar to how support for AutoCAD 14 “expired” in January of 2001).

“Thus the NEW long term plan is:



“Our advice, for companies already using AutoCAD, is to upgrade to ArchitecturalDesktop for most machines, and at least explore Revit on one or two machines - in particular, it is important to keep software licenses “current” to avoid being stuck in an older version of AutoCAD not compatible with what is coming. For new, or split off companies, you are probably better off looking at one of the competitors like ArchiCAD, MicroStation, or VectorWorks. For people already using a competitor, now is NOT the time to switch to AutoCAD for some imaginary “better compatibility” and you are probably best off upgrading to the current versions of those programs, which, again, will continue to gain better compatibility with whatever happens to AutoCAD.

“Large AutoCAD offices will point out that the current version of ArchitecturalDesktop is nowhere near as stable as AutoCAD (crashing on average 3 times per day per machine as opposed to AutoCAD at slightly less than once per day) and that, by being limited to only 1 story buildings, it is inappropriate for their use (without extensive XREF files), and that the file incompatibility with AutoCAD 2002 and older versions makes it difficult to communicate with other firms, consulting engineers, and even in-house designers not yet upgraded.

“In response, as more and more firms DO use the ADT version of AutoCAD, firms WITHOUT ADT will see more and more problems in transferring drawings. The next version(s) of AutoCAD will likely BE ArchitecturalDesktop (evolving into Revit), as Autodesk solves the stability issues, so it may be a de-facto change anyway (and better to take advantage of it now).

“The **big losers** here are the AutoCAD salespeople (who now have to learn and sell a confusing mix of currently incompatible software), design schools (who are at a loss WHAT to teach students to prepare them for all these changes in CADD for the design field and don’t have unlimited time and money), designers who stick with older CADD versions whether AutoCAD or competitor (as they will find that they will be less and less able to exchange drawings with colleagues, even though they think for now

they are saving by not paying for upgrades), and large design offices (who will find that upgrading or switching all their systems will cost them hundreds of thousands of dollars and put too much design power into the hands of draftsmen).

“The **big winners** here are the training centers that teach AutoCAD, ArchitecturalDesktop, and Revit (as there will be lots of changes and versions and even whole changes in technique approaches), the designer users who upgrade (as it will just get easier and easier to do more and more), the building owners (as they will get drawings and 3D views from their designers faster than ever), the progressive building product manufacturers (as it will be THEIR product specified if they just provide a drag and drop symbol for it on their web site), small design offices (as they can more easily implement new systems for everyone and gain a competitive edge), and the salespeople of competing CADD products (as all this confusion and change opens the door for them to break into the AEC CADD markets).”

Best Reason to Upgrade to DataCAD 10

As the final lesson of the evening, Geoff touched on what he believes is the most important reason to upgrade to DataCAD 10 — for its bitmap import. He said that this ability to now do image overlays and to either trace or incorporate scanned drawings directly into a CAD file is a huge productivity boost that many architects have been waiting for. The group exchanged various tips and tricks on doing such image overlay tracings (use a white background, set walls to a known width and just trace one side of wall, use photo editors to adjust rotation to square BEFORE import into DataCAD, and set layer refresh so that your vector layer refreshes after the bitmap layer.)

Although attendance was light, the program was not and Geoff, as usual, gave DBUG attendees plenty to think about for weeks to come.

-- Meeting Notes by Evan H. Shu, FAIA