

DataCAD Boston Users Group

c/o Shu Associates Inc.
120 Trenton St.
Melrose, MA 02176-3714
(781)662-0020 Tel. & Fax
<http://world.std.com/~eshu/dbug.htm>
eshu@world.std.com

A Committee of the Boston Society of Architects

March 2004 DBUG Meeting **Barriere-Reeves Design** **Meeting Notes** **March 17, 2004**

A congenial group of some 20 DBUGers helped to baptize with pizza, beer and an excellent program the new offices of Barriere-Reeves Design in Sudbury, Massachusetts, thanks to hosts Larry Reeves, Neil Blanchard, and Greg Barriere. Barriere-Reeves occupies much of the top floor of the Allied Consulting Engineering building in a well-organized, light-filled space (using nice wood wine racks as rolled drawing organizers and counter supports as a very nice idea!). In general announcements, Evan Shu said that DATACAD LLC would be hosting the next DBUG meeting in late April as its 20th Anniversary in Avon, CT. Neil Blanchard displayed web shots of Mike Smith's newest DBUGer, Sophia, born on March 12 — giving Mike a good excuse to skip this one DBUG meeting.

Basic Lesson: Upgrading to DataCAD 11

Neil Blanchard started the meeting off by demonstrating how easy the process is to upgrade to DataCAD 11 by doing so in just a few minutes on an existing laptop which had DataCAD 10 installed on it. The nice thing about DataCAD 11 is that it can coexist quite easily with DataCAD 10, so that you can ease your way into using this new program if you want.

Here are Neil's outline notes below:

"Just do it! :-) Your current DataCAD folder is probably C:\DataCAD (or similar) and the default location for DataCAD 11 is C:\Program Files\DataCAD. Also the INI file is kept there as well, so the fact of the matter is that v11 and v10 (or earlier) can coexist on the same computer — and be run at the same time if necessary.

If it is installed, then you can at least dabble with it in a spare moment (I know — who has spare time?!) and get a little more comfortable with it. Why? What will it "get" me, if I "only" use 2D? This was a question recently from a hesitant Forummer, and here is my answer:

If you open a DC5 just to try things out, the DC5's remain intact and unchanged, because when you "open" them in v11, it actually makes a copy and converts that to the new AEC file type. If you then edit the AEC, that new info would not be available in v10, since the DC5 is unchanged. As for your qualitative questions, here are some of the new features that DataCAD 11 has *now* (in v11.01.00 which was just released a few days ago) that will affect you.

- 1) Much better handling of XRef's, for a large reducing in the number of temp files, and opening files and file saves are much faster.
- 2) More accurate 64bit drawing database avoids rounding errors (but it doesn't prevent drafting errors, of course).
- 3) Many more bitmap file types are supported, and there is a bitmap orphans manager.
- 4) The Symbol Browser negates the need to maintain templates, and can help you get around inconsistent template paths.
- 5) Clip Cubes and X-Clip Cubes can be rotated as MSP details, or the sheets can be rotated when you use Clip Cubes.
- 6) Linetypes are embedded in the AEC file, so if you are collaborating with other DataCAD users, they don't have to have the *same* DcadWin.LIN file. Each linetype "remembers" its unique spacing, so you just select the linetype you want and continue drawing...
- 7) You can create complex linetypes in minutes — instead of hours, or having to buy them, or do without. For example, I created an 8" CMU Section line with hatching in about 4 minutes.
- 8) The interface is now more customizable, with the Status panel having pull-downs for linetypes, and a Context Sensitive toolbar, and many new "hot buttons" — and best of all, IMO, it now works much better with two monitors. (I'll send you a screen capture, if you're interested!)

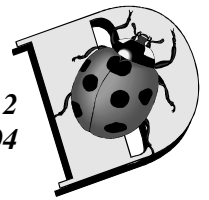


Figure 1: desktop icons can be moved to handy toolbars that preserve your system resources.



9) Drawings are automatically purged each time you open and close them, so the Layer Utility process is moot now, and file corruptions are very rare indeed.

10) The AEC files are compressed, so they are roughly 1/5 the size on your hard drive as an equivalent DC5! And the preview thumbnails are PNG files, rather than BMP — 2KB vs 51KB; saving 49KB per drawing.

11) You can turn on Sessions Files, which can save up to 10 versions of a file, so if you plow into a big change and have forgotten to do a Save As — and then the client says “Wait — I don’t want the change after all!”, you can just revert to the Session file before the change.

12) Hatching/SPB Fill contour search works much better in v11.

13) Symbols (now DSF for DataCAD symbol file) can have layers, and they can have attributes, which are very useful for Construction Documents.

BASIC LESSON 2: The New Interface & Tweaking Win98 (Win95 and WinME, too!)

There was a lot of interest in Neil’s tips on how to increase your performance of your *System Resources*, especially if you are running Win98, Win95 or WinME). He noted the basic 64K memory cap on GDI resources and User Resources <http://fp.computers.pcc.edu/pmcg/memory_vs_resources.htm>. By right-clicking on *My Computer* and then *Properties* and the *Performance* tab, you can see how your computer is doing. If on a fresh bootup, your performance % is already under 50%, you computer will quickly start performing sluggishly as you get into your heavy-duty work. With the tips below, Neil increased Greg Barriere’s old laptop performance from 45% to 94%!

So, how do you increase the System Resources?

* Go to Start/Run and type MSconfig and this runs a very convenient editor program. On the last tab on the right,

called Startup, you need to uncheck all the things that you do not absolutely need: leave only ScanReg, mouse and keyboard items, firewalls and antivirus startups, and maybe one or two things that are specific to your system. If you find that you can’t do something that you really must have — come back in and recheck that item.

* This will remove some of the items from your System Tray (which the row of icons near the clock), but you will probably need to remove others from your tray by changing their preferences and exiting them.

* Turn off any wallpaper — you should run with just a color on your desktop.

* Turn off all “sound schemes”. Program sounds and music will still work — the schemes are just the Windows boot “tada” sound, and the like.

* Be sure to exclude all commonly used programs from your antivirus program.

* If you have a bazillion icons on your desktop (and I’ll bet you do), then you need to ruthlessly delete those that you do not need, move others either to your Start menu (just drag them there), or I will show you how to make a custom toolbar.

Neil showed us how to create a custom toolbar, a trick he learned from his son (a preschooler at the time). In Windows Explorer, create a new folder (most conveniently in your root directory) and name it some category for icons (such as “Work”). Now just drag all the icons from your desktop to that folder in Windows Explorer. It will disappear from your desktop.

Now right-click on your bottom menu bar and pick “Toolbars,” then “New Toolbar.” You will get an Explorer-like menu to find your new “Work” folder. Once you pick it, now a new little “Work” toolbar sits on your bottom menu bar. When you click on it, all the icons from that folder will display in a menu for easy picking (see *Figure 1 above*).

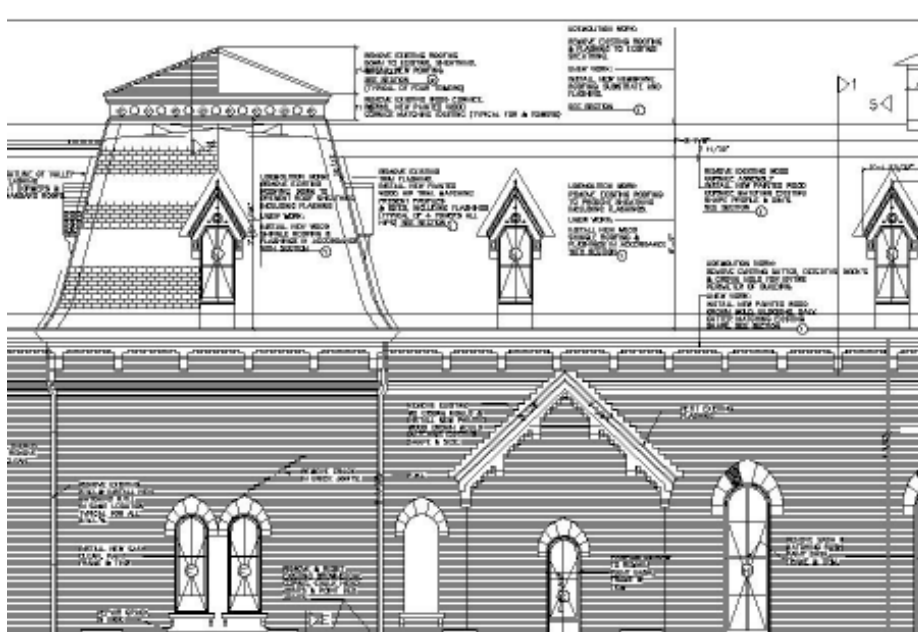
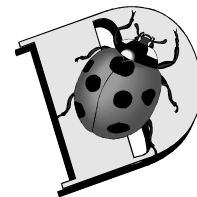


Figure 2:
Imagine the job of
converting a paper
drawing to this CAD file!
(Boston Scanning did
just that!)

his company's services.

INTERMEDIATE LESSON: PAPER to DataCAD (Boston Computer Scanning)

In an extremely interesting presentation, Ted Dooling of *Boston Computer Scanning* at <www.bosscan.com> (est. 1992) gave the group an excellent overview of the state of creating usable CAD documents by scanning existing drawings. While the sophistication of software and hardware has increased significantly over the last decade, the unvarnished truth is that rarely can a straight scan and software vectorization of an existing drawing give you a usable CAD drawing. Ted said that his company uses a Vidar machine which scans at a rate of 6" per second up to a 36" by 10' sheet. They use this scan and sophisticated clean-up tools along with basic CAD drafting to create a usable CAD document. In some cases, this process may mean as much as 90% of their time is spent in "manual" correction of scanned documents.

The good news is that even so, the overall price for conversion of paper documents to CAD has really become quite affordable. Cost, of course, is dependent on quantity and level of complexity needed (i.e. text, dimensions, details, etc.) But for a medium complexity job, Ted estimated the following:

- a) 1 to 5 "D" size sheets would cost \$125 to \$185 per sheet and take 1 to 3 days; and
- b) 6 to 20 "D" size sheets would cost \$110 to \$160 per sheet and take 2 to 6 days.

Certainly, well-under your cost to manually re-draft these plans yourself in CAD.

Ted estimated that his clients are split about 50-50 between architects and engineers. He spread more goodwill by raffling off a few freebie "pen-dulum" clocks (with the Boston Scanning logo of course!) but more importantly impressed the group with expertise and the affordability of

ADVANCED LESSON: DataCAD to PAPER — Making the Most of 2D in DataCAD: XRef's, Clip Cubes, Text Scale & MSP

Neil Blanchard then gave the group an advanced lesson in using some of the 2D production "power tools" in DataCAD. His outline notes were as follows:

The overview of the way I use DataCAD is to have several files, but not a separate file for each drawing sheet. I think it is most efficient to have all the floor plans to be in one file, but if you need to you can use XRef's to share info while being able to separate each plan; so that more than one person could work on them, for example. You'll get more details as I go along.

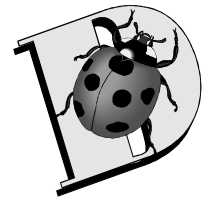
A. Text scale is often misunderstood, and it can benefit you even if you never touch MSP, or XRef's. What it does:

a) You set the plot scale that you intent to use, and then you set the text size that you want to have on the paper — and DataCAD does the rest!

b) It also does the same things for dimensions: you set the plot scale (and if you then update your GTV, this plot scale gets saved with the GTV!), and then set all the various dimension settings to the size you want them on the paper — DataCAD gives you the right sizes.

c) Now, the time savings really kicks in when you want to use a different plot scale: just change the plot scale, and then enter some text or add some dimensions — they will be at the correct size to plot the way you want them to. PLEASE NOTE: turning on Text Scale after you have entered some text or dimensions in a drawing will NOT affect those items!

B. Multiscale Plotting (hereafter MSP) is the next best thing to GTV's, and not to use it is to miss out on just



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Figure 3: Neil's neat trick to use XClip of elevation to show elevation beyond this section.

about the most powerful thing in DataCAD. In a nutshell, it allows you to draft everything at “full scale” — not just the stuff at the “main” scale on any particular plot sheet.

a) It works by adding “Details” to a virtual sheet of paper. A detail is often the border – which I always plot at 12”, which allows me to use just one size border per job (which as I get into later, I XRef the same border into all the files.)

b) You can use MSP when you just have one sheet per file, but you certainly can use MSP to layout more than one sheet in each file and still be able to just plot ‘em quickly – Batch plotting and check plots are things that are easier to do with MSP sheets.

c) You can use Clip Cubes (hereafter CC) to “zoom in” on a portion of a drawing and then add layers of info to be plotted at a larger scale (Text Scale makes this much easier), and GTV’s also save the CC. The one drawback with a 3D CC is that you cannot draft outside the CC (by definition!).

d) If you use a self referencing Xref (which is kind of an oxymoronic name, isn’t it?), then you can draft outside the boundaries of the X-Clip Cube (hereafter X-CC), and now with v11.01.00 there is no speed penalty for a self-XRef.

[Nice Cheap Trick: Neil showed how to use Z-height to exclude certain items from an XClip. For example, he wanted to show part of an elevation behind a building section. By breaking the elevation lines at the section outlines and then giving the unwanted part of the elevation a z-height beyond the XClip limits, he was able to display just the portion of the elevation that he wanted behind the section (Figure 3 above).

d) XRef’s allow you to use Highlighting, which means that you can change the lines to a different linetype (all dashed, for example), and/or a different color – one that plots as a 20% gray line, maybe.

e) Always remember to name each MSP detail! I will show how to align MSP details. [using custom snap points and snap grid divisions].

FINAL LESSON: Gadget Show and Tell.

Chris Walsh was showing off his new toy, an *iPod*, which carries his entire CD music collection with ease and lets him easily navigate through his tunes by either artist, album, or song title (or by special playlist). Greg Barriere then stepped forward with a number of nice accessories:

a) Hate the way that your peripheral transformers hog up your plug strips? Try these short “pig-tail” extension cords by Ziotech, available at <harrington.com>. You can get 4 of them for \$6;

b) Need portable backup and transfer storage? How about 200 gigs of harddrive that fits into your front shirt pocket, plugs into any USB port for instant drive access, and only costs \$200. (*Ion* by Iogear <www.iogear.com>;

c) Or how about turning your sketchpad into an instant digitizer? Inklink <www.seikosmart.com> sells a device that clips onto your notepad. By using their special pen to draw on your pad, anything you draw is digitized for subsequent transmittal to your PDA or computer. So you can do a sketch detail on the jobsite and have that sketch ready for placement on a DataCAD drawing or combinable with your job notes for faxing to a client/contractor.

These show and tells inspired Evan to suggest that a future meeting be devoted to everyone bringing in their favorite gadgets. With that capper, the meeting ended around 9:00 p.m. after another interesting and informative night at DBUG.

— Meeting Notes by Evan H. Shu, FAIA (with liberal quoting from Neil Blanchard’s excellent handouts).