

## DataCAD Boston Users Group

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A Committee of the Boston Society of Architects

### June 2004 DBUG Meeting

June 23, 2004

Host: Chris Walsh & Company  
Framingham, Massachusetts

### Introductions & Announcements

On a nice early summer evening on June 23, 2004, a good group of some 15 DBUGers gathered at *Chris Walsh & Company's* recently expanded offices in Framingham for pizza, beer, networking, and, of course, an excellent program on architectural computer use. Chris welcomed all and gave tours of the building renovation, which also houses a retail store and warehouse/production space for his wife Chris Walsh's company and retail store: *Red Rover Clothing* <[www.redroverclothing.com](http://www.redroverclothing.com)>

In our group introductions, we also met first-time visitor Carol deGroot Bois, an environmental engineer, who leases an office at Chris Walsh & Co. If you ever find yourself in need of consulting help while encountering an onsite hazardous waste issue, or wonder what it might take to clean up an abandoned site to ready it for development, she is your man, *uh*, make that woman. As a licensed site professional, she says you may be pleasantly surprised how straightforward and affordable such cleanup projects can turn out to be. You may contact her at <[cb@boisconsulting.com](mailto:cb@boisconsulting.com)> or (508)788-9988.

In announcements, Evan Shu, noted that the July DBUG meeting had been moved up a week to July 22nd at the BSA Building, so as not to conflict with the traffic issues that will surround the Democratic National Convention activities during that last week in July.

#### I. Setting up a Project file using XREFs

Chris Walsh started the main program by describing his office use of *XREFs*, *GoTo Views* and *MSP* sheets to set up a drawing file system, so that the final printing set is produced from one master file. This master file (his office calls it a "plot file" but "project file" will be used here) is an aid to coordination, checking, and working in a team fashion in a networked situation, where individual team members can work on different parts of the project in a variety of different files.

*I. XREF from Plan File to Project File:* in this system, team members work on the data of the project in various drawing files, such as floor plan, elevations, sections, details in the normal fashion. But compositions for project sheets is done in the master project file as in the following example for the *Sheet A1 Floor Plan*:

a) Save floor plan in "Plan" file; b) Open Project File and Create/Open *GotoView A1*, which is comprised of generally of blank layers (one or more based on need) named A1-XRef#; c) With the A1-XRef layer on and active, Insert the XREF of floor plan (A1) from "Plan" File using absolute zero placement for sure coordination.

*II. Set Up Title Block in Master Project File:* Next create a *A1 Border Goto View* that is comprised of two layers, one of the generic title block (with all typical sheet information filled in) and one layer for specific sheet information (e.g. "Drawn By:", "Scale", & Sheet No. on Title Block) filled in.

*III. Next in a MSP (MultiScale plotting) A1 Sheet View is created in the Master Project File by* a) Opening *Sheet A1* from *Print/Plot* menu, then click *Multi-layout*; b) Select the "A1 Border" from the list of *GotoViews* (ensure scale is set to 12") and place *A1 Border* in center of sheet; c) Select the "A1-XRef" from the list of *GotoViews* (ensure scale is set to appropriate drawing scale) and place in center of sheet. Note: Scale can be changed in *Multi-layout* using "PageUp" & "PageDown" keys.

*IV. All sheets in the set are created in the one Master Project file in this fashion.* This system allows all work to continue in regular fashion, and then by refreshing/reloading all the XREFs in the master Project file before plotting, all the sheets can be batch printed at once with the confidence that the sheets are all up-to-date.

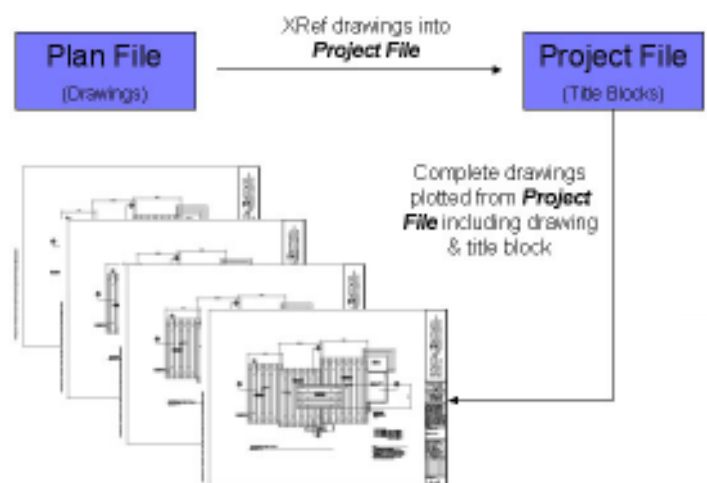


Figure 1: Master project file used for plotting & coordination.

## II. SketchUp: Working with Components and Groups

Bill Huther continued DBUG's continuing lessons on using *SketchUp* (particularly in conjunction with DataCAD.) He stressed the most important difference in using DataCAD and SketchUp is in the conceptualization of layers. He demonstrated that in SketchUp, even with layers that are "off" and "not visible," you can still unknowingly be editing information on that layer. For this reason, you should never rely on layers in SketchUp the way you do in DataCAD. Use *Groups* and *Components* instead for all your separations.

You create a group by selecting the elements you want to be part of the group, then right-clicking and picking group from the context model. Now, this group is more like working with elements in an active layer in DataCAD in that no other geometry will be mistakenly affected during the editing. You can also reorganize this group to add other elements, subtract elements, or ungroup them.

When you save geometry as a component, it is first saved as an "internal" component within the main project file and is only available within that drawing file. You can also "Save As" the component out to the system library, so that it may be placed in other drawing files — much like a DataCAD symbol file.

Bill showed different aspects of how groups/components are copied and edited. A group when copied will still act individually if geometry in one group is changed. A component when changed will also change in all its iterations. But when an external component is changed in its master file, you will need to right-click and "reload" the component to update it.

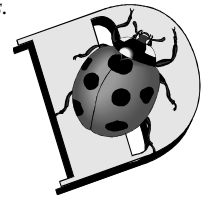
He uses SketchUp to create many different groups and components for any one building model. And he noted that 80% of the effort of using SketchUp is effective organization of the project. One undocumented cheap trick is to use the "CTRL-Shift-d" to access the *Debug* menu, then "Extrude to Path" to create a molding that follows a path. He demonstrated this feature by running molding profile around an arched door opening. (Right-click, then pick "Smooth" for rendering without jaggies.)

## III. A Look at Piranesi

Greg Childs gave the final presentation of the night, a look at *Piranesi*, which is a sophisticated 3D painting program, originally developed in the UK <[www.informatix.co.uk/piranesi](http://www.informatix.co.uk/piranesi)>. It is a little difficult to describe in words what Piranesi is exactly, but the group quickly got the concept for the program with a few demonstrations, where Greg took a SketchUp model and exported it to Piranesi.

Piranesi is a smart paint program with PhotoShop-like tools which can understand and interpret a view of a model as having planes and surfaces that exist in 3D space and material objects that turn corners, etc. Unlike conventional paint programs which treat a 3D perspective in the same

Figure 2: working with SketchUp components.



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way it treats a 2D plan, Piranesi understands the difference. Thus, when you apply a fill or texture to a surface or an object in the view, it applies it to the whole surface or view — not just to an enclosed boundary. A brick texture can be applied, which not only turns the corner but is applied to that entire material object (previously grouped in the 3D model program.)

When you create a model in a program such as SketchUp, you pick a view and then export that model into a special EPIX file format, where each pixel stores depth, material information and color specification. This allows Piranesi to understand the view in a 3D fashion. In addition, you can use backgrounds and "cutouts" (Piranesi's library or create your own) which are scenery images (trees, people, cars, etc.) that can be dropped into image add detail.

Also, much like PhotoShop's filters, you can apply any number of hand-drawn or artistic effects to an otherwise photorealistic rendering to give it a schematic, sketchy, or watercolor look for early or conceptual presentations. You can also use special tools to create highlights or artistic emphasis on certain areas of the picture to give the rendering a personal touch.

Piranesi is not a cheap program at \$650, but it appears to provide a very sophisticated set of tools that once mastered can make the price seem more than reasonable. (The Boston area dealer is Greg Conyngham of Integrated CADD at 617.576.8778 ext. 11 or <[www.intcad.com](http://www.intcad.com)> — free shipping for DBUG members.)

— Meeting Notes by Evan H. Shu, FAIA



Figure 3: Piranesi is intelligent 3D painting program.