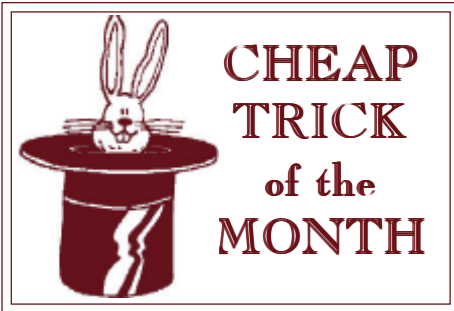




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VOLUME 19, NUMBER 11



**CADD for Clunkers:
a DataCAD 12 FAQ**

With a success of DATA CAD's current "DataCAD 12 for Clunkers" sale (which ends 12/31/09), we are seeing a lot of renewed interest in the features added with DataCAD 12 — not to mention features added with DataCAD 10 & 11 for those updating from older versions of DataCAD. For this reason, we thought we'd devote some space in this issue to help those who are trying to catch up with DataCAD 12. Even for those of you who have been using DataCAD 12 now for awhile, it should be a good refresher to make sure you are using the full potential of this powerful version.

INSTALLATION: I have Vista on my computer station, does DataCAD 12 play nice with Vista? How about with the new Windows 7?

Yes, definitely, DataCAD 12 will work well with both. But the most important thing to remember in installing DataCAD 12 is *NOT* to override its default installation to your C:/DataCAD 12 folder. You may be tempted to put it under C:/Program Files/DataCAD 12 but that is a recipe for Vista's infamous *User Account Control*

"feature" to mess with DataCAD's need to write to its files. Also, make sure that once you successfully install DataCAD 12 that you go to "Check for Update" in the *Help* menu and download the absolute latest version available. Depending on when you got your DataCAD 12 CD, it may not be today's most current version of 12 (12.08.03.07).

KEEP MY OLD VERSION WORKING? I'd still like to keep my old DataCAD (9/10/11) version working as a security blanket until I'm feeling secure about DataCAD 12. Will the new installation overwrite my old copy?

No, it will not overwrite your old DataCAD version as long as it is installed to a different folder. You can operate both freely as long as you have both version dongles plugged in or are ready to swap them. DataCAD 12 can open any DataCAD 10/11 file. But if you work in DataCAD 12, you have to "Save As DataCAD 11 AEC" to have the file readable in DataCAD 11 and it will also lose the "smart" aspects of any entities, plus they will not "roundtrip" back into DataCAD 12. DataCAD 12 will also open DC5/DC3 older file versions of DataCAD but will not save out to DC5 (use DWG export/import if you must). A nice feature



DataCAD 12 for Clunkers!

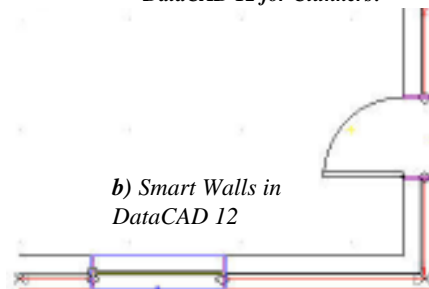
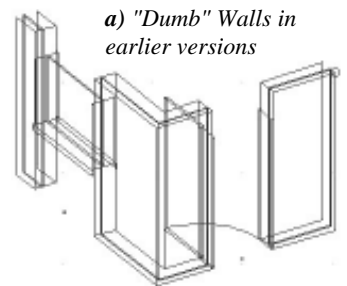


Figure 1: a) 4 line cavity "dumb" walls (upper right) yield barely usable 3D results, but in DataCAD 12 similar b) 4 line "smart walls" (lower pair) deliver 3D renderable results.

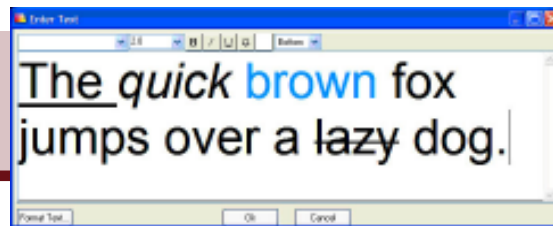
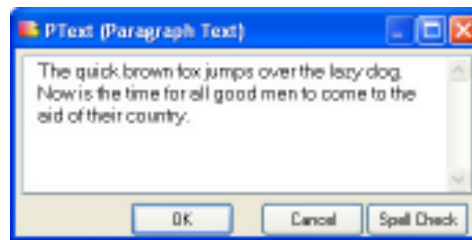


Figure 2: MText (above) offers text formatting, while PText (below) is simple version of allowing reflowable text paragraphs.



WHAT'S UP WITH TEXTING? Did I hear that somehow text can now wrap and be reflowed within a drawing file in DataCAD 12?

Yes, you now have 3 different types of text that can be used from your Text menu. Basic Text is the same as always, so no difference there. But down near the bottom of the Text menu at the S7 and S8 slots, you will find *ParaText(PText)* and *MText*. As we described more fully in our April 2007 issue, both are multi-line word wrapping versions of text input, where you can change the boundaries of the text box both before and after you place the text. *ParaText* (for both CHR and TTF fonts) is a very popular, flexible, no frills version that doesn't allow features such as bolding and italics while *MText* allows all those fancy features but can only operate using TTF fonts — although DataCAD has conveniently translated most of your CHR

fonts in TTF formats for use both inside and outside of the DataCAD program. Plus PText and MText can now (with 12.08) be used inside symbols. Also, check out the new DataCAD.TTF font (issued with DataCAD 12.08 and located under C:/Windows/Fonts). You're going to want to use it in your other programs.

SYMBOL PLEASURES: What!? I can now edit symbols within a drawing file? Tell me how, quick!

Yes, with DataCAD 12, you can now edit unexploded symbols on the fly, so that you don't lose their databasing ability. Basically it opens up the symbol in a new drawing file which, when saved, automatically updates all instances of that symbol *only* in your drawing file. To edit any symbol, you use the CTRL-right click command with your mouse hovering over the symbol you want to edit. Select "Symbol Tools" from the Context menu, then from the submenu, pick "Edit Symbol" and it will open your symbol a new drawing window. After you make your changes, you close the window by clicking on the corner "X" and answer "Yes" to the question of saving these changes to your current drawing. Or, you can pick "Save As" from the File menu to save this symbol file either to a new name for future use in other files.

of this installation is that it will ask you if you want to copy your various user customization files (keyboard shortcuts, linetype files, even the "Moolbox" MSG file customization) to DataCAD 12. But, in any case, don't worry about multiple installations, DataCAD 11 (or any earlier version) will still function and can serve as your security blanket while you transition to DataCAD 12.

NOT READY TO BE SMART? I am not sure if I am ready to use Smart Walls/Windows/Doors, since I've been so productive without. Do I have to use them? How do I turn them on and off.

Smart walls are turned on/off via your regular *Architect/Walls* menu via the "Auto 3D" button. If this button is off, your walls will function exactly as they did before. You can tell if you are drawing "smart" walls because they will automatically clean up at intersections and they will have little "X" indicators at each corner.

If you do start using Smart Walls, a crucial concept to understand is that various smart wall types must be loaded into the drawing file. When you first open a new drawing file, you may be puzzled that you only seem to have one smart wall type option, the two line wall. If you hit the *Manage* button, you can see other default wall types, but they will have a little drive icon beside them to indicate that they exist only outside your drawing file and thus cannot be used. Click on any of these other wall types and it will be loaded into your drawing file and then be available as an optional choice. Load in a bunch of them right away, so you can see how they affect your drawing file operation.

Once, you load in a variety of smart walls, you can choose which one to draw with using the new *Types Toolbar* (below) that lets you select any loaded wall type, door type, window type. This toolbar can be turned on/off via the *View/Toolbars* menu.

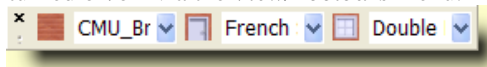
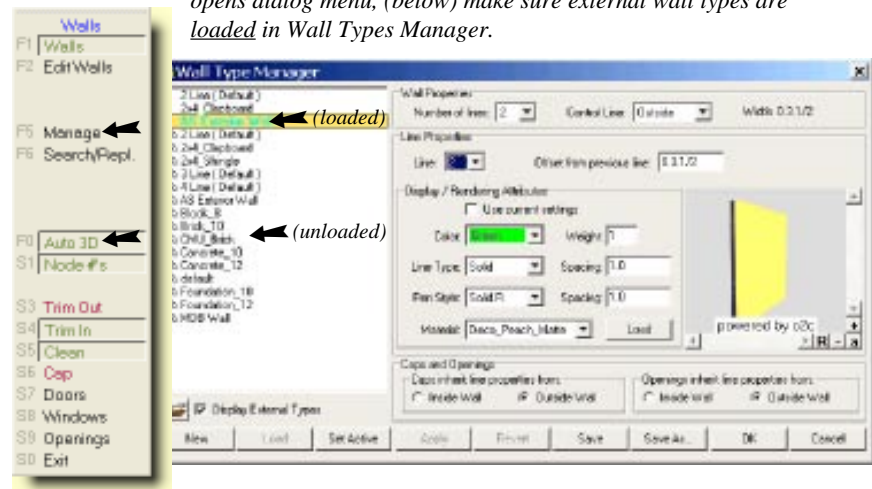


Figure 3: (left) "Auto3D" button turns on "smart" walls, "Manage" opens dialog menu, (below) make sure external wall types are loaded in Wall Types Manager.



DON'T FENCE ME IN: Isn't there a Fence type of ClipCube in DataCAD 12? I can't find it.

The fence-type clip function works for only two specific cases: Symbols and XREFs. You can access these two new functions *SClip* and *XClip* from the *Clip Cube* menu. Or easier still, for any symbol, *CTRL-right click* on it and pick *Symbol Tools/SClip* then *New Cube/Polyline*. The same goes with any XREF: *CTRL-right click*, *XREF Tools/XClip* then *New Cube/Polyline* (Figure 4).

WHERE ARE MY SYMBOLS?! How about using my template and symbol library that I have built up over the years? Do I have to worry about transferring or rewriting all my templates (again) to use them in v12?

Yes, and no. If you have been using the full path method of template writing, you can access your template wherever it is located in your old version of DataCAD 12 and it will still work to call up your symbols. Unfortunately, if it doesn't work, the templates were written using the relative path method. See this month's *Q & A* for an easy way to reset your pathnames to find your old templates and symbols. *But the real question is, why aren't you using the Symbol Browser* (CTRL-T) instead? Oh, you don't know about it? It was only the best new feature added in DataCAD 11! With the Symbol Browser (Apr 04), you are free of templates, you can browse to any folder you like and it will display all the symbols within it, and you don't have to worry about templates or pathing anymore.

FLYS ON MY NERVES: At first, I really liked the dynamic flyouts for snapping points (Fig. 5) & the snap indicators thingies, but now, they are starting to get on my nerves. How do I turn them off or tweak the look?

Remember, the flyouts only display the snapping points that you have called *fc* under the *Object Snap* menu. To chang-

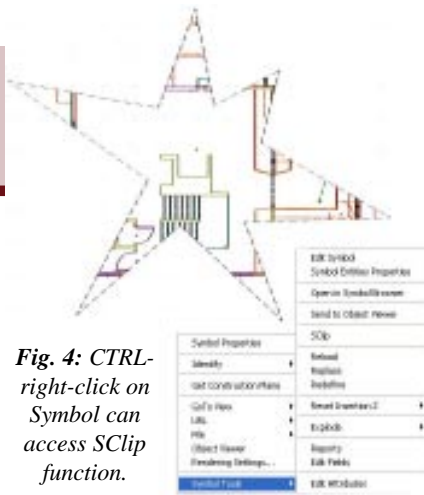


Fig. 4: CTRL-right-click on any Symbol can access SClip function.

how these flyouts appear, go to the *Tools* pull-down menu, then *Interface/Tooltips* and check *Object Snap*. Now you can set background color, *Display Delay* (how long it takes to appear), and *Hide Delay* (how long it displays before it disappears again). In the *Dynamic Snapping* section (lower right) of the same dialog, you can also choose to turn off dynamic snap indicator, or turn off the tool tip hint, or choose the type of snap indicator (Style 1 is an asterisk, Style 2 is a little circle). Speaking of snapping, you can now snap to points within XREFs, symbols, and plotting details!

TRYING TO BE SMART: I created a few smart walls. Cool. But now, how do I change a smart wall?

You can move or stretch wall corners and intersections using your normal editing functions, but if you wanted to make a wall thicker, for example, you can't do that with stretch as you might with a "dumb" wall. To DataCAD, a dumb wall is two separate lines, while a smart wall is a new entity and not really a pair of lines at all. To change any wall section, CTRL-right click on it and select "Wall Properties" (Fig. 6) & you will see a whole menu of possible changes you might make. If you select *Wall Type*," you will see a list of all the different wall types that you have previously loaded. You can change the width of the wall here along with linetype, z-height, material or just about any other parameter you can imagine.

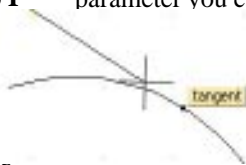


Figure 5: Dynamic flyouts and Snap Indicators may not be your cup of tea.

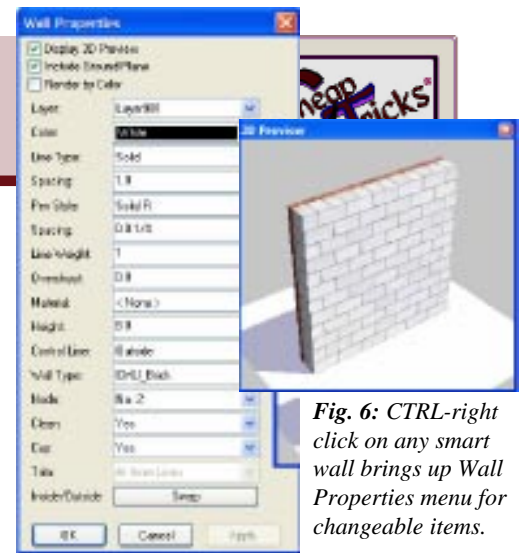


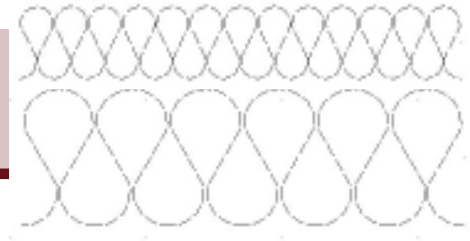
Fig. 6: CTRL-right click on any smart wall brings up Wall Properties menu for changeable items.

One crucial difference is that while you might think of a wall as the whole linked series of wall segments that you drew in one step, DataCAD 12 smart walls now operate on a section by section basis. But you can change the whole wall type in one step, using a new *Search and Replace* function in the same *Architect/Walls* menu. Once you pick a wall type to find and a wall type to replace it with, you can use your typical *Entity/Group/Area/Fence* selection means to pick the walls you want to swap.

KNOCKING ON THE DOOR: Okay, now I've got a smart wall, is there any trick to inputting smart doors and windows as well?

It's pretty straightforward once you understand the concept of loading "types" (see more under *Computerese*) into a drawing file *before* they can be used. Also, you obviously can't put a smart door into a dumb wall and vice-versa, so be aware of the status of the *Auto 3D* button in your *Architect* menu. If you try to input a smart door into a smart wall, it will default to a 3-0" single swing door. If you want any other door, like with walls, you must first select the *Manage* button and load any desired external door type into your drawing file. Also, if you want to determine the width of the door as you draw it, then uncheck the "Fixed Width" selection in the *Wall Type Manager* dialog box.

Now, input a smart door in by clicking on a spot in the smart wall, but before you click down for the second side, move your mouse around a bit. You will see that now



you can dynamically and visually see which swing direction to use. You can also switch horses in midstream by clicking on the “By Strike” option to swap the hinge side of the door. Excellent! To change a Door type, you use the same CTRL-right click on the door to access the *Door Properties* menu to change door type, swing direction, opening angle, etc.

Inputting smart windows works in pretty much the same way. Just remember the key step is to use the *Manage* button to load in external window types before they can be used within a drawing. Also in the same Window Type Manager, you can take any existing window type, change any number of parameters around (muntins, casing, trim, etc.) and save it as a new window type for future use.

WALL CLEANUP: Sometimes I get weird wall cleanups, what am I doing?

This question came up frequently during the first release of DataCAD 12, but if you have updated to DataCAD 12.08, a lot of those bugs have been fixed. However, if two smart walls won't clean properly, it is probably because their “control lines” don't meet (see more in *Computerese*). Remember that to DataCAD 12, a smart wall is really a single entity as defined by its control line (usually the line you drew) with various wall type parameters (double line, triple line, etc.). So, it might look like two smart walls intersect but if you reduced each to its single control line, they wouldn't touch. Note that you can also change the way two walls clean up with each other by control-right-clicking on an intersection and picking wall properties and then selecting yes/no on the “Clean” and “Cap” options. However, note that you can only change cleanup option on hard “node” conditions and not virtual node conditions (see more under *Computerese*). This means that if you want to have an unusual cleanup condition, you will have at use the “Add Node” button under Edit Walls, which is just like adding a vertex in a polyline.

MSP TO DWG? Am I hearing right, DataCAD 12 can really export a Multi-Scale Plotting (MSP) sheet now to DWG? Yippee! Tell me how.

Yes, this limitation has now been eliminated by essentially creating a function that makes a “one-scale” version of your MSP sheet by enlarging the other scaled details to match. Get all the details in our *DataCAD Tutor* column this month.

SKETCHUP BACK & FORTH: I use SketchUp a lot for design modeling. Are transferring models and materials easier now with the new version?

Yes, now you can both import SketchUp files and now (with DataCAD 12.08) also export DataCAD 12 files directly to SketchUp. Another big plus about importing SketchUp models is that any associated materials or bitmap textures come along for the ride and get embedded in your drawing file, where they can be saved for use in other drawing files as well. When you select *SketchUp* (see alternate option below) from the *Insert* pull-down menu and pick your file, you can check boxes that include a) *Extract textures* – takes the SketchUp textures as well; b) *Overwrite existing textures* – places textures into DataCAD and asks you to specify storage folder; c) *Extract front material(s) first* – materials are extracted from front to back (not quite sure why that is important, but you modelers must know); d) *Preview* (shows the SketchUp file); e) *Isometric view*, or f) *Object Viewer* – shows a 3D raytraced view. Once selected, the SketchUp data appears in a box on your cursor just like a symbol (which it now is!) with the same symbol menu placement options.

You can also import the SketchUp model as an XREF, instead of as a symbol as outlined above. From the *Insert* menu, you pick *SketchUp XREF* (instead of just plain “SketchUp”) and now the SketchUp file is placed like an XREF instead and can be controlled (layers on/off, highlighted, etc.) via the Reference File Manager.

SPREADSHEETS: How about importing Excel files?

Excel spreadsheets can also be imported via the *Insert* menu, then *Excel*. You browse to your desired spreadsheet file, pick it, and it appears on your cursor (you can also choose to place it by center or absolute zero.) One placed the *Reference File Manager* comes up because your Excel file is now an XREF, which can be refreshed to match up with any changes made in the originating spreadsheet.

THERE'S MORE? Well, we don't want to overload you with all the new features that you have missed in not upgrading sooner, but just so you are aware of what else DataCAD 12 can do, here are a few more highlights.

- 1) You can now use more than one dimension type within a single drawing file (CTRL-right click on any dimension);
- 2) *PenStyles* (aka Windows line types, look under Linetypes) are scale independent linetypes (dashed, dotted, etc.) that will look “right” no matter what scale you print at (*Fig. 7*);
- 3) Multiple Pen Tables can now be used on scale by scale basis, so that an MSP sheet can use one Pen Table for 1/4" scale details, and another for 1 1/2" scale details (*Print/Plot* menu and *Scale to Pen*).
- 4) 3D Boolean modeling (see *Oct 09*);
- 5) Lot of great new rendering material libraries are provided!
- 6) *PakNGo* (12.08) is a feature that makes sure all the associated files you may need (XREFs, materials, pen tables, bitmaps, fonts, etc.) are included when you send off a file to a consultant.
- 7) Help is available. See the links in the box at *Figure 9* for more helpful resources that you should access.

Yes, you Clunkers have a lot to catch up with — but don't be shy, give these great new features a try. Soon, “you'll be lovin' it” (as the slogan goes) and all these new DataCAD features that will help your productivity even more! ☺

COMPUTERESE

DataCAD 12 Terminology

DataCAD 12 introduces some new terms into our CAD lexicon. Here are few of the most crucial ones that you should understand.

Control Line is the single line used to define the beginning node, end node, and all other aspects of a given smart wall type, which exists in relationship to the Control Line. By default, it is the line the CAD user first draws but it can be shifted to other lines in the wall type (Fig. 8).

CTRL-right click is the combination simultaneous CTRL keystroke with the right mouse button after the cursor is placed on a desired entity. Most commonly, it will cause a pop-up context menu (often the *Properties* manager) associated with the entity to appear.

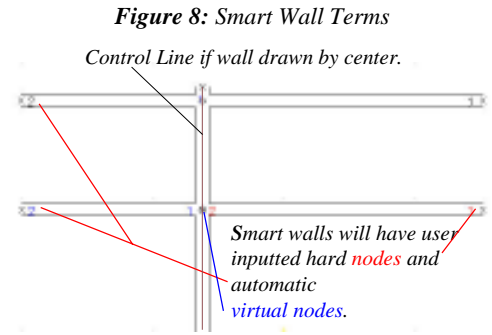
Dynamic Snapping (aka *Snap Tips*). Indicator of defined points within a given

entity, such as end point, midpoint, center point, which appears when the mouse cursor is close to such a point. Points indicated are those selected from the *Object Snap* menu, and dynamically will appear on the display with an asterisk or small circle along with a label indicating what type of point is being displayed (Fig. 5).

Lock Scale is a way of ensuring that a given dimension type (architectural, metric, decimal, engineering) stays set even if differing from the global or default drawing file settings. It allows a mixed variety of dimension types (e.g. decimal on property lines, architectural on plans, etc.).

MText is a multi-line word-wrapping method of inputting text into a CAD file that allows specific formatting of text into bold, italics, and strike-through modes as well as reflowing into different boundaries. It utilizes TrueType format fonts only and corresponds and converts to the same MText feature found in AutoCAD (Fig. 2).

Node. A (hard) node is a point inputted by the user and defines an end point of a wall



segment and includes parameters that can be set by the user to determine the behavior and appearance of wall ends, corners, and intersections. See difference with *Virtual Node*, also see *Figure 8*.

Paragraph Text (PText) is a simpler version of *MText*, this feature also provides multi-line word-wrapping, reflowing and editing flexibility but does not provide for font highlighting. It can utilize either CHR (vector stroke) as well as TrueType (TTF outline/infill) fonts.

Pen Styles (aka *Windows Line Types*). A line appearance, such as dashed or dotted that will appear properly-sized no matter at what scale or format a drawing is displayed, printed, or plotted at. This “scaleless” linetype is called a *Pen Style* in DataCAD 12 to differentiate it from the DataCAD line types, which do vary based on scale. Windows line types, or Pen Styles, can be used in combination with DataCAD’s linetypes to take advantage of both of their desirable qualities (Fig. 4).

Properties Manager is a dialog box that indicates all the parameters of a given entity which can be altered via menu selection. It is most commonly invoked by CTRL-right clicking on any given entity.

Smart Entity (aka *BIM* feature or *Object Oriented Entity*): is a specific use entity which has a sense of association and rules of behavior that govern in what specific ways it can be used and how it can change, e.g. a set of lines that understands that it is a “door,” that can only exist within a wall and has a defined “swing” path. Users can alter variables of the smart entity (e.g. door type, door opening angle, door material, door width) through menu selection in either *Properties* or *Types Manager* dialog boxes.

UPDATE RESOURCE LINKS

- 1) **DataCAD 12 Update page** (make sure you have the latest update):
<www.datacad.com/update/update_dc12.htm>.
- 2) **DataCAD 12 Reference Manual** (10.3MB) (if you CD installed version is corrupted):
<www.datacad.com/support/down/DataCAD_12_manual/DataCAD_12_Manual.pdf>.
- 3) **DataCAD 12 What’s New? Manual** (516KB) (if you CD installed version is corrupted):
<www.datacad.com/support/down/DataCAD_12_manual/Whats_New_in_DataCAD_12.pdf>.
- 4) **DataCAD 12 Smart Entities Tutorial** (404KB):
<www.datacad.com/support/down/DataCAD_12_manual/Smart_Entities_Tutorial.pdf>.

Going Further Back

- 5) **What’s New in DataCAD 11?** (2.36 MB):
<www.datacad.com/support/down/Whats_New_in_DataCAD_11.pdf>.
- 6) **DataCAD 11 Before You Begin** (36 KB):
<www.datacad.com/support/down/Before_You_Begin.pdf>.

Always eye-opening, even for gurus (bookmark it!)

- 7) **DataCAD Revision History**
<www.datacad.com/update/downloads/RevHist/DataCAD/RevHist.htm>

8) More Help at

<<http://forum.datacad.com>> or <www.tinyurl.com/DBUGforum>
You can post questions at either forum for specific problems.

FIGURE 9



Type is a named set of settings and their corresponding values for smart entities, such as a wall, door, or window. Types can be saved to and loaded from external files, or they may be stored within a drawing file exclusively. Any external smart entity type usually must first be loaded by the user into a drawing file in order for it to be available for use.

Type-dependent settings are shared by all instances of a given type. Modifying a type-dependent setting will automatically affect all instances of that type.

Type-independent settings may be modified on a per-entity basis, in spite of their common entry in the Type Manager.

Type Manager, such as *Wall Type Manager*, *Door Type Manager*, *Window Type Manager* is the dialog menu that allows user to load various types and adjust their various parameters. It is invoked via either the “Manager” button on that functions menu or else the “S” button on the *Context (Architect)* toolbar.

Types Toolbar. New Toolbar in DataCAD 12 showing currently available loaded types for wall, door, and window for menu selection.

Virtual Node: a virtual node defines the intersection of two wall segments, or the sides of a door or window as they relate to a wall segment — sometimes on a temporary or changeable basis. Virtual nodes are automatically generated when walls on the same layer intersect, or when a door or window is placed in a wall. The behavior of virtual nodes is predefined and cannot be customized by the user for variable end conditions. However, virtual nodes can be converted to (hard) nodes by the users for this purpose. (see Fig. 8). Φ

Binding MSP sheets for DWG

For those of you who struggle with consultants who use AutoCAD, DataCAD 12 goes a long way toward solving your problem of getting your MSP (*MultiScale Plotting*) sheets to consultants in a form they can view properly and use in AutoCAD.

In a nutshell, what DataCAD does is adjust a copy of all the various plotting details, so that they are all in the same relative plot scale. For example, if on a MSP plotting sheet, you have combined a 1/2" scale drawing detail and a 1" scale drawing detail, along with a 1/4" scale plan and are plotting the sheet at a 1/4" scale, then it will double the 1/2" scale drawing in size and enlarge the 1" scale drawing by 4.0 and place them into their proper relationship as defined by your MSP layout. Then DataCAD makes that whole sheet a big ol' symbol on its own separate layer, which you can then export on its own to DWG and keep your consultants happy (*Figure 10*).

For you grizzled old veterans of DataCAD before MSP, this method is how we used to do multiple scale detail sheets by enlarging or reducing various details to get them to plot correctly at one overall scale. There was always a danger associated with this practice if you didn't remember that you had enlarged or reduced a detail, you might add to that detail with a new part that wasn't sized properly — relatively speaking.

The exact methodology is as follows. Create one or more MSP sheets in DataCAD as you normally would.

Now in *Print/Plot* menu, select *Multi-Layout*, then *Sheet*, then *Bind One*. (or *Bind All* if you want to do all the sheets at once.)

Pick the sheet you want to bind. Now pick the plotting scale that you want the overall sheet to be plotted at. You are given a choice of two methods to pick the scale. You can just pick one of the plotting details as your master scale. Hover your cursor over each detail and a flyout will tell you what the plotting detail's scale is set for. The other method is to select the *Scale* button to pick the scale off your normal scale list.

For example, if you have various plan enlargements situated around a 1/8" scale plan, you might pick 1/8" = 1'-0" as the master scale. Or if you have 8 details on a sheet and half of them are at 1" scale, you might pick 1" as your master scale to minimize the number of details that need enlargement or reduction. In reality, it doesn't matter which scale you pick, because all your plotting details will end up in the same relative size to each other. However, if your title block and border are one of the plotting details, it makes sense to pick that detail's scale as your master scale.

Once you complete those two steps (pick sheet, pick scale), your sheet details are

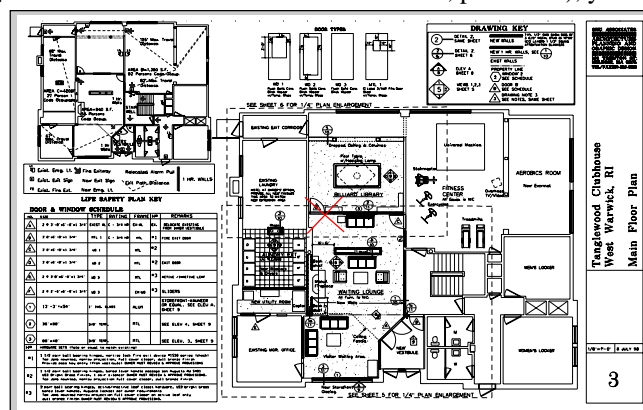


Fig 10: Binding will create a single symbol on a new layer to mimic your MSP drawing sheet.



1 In DataCAD 12, CTRL-A is now a keyboard shortcut for *Select All* (see Q & A), and CTRL-Z is for *Undo* (same as curving arrow icon). Undo will now work also for Layer on/off, and will restore your entities after you have made a symbol.

2. From Rick Gleason: If you really must have your old templates in DataCAD 12, you can repath them easily under the *Tools/Preferences/Pathnames*. Look under the “Classic Symbols” and “Classic Templates” headings, and you can set these choices to your old path, e.g. C:\Program Files\DataCAD 10\Templates etc.) One you “exercise” the templates three or four times to get the path set properly, the symbols will appear as in your old version.

3. From Oran Woody: Ever need to bisect an angle, quickly? Try using the 2 point arc command between the angle end points, then middle snap to pick the arc center, and then snap to the two end points (or mid-points) of the relevant lines of the angle. With that arc in place, I (Object) snap to the mid-point of the

arc, touch the comma to erase the arc, and then snap to vertex of the angle. *Done!*

4. From Dick Eades and Roger Donaldson: Another quick way to bisect an angle is to hit B (*Tangents*), F1 (*Bisect*) and pick the two angle lines, then the cursor is rotated to bisect the angle and you can draw your line or use it to mirror entities. Remember to *Cancel* tangents (B, F3) when done.

5. From Neil Blanchard: To print out the DataCAD pathnames list, open the *Info* menu under *Tools/Program Preferences* and make sure that *Program Paths* is checked off. Then use the Export button on the lower left corner to export the *Drawing Information* to a text file. (FYI: This procedure did not change with DataCAD 12!)

6. From Daniel Kaczor: Another way to print out pathnames is to open DCADWIN.INI in Notepad, scroll down to the [Paths] section, copy that section into another Notepad window and print it from there. Make sure you don't change anything in DCADWIN.INI. ☐

bound as a single symbol and placed on a new layer, named after your sheet name. You should now make this layer “active only” and rename the layer, so you remember what's on it. You might want to do a Quick Layout to confirm what the plotting scale should be for this layer/symbol. You are also free to add anything else you might want to add to this layer (e.g. notes to consultant on plotting scale, entities as AutoCAD block, etc.)

Now, you can go about your business and go to *File/Export to DWG* and pick “On Layers,” if you just want to send off that MSP sheet. Now, you go through your standard dialogs to create your new DWG file to send to your consultant.

The process is simple, fairly intuitive, but there are a few concepts to make sure you understand. First of all, this new layer is a *copy* of the state of your MSP sheet at that particular time and not tied to the actual

entities themselves (unlike XREFs). If you subsequently change any aspect of the plotting details, they will not automatically update to your new layer.

Secondly, this MSP layout on the new layer is a Symbol — with all that being a symbol entails. It all moves, rotates, enlarges/reduces as a single symbol. You can only edit any aspect, if you use the *Symbol Tools/Edit Symbol* procedure. If you explode it, it does not explode into separate plotting details at their original scales and layers but as all individual entities on a single layer, so you are not likely to want to take that step unless it is an emergency recovery type of operation.

If you keep those caveats and concepts in mind, you will find that this method to export MSP sheets to DWG is great — no muss, no fuss. Now, if AutoCAD only had a similar way to send us their PaperSpace sheets, we'd be all set. ☐



DR.
OPs

DBUG Forum Now Playing on Google Groups

It was with some reluctance, this past summer, that we switched the e-mail host for the DBUG forum and DBUG Tech Digest from the World to Google Groups (*Mar 09* for instructions on setting up your own Google Group). After all, the World has served DBUG well for 15 years, through thick and thin, as we all have grown up with this medium.

The way the old DBUG forum was set up, it didn't let subscribers use rich (formatted) e-mail, or attach files, nor was there a bulletin board to look up or search through old postings. That was reason enough for the DataCAD Forum to step into that gap four years ago (*Feb. 2005*) to provide those missing features as another resource.

Even so, we held on and kept using the majordomo software at the World for the DBUG forum, periodically weathering storms of lost service or otherwise wonky behavior from time to time. We certainly didn't trust Google Groups so much that we leaped in without hesitation. Instead, we gradually moved our subscribers over bit by bit — first the Tech Digest subscribers, then the DBUG forummites group by group.

We were able to make this gradual transition by the simple trick of making the Google Groups new posting address <datacad-dbug@googlegroups.com> one of the subscribers to the DBUG Forum service at the World. Therefore, any post sent to DBUG at World would also be posted at Google Groups. For the reverse trip (since Google Groups does not allow any mailing list addresses nor any



“postmaster@”, “webmaster@”, or “info@” e-mail, we manually forwarded any Google Group post back to the DBUG forum at World.

We describe all these machinations to you, not to confuse you further, but to simply say “it’s safe now!” For all of you who may have left the DBUG forum or DBUG Tech Digest forum over the years because of inability to post or receive e-mail or because of its lack of features to support rich e-mail or attachments, please feel free to come back now and check out the new DBUG forum on Google Groups.

You can first see how all the posts are automatically archived and threaded at their Google Group Bulletin Board(s):

<www.tinyurl.com/DBUGforum>
or
<www.tinyurl.com/DBUGtech>.

If you are already a member of either forum, you know that you are still receiving the usual DBUG forum posts but now with some rich e-mail and attached file e-mail mixed in with the typical traffic. If you would like to join either forum, you will now need a Google Account to do so. But bear in mind, you *do not* need a new Google gmail account to have a Google Account as many people believe. You can use your regular e-mail address to create a Google Account. Go to the main Google.com page and click on Sign-in, then *Create a New Account* — the direct link is <<https://www.google.com/accounts/NewAccount>>

Follow the steps outlined, and you will receive a e-mail with a subject heading “Google Email Verification” and once you click the link in that e-mail, your account will be created.

Once your account is created, you can sign-in, then go to the bulletin board page of any public forum and click “Apply for group membership.” You may be asked a simple question or request, e.g. “please tell us your interest in DBUG or CAD” — we figure most spammers won’t be able to satisfactorily answer this request. Do not

leave this request blank as most spammers do leave it blank and hope their silence will be rewarded with approval. Your application for group membership will be acted on usually within a couple of hours (unless we are sleeping at the time!) and you will start receiving DBUG e-mails.

And, if you have troubles with that procedure or are philosophically opposed to creating a Google Account, we both understand and sympathize. Send us an e-mail at <evanshu@comcast.net> and ask to join either the DBUG Forum or the DBUG Tech Digest, and we will add you in directly--no need for a Google Account.

Now, the way of the world being what it is, the biggest change we have had to institute is the need to approve all e-mails before they are posted. Otherwise, it leaves a hole where “spoofed” e-mail aliases can be used to get through membership restrictions on any group. We’ve also experienced cases where even non-member spammers still manage to find backdoor ways of posting to a member-only forum. So, with some reluctance, we

have changed to an “approve all posts” system, which means that some of you will experience longer delays in posting, especially those of you from the other side of the world from us who work and e-mail while we sleep. Our apologies in advance for these delays, but at least you know why.

So, all in all, we think the new features and the more reliable service and automated bulletin board have made the move to Google Groups for DBUG well worth it. And don’t worry about forgetting what the posting address for the DBUG forum is, we still have it setup to accept either (although the old one will still block attachments and rich text e-mail). The footer on DBUG forum e-mail now reads:

To Join or view DBUG Bulletin Bd:
<http://www.tinyurl.com/DBUGforum>
New Posts->
datacad-dbug@googlegroups.com
OR datacad-dbug@world.std.com

So, please, do give the new DBUG forum or DBUG Tech Digest a try — especially if you left it due to posting/receiving issues. It’s safe, the temperature’s warm, and the DBUG forum is cooking again. ☺



Fig. 11: DBUG Forums now have their own bulletin board archives on Google Groups.



IMPORTING BATCH OF LAYERS: Can I import an extensive series of layers that I've created to serve much like symbols? If so, where to and how do I access them?

If you just want the entities on the various layers and don't care about the layer names you can use the Layer Sets (*Lyr Sets*) function in DataCAD's *Layers* menu to both save them into a set and load them from a set. But we are guessing you probably do want the layer names loaded as well. By saying "like symbols," you are on the right track. A cheap tricks way to do it, is draw a little marker on each layer you want to save out, and then create a symbol (using *Layer Search*) of all those markers on all the layers. Now in any new drawing, place that new symbol and explode the symbol with the option *Original Layers (OrigLyrs)* picked. Now all your named layers will be (re)created in your new file.

MOVING MENU TOOLBAR: Now that more of us have upgraded to DataCAD 12 via the clunkers program, we have some elementary questions. I'm not finding an option in the Preferences/Interface tab to move the F key menu to the right hand side like in previous editions.

Go to the *View* pulldown menu and make sure there is no check by "Lock Toolbars," if checked, uncheck it. The top of your F key menu should have a dotted line along the top. Put your cursor on that line and click and hold and just drag the menu over to the other side of the screen and bump it into the side and it will dock into a side bar. You can move around all your other menus and toolbars that same way until you get an arrangement you like. If you want to keep it that way, go back and check "Lock Toolbars."

CTRL-A CHANGEUP: I updated DataCAD to the latest version to have access to the *SaveAs SketchUp* file export. I loaded the latest SU. Then, I

found that my CTRL-A key combination no longer works as it did before to taking me to the draw Arrows command as I have set in my DCADWIN.MNU file, it now takes me to the Windows command of "Select All." Is there a setting in Windows that I can re-set to make everything work as it did before?

From Dave Giesselman, DATACAD: If you don't want to use CTRL-A for Select All (such as after setting a Move distance), then Open your DCADWIN.INI file in Notepad and search for the following key in the [General] section:

Select All Character=a

You may change the "a" to any other character of your choice or change it to:

Select All Character=

to disable the command completely.

LOCKED OUT: I have installed Windows 7 Professional and have installed DataCAD 12 and am now getting the message that HLVDD.DLL is missing

From Nick Pyner: The "HL" tells you it's about the hardlock. Try loading your DataCAD 12 CD again and running the setup just for the Hardlock as that sometimes works. [Editor: also, to make sure you have administrative privileges under Windows 7 (or Vista), you can right-click on the hardlock setup execution file and use "Run As" then pick "Administrator".] Many people find it easier to just download the latest hardlock driver from DATACAD's website at <http://www.datacad.com/update/update_hardlock.htm>.

DATACAD 12 GROUPIES: I am trying to get used to DataCAD 12 and it looks like you have to check "keep groups" every time you use the copy command. I was used to setting this once in each drawing. I did not see it addressed in the manual. Anyone know how to get the "Keep groups" on as a default/permanent setting?

From Brian De Coster: Open the DCADWIN.INI file (found in the folder you installed DataCAD in) with Notepad and find the line near the top that reads "Copy Keeps Groups=FALSE" and change to "Copy Keeps Groups=TRUE" and save the file and you will get what you want.

BLUEPRINT DREAMS: Do you have any ideas on how to produce a PDF file or other image that looks like a blueprint, i.e. blue background with white lines? I'd like to use a few as backdrops on a web page.

From Daniel Kaczor: Make a new file with a layer for a Blue SPB fill which is at least the size of your sheet. Make additional layers for all the drawings you want to blueprint. XREF in the desired files and highlight the XREF using a near white custom color (I use color 254 mapped to R:254, B:254, G:254). Use MSP to layout sheets with the blue layer included. Then you can save as PDF or EMF and convert to JPG or GIF for the web. You will need to make some pen assignments in the pen table to make the blue and near-white print, but, you know what to do there.

From Oran Woody: If all you want is some web backgrounds, after you have what you want using the XREF method, just use a screen capture program to grab what you want for a quick and easy JPG or GIF image (*see below*).



From Wayne Allen: Another way is to export the drawing file to Sketchup. Then simply select a "style" that suits the effect you desire. There are several blueprint styles there, even those that will give the drawing a hand drawn effect. Φ



Podium for SketchUp

As many of you now use SketchUp as a companion modeling program to DataCAD, we wanted to tell you about a very powerful and simple to use SketchUp add-on utility called *Podium*. Podium is a rendering program and works in SketchUp (5/6/Pro) in a similar way that the Object (o2c) Viewer works in DataCAD. But the potential for high quality renderings, especially interior renderings, is much greater.

Our thanks to Eric H. Gjerde, AIA of the MZO Group Architects in Stoneham, Mass. for bringing this powerful utility to our attention via the September DBUG meeting presentation and demonstrating how easy it is to use and what impressive images can be obtained from it. He answered the following questions for the group about Podium.

1) Where do you find SU Podium?

<<http://www.suplugins.com/>>.

2) What does the Program do? It adds reflections, lights & realism to the model.

3) Is it hard to learn? No.

4) Does it cost a lot of money? No, it's free for the limited 500x500 output image size version. \$179.00 gets you the full working version for image output over 3000 pixels.

Once you have downloaded Podium at <www.suplugins.com> and installed it you will see it in SketchUp under the *Plug-in* pulldown menu. The amazing thing about this utility is that it is controlled by one ultra-simple menu (*Figure X*). The upper pulldown menu sets the rendering quality, and then you just have two toggle sliders that control *Light* and *Reflection*. *That's it!*

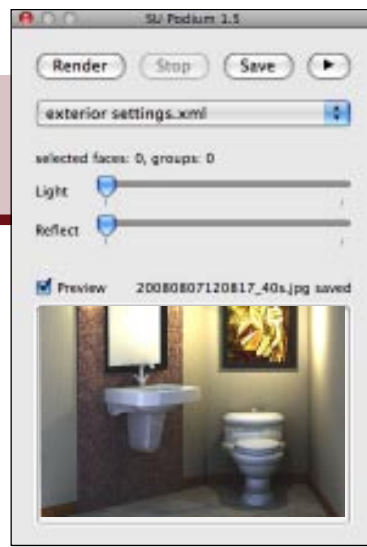


Fig. 12: Podium's ultra-simple menu (left) can still create ultra-realistic renderings (above). Images by Eric Gjerde.

Podium will use SketchUp's own textures, backgrounds, views and shadows to produce photorealistic renderings, so the plug-in is fully integrated with SketchUp itself (*Figure 12*).

Now, as Eric further explained, it is not quite that simple, but it is certainly simpler than any other photo-realistic renderer he has ever worked with. He found it less useful for exterior renderings (too stark, not realistic) but extraordinarily useful for interior renderings (very realistic!).

To get started with a simple exercise, pull up any SketchUp building model, and open the Podium menu (Plugins).

1. Click on to select any surface or face in the model.
2. While the surface is highlighted, pick a value for reflection by moving the Reflect slide bar in the Podium menu.
3. Paint a texture or color to the surface.
4. Check the Preview box, then click on the Render button and you will see the results in the *Preview* box below. Click *Save* if you want to keep that image. Click on the arrow button in the top right corner to change any of the rendering settings for pixel size, quality, or folder it is saved to.

Podium creates renderings of the SketchUp model by simulating the reflection of light on each SketchUp surface. By default, Podium applies SketchUp's default "Sky Light" source to the scene. By varying the amount of reflection on various surfaces, you can create a photorealistic effect. You can also change the lighting and reflection by changing SketchUp's background color (darker for evening shots) or shadows.

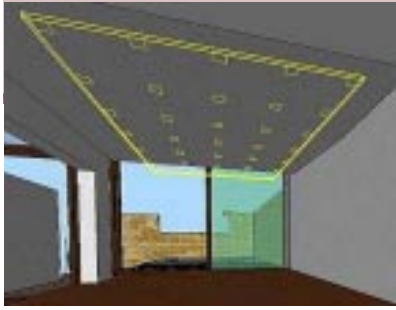
But, as we suggested, the more impressive use for Podium is with interior renderings not exterior ones. For this purpose, you will generally need to add at least some interior lumination in addition to any natural daylighting that may be available.

There are two main methods of adding light in Podium: one (LEM) is sparingly used, and one (Omni) is almost always to be used. LEM stands for Light Emitting Material and you create one by selecting any surface or face and moving the light slider to say, 20. LEMs are good for linear type lights (fluorescents, etc.). The problem with them is that they take a lot of rendering time and processing resources. Using 1 or 2 LEMs per rendering is about all a typical scene can handle without taking forever to process. (You can download a library of LEM lights from the Podium Users download area.)

So, if LEMs are to be used sparingly, if at all, what is a Podium renderer to use? The Omni light comes to the rescue. The Omni light is an invisible point source type of light that is created by making any object into a Group (*Select/Edit/Make Group*) and then applying the same Light slider setting to it from the Podium menu. With a LEM, the surface stays in view and emits light. With the Omni, the object or surface disappears but light is created. The bigger the surface, the bigger the area around it that is illuminated. So, you can put in a big floating square in the middle of your room and it will light up the room quite sufficiently — but not evenly, since it works as a point source of light.

So, the next step in your quest is to download a utility for Podium, called *Omni Grid*. You can get it for free at

Fig. 13: Omni Grid Utility light grid.



<<http://www.supplugins.com>> but you have to register as a Podium user. But then you can go to the *Registered User* area, and look in the index of available utilities to download Omni Grid.

What Omni Grid does, as the name suggests, is create a grid of omni lights. Once this utility is installed, you can select any planar surface and a grid of omni lights is created parallel and sized to that plane (you can reset the grid settings to get more or less lights, *Figure 13*). You then can use SketchUp's Move tool to reposition this omni grid of lights anywhere you like in the room. It is already set to create an even illumination of light, so be careful of adding any more light to it.

So, here it is in a nutshell. Create an interior scene in SketchUp, complete with "painted on" materials from SketchUp's libraries. Add in bitmap images of people (use the *Face Me* command to get them to always turn to your point of view). Add in an Omni Grid of lights. Hit Render, and you will soon get images as impressive as these shown by Eric Gjerde (*Fig. 12-15*).

When it seems too good to be true, it usually is. But Podium for Sketchup may actually be the exception to the rule. It really is a fairy tale simple solution to creating photorealistic interior renderings. ☺



Fig. 14: Podium rendering by Eric H. Gjerde.



Fig. 14: Podium rendering by Eric H. Gjerde.



From the Editor:

The *DataCAD 12 for Clunkers* promotion (turn in any old dongle-hardware key in for a new copy DataCAD 12 for only \$295) is getting another welcome jolt of publicity as DATACAD's 50,000 postcards arrived in the mailboxes of current and former DataCAD users this past month. And the response has been strong. Amazingly, it has even gotten many DataCAD DOS users (5/6/7/8) from way back to upgrade to DataCAD 12! It is, after all, a tremendous once-in-a-decade offer that is tough to resist. But don't procrastinate, thinking that DATACAD will keep extending that deadline. We have it on good authority that the CADD for Clunkers sale will definitely end on December 31, 2009. See more details at <www.datacad.com/trade-in> or e-mail <sales@datacad.com> with any questions (or even creative alternate scenarios for trade-ins that you would like to propose, e.g. "can I trade in my dog for DataCAD 12?")

To help with the inevitable flurry of questions in this upgrade transition, this month we have provided a DataCAD 12 FAQ (*Frequently Asked Questions*) issue to help you DataCAD 12 Clunkers (you don't mind being called that, do you?) catch up with all the new features. There is a lot there to absorb (and more we haven't even covered yet). In fact, as we were putting this issue together, we realized that there were several great new DataCAD 12 features that we had completely forgotten about and haven't really tried out ourselves yet (*Pen Styles, PakNGo*, the new DataCAD font among others). So even for you gurus, we hope this issue is a good refresher/reminder course on DataCAD 12.

Hopefully then, a strong finish for the CADD for Clunkers promotion will be just

what the doctor ordered to give DATACAD the impetus and time it needs to get the work done on DataCAD's next major version. DATACAD is getting ready to give its first public BETA showing of that upcoming X3 version of DataCAD at their annual appearance at the Build Boston tradeshow at Boston's World Trade Center. The X3 version is said to include such major new features as *Smart Symbols, Scale-independent Text, 2D/3D View-dependency*, and *Sun/Shadow Studies*. If you missed the October 23rd deadline for free registration, you can still register for an exhibit hall pass (\$10) and the 22nd Annual DBUG (DataCAD Boston Users Group) Meeting (Event SA15) on Wednesday, November 19, 2009 at 6 p.m. at <www.buildboston.com>.

Don't look for any more advanced productivity training sessions to come from DATACAD at least for the near future. That ship has sailed for now, so if you procrastinated or your wallet prevented you from taking advantage of those excellent training sessions, you will need to look for other alternatives (like subscribe to *Cheap Tricks!*) until at least next year.

It was just one year ago that the economy was in freefall and all of us were starting to wonder if there was any bottom to the recession. Now, most would agree that we've at least hit bottom overall but when and how strong the bounce back will be remains to be seen. We especially empathize with all of you middle managers who have been squeezed out of many firms in the downsizing process. We hear stories of how you've been faced with the difficult choice of competing for entry level drafting positions versus somehow striking out on your own. It's certainly still not an easy time for any of us. But we are encouraged by the sense of community that remains strong among DataCAD folk. Hang in there, we see light at the end of the tunnel and better days ahead. ☺

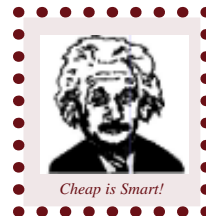
— Evan H. Shu, FAIA



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