

Newsletter

March
2001

autodesk
authorized reseller

www.autodes.com
Automated Design Systems
an Avalanche Networks
Corporation company
CDNX: AVH

Barrie
(705) 739-1818

Belleville
(613) 967-3694

Burlington
(905) 681-6760

Cambridge
(519) 658-9000

Kingston
(613) 546-6710

London
(519) 652-3825

Mississauga
(905) 565-8000

Richmond Hill
(905) 889-6662

Oshawa
(905) 404-1498

Ottawa
(613) 225-1717

St. Catharines
(905) 687-3931

Stoney Creek
(905) 662-5413

Sudbury
(705) 524-8080

Vancouver
(604) 647-2220

Windsor
(519) 972-8788

AutoCAD 2000
Mechanical Desktop®
Autodesk Inventor™
Architectural Desktop
Land Development Desktop
AutoCAD® Map
3D Studio MAX® / VIZ®

Note: Not all products are available from all offices.

Automated Design Systems AutoCAD® 2000 NEWSLETTER

Serving AutoCAD users for 12 Years 1988 - 2000

NEWSLETTER DISTRIBUTION OPTIONS:

Please **email** this newsletter to me. Name: _____ Email address: _____

Please **fax** this newsletter to _____ in addition to me instead of _____ Fax: _____

Please **mail** this newsletter to me instead of faxing. Name: _____ Address: _____

Please include the **mechanical parts design page** when you send the newsletter to me. Name: _____

Please include the **quarterly architectural/civil page** when you send the newsletter to me. Name: _____

Please **do not send** this newsletter to _____

Please fax this sheet to (905) 662-4842 to have these changes made to our newsletter distribution list.

Customizing CAD

I entered the CAD industry in 1986. AutoCAD 2.17 was the current release and 2.18 came out shortly thereafter. With 2.18 came the ability to program commands using an obscure programming language called AutoLISP – a superset of Common LISP developed specifically for AutoCAD.

It was the course I took in AutoLISP that made me really fall in love with AutoCAD. I knew that with this programming language, the opportunities to customize AutoCAD to meet the specific requirements of users were virtually limitless.

We developed our own applications, many of which are still provided to our customers today at no charge, such as TE! Table Editor, which makes working with tables and schedules within AutoCAD a breeze, and our Power Tools 2000, which started out as A.D.S. Utilities – a collection of useful programs to automate certain repetitive tasks in AutoCAD. And we became a Registered Developer with Autodesk because of our programming initiatives.

Now, AutoLISP is playing second fiddle to Visual Basic for Applications (VBA), which is recommended for new programs due to its flexibility, ease of learning, and ability to communicate with other applications.

The next step in the programming evolution is to drive your AutoCAD, Mechanical Desktop and Autodesk Inventor-generated designs with input over the Internet. Imagine allowing your sales team or even your customers to create the designs for their parametrically generated products over the web. If you are interested in how your applications can be automated – including creating a web interface – please contact your nearest Automated Design Systems rep.

Bruce Lamb, President

Show your designs in interactive 3D on the Web

If a picture is worth a thousand words, what is the value of a dynamic 3D model that shows exactly how a product works and sounds?

Now you can see anything from the interior design of a building to consumer electronics to construction industry products and industrial components – all over the web.

The technology that allows this 3D capability is a **Cult3D** plug-in that gets installed as soon as you go to a page that includes a Cult3D model. The plug-in is about 1 MB in size, but only needs to be downloaded once.



The above screen shot shows a fictional interior design of a store layout that you can *walk through* in real time over the web – and the file is **only 148k** so it can be viewed easily over a dial-up connection.

To try out this walk-through, select the Essence Cosmetics link from the bottom of the side menu at www.partsdome.com/FluxCaps. And call your Automated Design Systems rep to see how you can market *your* designs over the web!

Quote of the month:

“Car sickness is the feeling you get when your monthly payment is due!”

– Unknown

On-site demonstration, anyone?

So you haven't had time to make it to our seminars, but you have this gut feeling that there may be a good solution for your company with some of the new technologies available. Well, our people are very motivated to show you how the latest versions of **Autodesk Inventor, Mechanical Desktop, Architectural Desktop, Land Development Desktop and AutoCAD Map** can make your company more productive. And if we do it at your office, the key decision-makers in your company can see for themselves how much more productive you can be with the software. So give your nearest Automated Design Systems office a call and we can discuss whether a demonstration of the compelling new software at your site would make sense!

Autodesk clamps down on piracy

Autodesk Inc. has announced that its Piracy Prevention Department has once again reached record-breaking numbers with more than \$5.6 million (U.S.) recovered from copyright infringers of its design software in North America last year. This brings the total amount to more than \$45.9 million (U.S.) in North America since 1989.

"We are seeing a marked increase in the number of calls to our Hotline at 1-800-NO COPIES and reports to our web site, which are directly responsible for the increasing numbers of recoveries we continue to obtain," said Sandra Boulton, director of the Piracy Prevention Department at Autodesk. "Ethical individuals are reporting companies who are suspected of illegally copying our software onto multiple machines - a common practice among small and mid-sized firms who either fail to enforce software piracy guidelines, have poor software management practices, or look the other way to try to keep expenses at a minimum."

**Do it better... faster...
with training from
Automated Design Systems**

How can you become more productive with your Autodesk software?

Take a training course from Automated Design Systems

Why take training from Automated Design Systems?

- ✓ Automated Design Systems is an authorized Autodesk dealer. We have been providing our clients with the total CAD solution for thirteen years.
- ✓ We offer a large number of courses for all Autodesk products, using Autodesk Certified Courseware designed for intensive instructor-led training.
- ✓ Our class sizes are small so that intimate, interactive training takes place between the trainer and student.

Contact your local Automated Design Systems office to reserve your seat in an upcoming course.

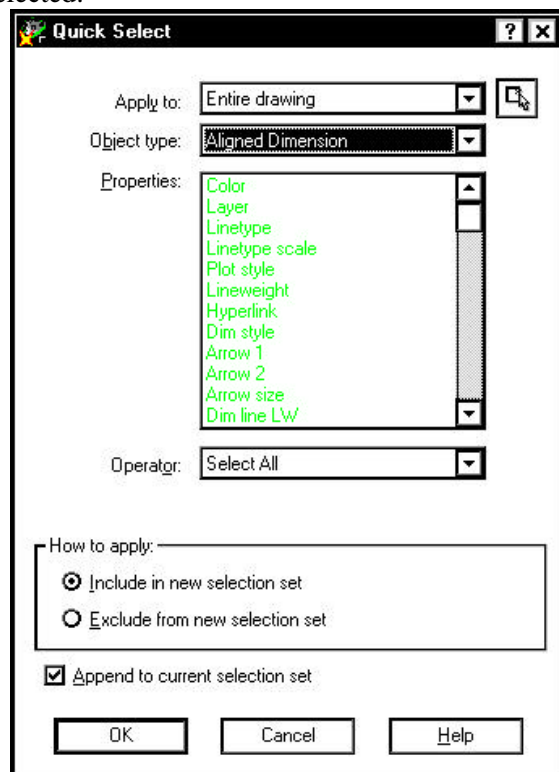
AutoCAD 2000i Tips!

Change Properties with Quick Select

The Properties window within AutoCAD 2000i has a nifty feature in the top right corner called the Quick Select filter. This filter allows you to select entities within your drawing by entity type, colour, etc. so you can change all of the properties of the selected objects at once.

Suppose, for example, that you want to change all of the dimensions in your drawing to the DIM layer. Here is how you can do it:

1. Select the Properties button to open the Properties window.
2. Select the Quick Select button from the top right corner of the Properties window. This action will bring up the Quick Select window.
3. From the Object Type pull-down, select Aligned Dimension.
4. From the Operator pull-down, select "Select All".
5. Press [OK] to return to the Properties dialog box. Note that your horizontal and vertical dimensions are now selected.



6. Repeat steps 2 to 5 for other Object Types -- including other types of dimensions such as Rotated Dimensions and Radial Dimensions -- to add them to the selection set to be modified by the Properties command.
7. Change the selected Layer to DIM within the Properties dialog box.

Note that you can also access the Quick Select dialog box by typing QSELECT at the Command: prompt, or by right-clicking in the drawing area and selecting [Quick Select...].

Check out EdgeCAM on Inventor R4 Special Trial CD

Autodesk just recently sent out approximately 200,000 Inventor R4 Special Trial Edition CDs. This CD is a great opportunity to try out Inventor. But there are two other programs on this CD that you may not have noticed: Cosmos/DesignStar and Pathtrace's EdgeCAM CNC software. EdgeCAM is a complete manufacturing solution to meet all your CNC programming needs, including Surface, Rotary and Multiplane Machining, 2 and 4 Axis Wire EDM, 2, 4 and C & Y Axis Turning.

This software includes 2D/3D Design and Modeling, 2½ to 3 Axis Machining, 5 Axis Trimming and Deflashing, 2 to 4 Axis (C and Y) Multi-Axis Turning, 2 to 4 Axis



Wire Erosion, Tools, PCIs and PDIs, Editor, Code Wizard, Edge Communications, and EdgeCAM for Mechanical Desktop. If you are interested in high function, high performance CNC software for Mechanical Desktop and Inventor, ask your Automated Design Systems representative about EdgeCAM, or visit www.autodes.com/cnc.

PartsDome gains momentum

The combination of a professionally designed web site, database-driven content and compelling 3D models delivered over the web have made our prototype PartsDome site – Thaler Metal Industries – an unqualified success. Thaler's chief engineer expects that, based on the past 3 months results, **they will do \$2,000,000 in business this year as a direct result of their web initiative** – mostly into the U.S. Check out their designs in 3D at www.thalermetal.com.

Two other PartsDome sites have just gone live in the past month as well:

Emco-Wheaton Corp. has unveiled their web initiative (www.emcowheatoncanada.com), which is designed to promote their new Dry-Break™ line of fleet fueling systems, in addition to other products. The 3D model of the Dry-Break not only shows how its coupler and adapter go together, but the cut-away view shows how the fluid actually moves through the system when engaged. Check out the **Dry-Break** section of their site to see it in action. Very cool!

And Sobotec Limited has unveiled their site at www.sobotec.com. While this site doesn't show any 3D content, they are using the database-driven functionality of the site to show a **gallery** of recently completed projects. Since the content for the site is almost 100% driven by information in a database, they can update information quickly and easily without having to be HTML gurus!

Inventor 4.0 Tips

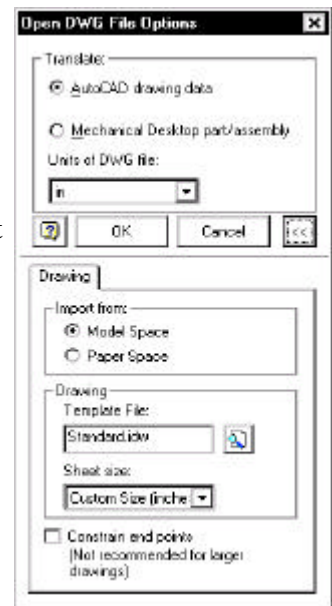
Inserting 2D drawings into Inventor

One of the key advantages to using Inventor is the ability of Inventor to open and allow you to use your existing 2D AutoCAD or 3D Mechanical Desktop files. And since the same company who makes AutoCAD makes the translator – Autodesk – you are assured of great translation results!

It is really easy to start using your existing 2D or 3D data. The simplest way is to just open the DWG file from the File>Open pull-down menus.

For 2D drawings, you will be prompted as to whether or not you want Inventor to automatically constrain endpoints. For small drawings, this is a recommended action.

The 2D drawing data will open into your Inventor session in a new Drawing (.idw) file, just as if you were creating drawing views of your 3D model.



Note that dimensions won't appear if the 2D drawing is opened directly onto a draft plane in an existing model.

To make changes to the sketch, right-click over the sketch geometry and select [Edit]. Then you can highlight geometry and move or delete that geometry as necessary. Select [Finish Sketch] from the right click menu to finish editing the sketch.

Imported dimensions are not considered part of the sketch unless you “promote” them. You can do so by simply right-clicking over the dimension and selecting “Promote to Sketch”. These dimensions now become “driving” dimensions. If you right-click over a promoted dimension and select “Edit Local Sketch Dimension”, you can change the value and the sketch geometry will change to reflect the change in dimension. In effect, you have created a 2D parametric drawing!

Once you have made the desired changes in the sketch, you can either right-click and select [Finish Sketch], or you can edit the sketch, copy the lines and dimensions into the clipboard, and copy the information onto your current sketch plane in your model. Finally, just use your regular Inventor sketch and feature tools to turn the sketch into a parametric solid.

The ability to import 2D and 3D data with ease is a key reason to choose Inventor over non-Autodesk software.

Do it Better... Faster...

with AutoCAD training from Automated Design Systems

Automated Design Systems runs AutoCAD training regularly from all of our offices. Here is a summary of courses that are scheduled in our offices in the coming weeks. Dates are subject to change without notice, so please contact your rep to reserve your seat as soon as possible.

Barrie Call Jim Clubine at (705) 739-1818

Course	Dates	Price
AutoCAD Fundamentals	Mar 5 - 9	\$1,095
AutoCAD 2000i Update from R14	Mar 12 - 13	\$695
AutoCAD LT Fundamentals	Mar 14 - 16	\$795
AutoCAD 2000 Advanced	Mar 19 - 20	\$795
AutoCAD 2000i Update (Condensed)	Mar 21	\$395
AutoCAD 2000 3D Modeling	Mar 26 - 28	\$1,095
AutoCAD Customization	Mar 29 - 30	\$795

Belleville Call Nick Nowitski at (613) 967-3694

Course	Dates	Price
AutoCAD Fundamentals	Mar 5 - 9	\$1,095
AutoCAD 2000 Advanced	Mar 12 - 13	\$795
AutoCAD 2000i Update from R14	Mar 14 - 15	\$695
AutoCAD 2000i Update (Condensed)	Mar 16	\$395
Architectural Desktop Fundamentals	Mar 19 - 21	\$1,095
AutoCAD LT Fundamentals	Mar 26 - 28	\$795
AutoCAD 2000 3D Modeling	Apr 2 - 4	\$1,095

Cambridge Call Andy Leitch at (519) 658-9000

Course	Dates	Price
Mechanical Desktop Fundamentals	Mar 5 - 9	\$1,395
AutoCAD 2000i Update from R14	Mar 12 - 13	\$695
AutoCAD 2000 Advanced	Mar 14 - 15	\$795
Autodesk Inventor	Mar 19 - 21	\$1,095
AutoCAD Fundamentals	Mar 26 - 30	\$1,095
AutoCAD 2000i Update (Condensed)	Apr 2	\$395
Architectural Desktop Fundamentals	Apr 3 - 5	\$1,095

London Call Laura Minogue at (519) 652-3825

Course	Dates	Price
AutoCAD Fundamentals	Mar 5 - 9	\$1,095
AutoCAD 2000i Update from R14	Mar 12 - 13	\$695
AutoCAD 2000 3D Modeling	Mar 14 - 16	\$1,095
Architectural Desktop Fundamentals	Mar 19 - 21	\$1,095
AutoCAD 2000 Advanced	Mar 22 - 23	\$795
Mechanical Desktop Fundamentals	Mar 26 - 30	\$1,395
AutoCAD 2000i Update (Condensed)	Apr 2	\$395

Mississauga Call Matt Willcocks at (905) 565-8000

Course	Dates	Price
Architectural Desktop Fundamentals	Mar 5 - 7	\$1,095
AutoCAD 2000 Advanced	Mar 8 - 9	\$795
AutoCAD 2000i Update from R14	Mar 12 - 13	\$695
AutoCAD 2000i Update (Condensed)	Mar 14	\$395
Autodesk Inventor	Mar 19 - 21	\$1,095
Mechanical Desktop Fundamentals	Mar 26 - 30	\$1,395
AutoCAD Fundamentals	Apr 2 - 6	\$1,095

Ottawa Call Jean-Marc Brunet at (613) 225-1717

Course	Dates	Price
AutoCAD 2000 3D Modeling	Mar 5 - 7	\$1,095
AutoCAD Customization	Mar 8 - 9	\$795
Autodesk Inventor	Mar 12 - 14	\$1,095
AutoCAD 2000i Update from R14	Mar 15 - 16	\$695
AutoCAD 2000 Advanced	Mar 22 - 23	\$795
3D Studio Viz	Mar 26 - 28	\$1,095
Mechanical Desktop Fundamentals	Apr 2 - 6	\$1,395

Richmond Hill Call Jesse Higgs at (905) 889-6662

Course	Dates	Price
Autodesk Inventor	Mar 8 - 10	\$1,095
AutoCAD Fundamentals	Mar 12 - 16	\$1,095
AutoCAD 2000i Update from R14	Mar 19 - 20	\$695
AutoCAD 2000 3D Modeling	Mar 21 - 23	\$1,095
Mechanical Desktop Fundamentals	Mar 26 - 30	\$1,395
AutoCAD 2000i Update (Condensed)	Apr 2	\$395
AutoCAD LT Fundamentals	Apr 3 - 5	\$795

Stoney Creek Call Phillip Morais at (905) 662-5413

Course	Dates	Price
AutoCAD Fundamentals	Mar 5 - 9	\$1,095
3D StudioViz	Mar 12 - 14	\$1,095
AutoCAD 2000 Advanced	Mar 15 - 16	\$795
Mechanical Desktop Fundamentals	Mar 19 - 23	\$1,395
Autodesk Inventor	Mar 26 - 28	\$1,095
AutoCAD 2000i Update from R14	Mar 29 - 30	\$695
AutoCAD 2000 3D Modeling	Apr 2 - 4	\$1,095
AutoCAD 2000i Update (Condensed)	Apr 5	\$395

Sudbury Call Dan Gamsby at (705) 524-8080

Course	Dates	Price
Mechanical Desktop Fundamentals	Mar 5 - 9	\$1,395
Autodesk Inventor	Mar 12 - 14	\$1,095
AutoCAD 2000 Advanced	Mar 15 - 16	\$795
AutoCAD 2000i Update from R14	Mar 19 - 20	\$695
AutoCAD Fundamentals	Mar 26 - 30	\$1,095
Architectural Desktop Fundamentals	Apr 2 - 4	\$1,095

Vancouver Call Byron Studer at (604) 647-2220

Course	Dates	Price
AutoCAD Fundamentals	Mar 5 - 9	\$1,095
AutoCAD 2000 Advanced	Mar 12 - 13	\$795
Architectural Desktop Fundamentals	Mar 14 - 16	\$1,095
3D StudioViz	Mar 19 - 21	\$1,095
AutoCAD 2000i Update from R14	Mar 22 - 23	\$695

Windsor Call Reynaldo Faraon at (519) 972-8788

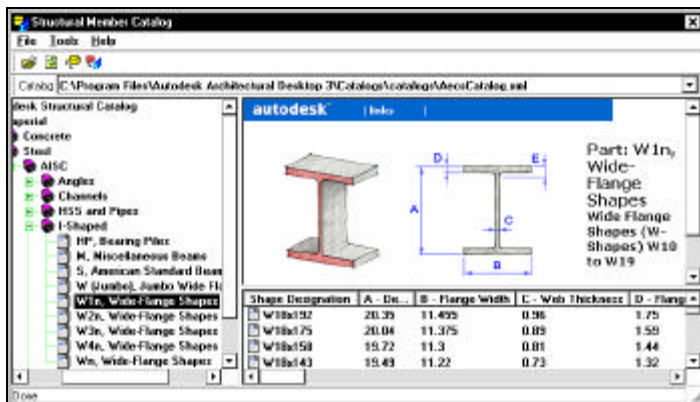
Course	Dates	Price
AutoCAD Fundamentals	Mar 5 - 9	\$1,095
AutoCAD 2000 Advanced	Mar 12 - 13	\$795
AutoCAD 2000i Update from R14	Mar 14 - 15	\$695
AutoCAD 2000i Update (Condensed)	Mar 16	\$395
Mechanical Desktop Fundamentals	Mar 19 - 23	\$1,395
Autodesk Inventor	Mar 26 - 28	\$1,095
AutoCAD Customization	Mar 29 - 30	\$795

Architectural Desktop 3.0 Tips Working with Structural Members

Architectural Desktop 3.0 now allows you to create structural members, such as columns, braces, and beams in your drawings. The software includes a Structural Member Catalog that allows you to easily access industry-standard structural shapes. You can also create your own structural shapes that you can add to existing structural members, or use your shapes to create new structural members.

To create a structural member style from the catalog, perform the following steps:

1. Select Design>Structural Members>Structural Member Catalog from the pull-down menus.
2. Select the material (concrete, steel, or timber), type (pre-cast, AISC) and shape (angle, I-shaped) for the structural member. You'll eventually see a list of all the available standard sizes for the member.
3. Select the Shape Designation you want from the list in the lower right corner of the dialog box and right-click to "Generate Member Style..."
4. Give the style a name and press [OK].



Now you can insert the structural member into the drawing using the following steps:

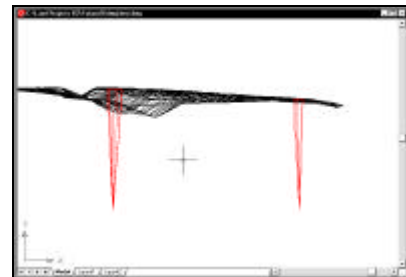
1. Select Design>Structural Members>Add Column (or Add Brace, or Add Beam) from the pull-down menus.
2. At the Command prompt, you'll be asked to "Select grid or RETURN". Press ENTER.
3. You can either type ST for Style at the command prompt, or select your newly defined style from the Add Columns dialog box that will appear (shrunk) at the top of your drawing window.
4. Adjust the height of the column within the dialog box.
5. Finally, pick an insertion point for the column and rotate it as appropriate. You will be prompted to repeat column insertions until you press ENTER from the keyboard.

This ability to work with industry standard structural member shapes is a real time saver, and is just one of the many benefits of working with Architectural Desktop!

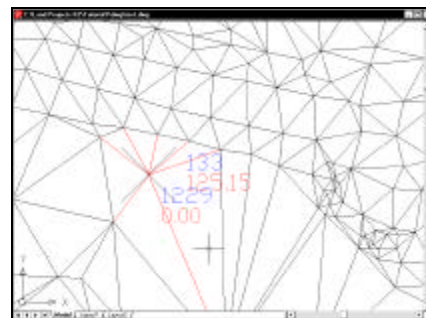
Land Development Desktop Tips Surface Blunders – Edit or Delete?

By Trevor Westerberg, Civil/GIS Specialist

Immediately after creating a surface in Land Development Desktop, you should check for surface blunders. Point irregularities within a cluster stand out and bad shots are easily recognizable when you view your surface on its edge. This can be done by using the 3D ORBIT command to alter your viewpoint, or select View>3D Views>Front from the pull-down menus.



Once found, you can modify these points or delete them. To distinguish the points, use Object Properties to change their colour (i.e.: use 'red' instead of 'bylayer'). After you restore your plan view, zoom into a "bad point" location to determine the point to be checked.



If you don't have your point numbers shown on the drawing, you can turn them on around the renegade points by doing a Points>Insert Points into the drawing. Use the Window option and select a window around the area in which you want to display the points.

Finally, to edit the point(s):

1. Select Points>Edit Points>Edit Points... from the pull-down menus.
2. Enter the renegade point(s) into the Current List, then press [OK].
3. Change the Elevations as required, press OK.
4. Re-build the Surface.

Note that the elevations of the modified points are changed in the points database as well as in the drawing.

If you decide that you don't need the renegade point in the points list, select Terrain>Edit Surface>Delete Point from the pull-down menus. After selecting a point marker to delete, the surface is updated automatically.