Workshops, Technology Days, Breakfast & Training – Oh My!

September 10, 2012
It's that time of year again… Early registration for our end of year workshops in North Carolina.

This year we will have day-long events in **Statesville** and **Asheville** in November and then in **Raleigh** and **Wilmington** in December. We have several new classes that have been developed in response to requests we received last year. Seats are limited and early registration discounts are available now.

In addition, we are also holding two Technology Days in **Charleston** and **Myrtle Beach**, South Carolina. These October events are 1/2 day sessions that will cover Carlson Software and data collection offerings.

And, for those in **Wilmington NC** on October 10th – join us for

a Free **Technology Breakfast** at the Cracker Barrel just off S College Road. The event is FREE but registration is required.

You can register or find out more about all of these events here.

Did you know… About the Flatten Command?

September 10, 2012
FLATTEN is an Express Tools command in AutoCAD and a standard command in IntelliCAD. It allows you to quickly convert 3d objects to a 0-elevation, flat version of itself.

Most of us in the civil/survey world have gotten frustrated when we've received a drawing from someone who used lines more than polylines and apparently snapped to everything in the drawing that had an elevation! The result is that you have lines drawn on a slope and with which it's nearly

impossible to inverse distances or even perform simple drafting commands.

So, next time that happens, try the FLATTEN command and see if that helps get things back where they're supposed to be!

Did you know… about all the different selection methods in CAD?

September 10, 2012
Anyone who has used AutoCAD or IntelliCAD for any period of time will be familiar with a few of the selection methods available to you during editing commands… although you may not know the "official" name of the method.

When your Command: line prompted reads "Select Entities:", you can use the following methods to add entities to the

selection set:

A **Single** selection is when you use a “Pickbox” to select one entity at a time.

An **Implied Window** selection is when you drag a rectangular area, from left to right, around the entities to be selected. This method will select any entities that are fully enclosed within the area. To force a **Window** selection, you can also type “W” at the Command: line when prompted to “Select Entities:”. **Window** selections are indicated by the solid outline of the rectangle and a color shading within the rectangular area.

An **Implied Crossing** selection is when you drag a rectangular area, from right to left, around or across the entities to be selected. This method will select any entities that are fully enclosed or touch (cross…) the outline of the rectangle. To force a **Crossing** selection, you can also type “C” at the Command: line when prompted to “Select Entities:”. **Crossing** selections are indicated by the dotted or dashed outline of the rectangle and a color shading within the rectangular area.

So, these are the ones you probably know about. But, what about these?

Again, when prompted to “Select Entities:”, you can do any of the following:

Hold the SHIFT-key down while selecting objects using **Single**, **Implied Window** or **Implied Crossing** selection methods will un-select any objects previously selected.

Type “P” at the Command: line to use the **Previous** selection method. This method will automatically select the same objects that had been selected for the most recent editing command. This obviously doesn’t work if the **Previous** selection set has been ERASEd from the drawing.

Type “L” at the Command: line to use the **Last** selection method. This method will automatically select the entity most recently added to the drawing. The entity must also be visible on the drawing screen in order to be selected.

Type “ALL” at the Command: line to use the **All** selection method. This method will automatically select all entities visible in the current space.

Type “F” at the Command: line to use the **Fence** selection method. This method allows you to drag a line (by picking points) across the entities to be selected. When picking the points for the **Fence**, the sketched line is dashed or dotted. This method is similar to a **Crossing** selection as it will select anything that touches the **Fence**.

Type “WP” at the Command: line to use the **Window Polygon** selection method. This method allows you to sketch an irregularly shaped area (by picking points) around the entities you wish to select. Any entities that are completely inside of the non-rectangular area will be selected. This is simply a non-rectangular version of the **Window** selection method. **Window Polygon** selection areas are indicated by the solid outline and color shading of the irregularly shaped area.

Type “CP” at the Command: line to use the **Crossing Polygon** selection method. This method allows you to sketch an irregularly shaped area (by picking points) around or across the entities you wish to select. Any entities that are completely inside of the non-rectangular area or touching its outline will be selected. This is simply a non-rectangular

version of the **Crossing** selection method. **Crossing Polygon** selection areas are indicated by the dashed or dotted outline and color shading of the irregularly shaped area.

If you have a complex selection set and need to un-select several entities, you may find it impractical (and frustrating) trying to un-select everything by using SHIFT+<select> to do so.

Another way to un-select a bunch of entities is to use the **Remove** selection mode. When prompted to “Select Entities:” at your Command: line, type “R” to change your Command: line prompt to “Remove Entities:”. Now, any entities you select, using any method, will be **Remove**d from the selection set. You do not have to hold SHIFT and you can use **Fence**, **Last**, **Window Polygon**, etc. to remove those items.

After Removing entities from the selection set, type “A” at the Command: line to return to the **Add** selection mode. This changes the Command: line prompt back to “Select Entities:” and you will once again be able to **Add** objects to the selection set.

Did you know… About the Change Space Command?

September 10, 2012

Some of us are old enough to remember life without the CHSPACE command… and what a great addition it was when the command was finally introduced to AutoCAD several years ago. And, with the release of IntelliCAD 7, it's now in that program as well.

CHSPACE is a command that allows you to move one or more entities from Model Space to Paper Space (or vice versa) very easily. In AutoCAD, the operative word there is "MOVE". You have to be a little careful because the command does exactly that: It MOVES it from paper to model or from model to paper. In IntelliCAD, you are given the option of COPYing the selected entities from one space to the other.

The command actually does more than just move or copy selected entities, it also scales the entities by the

viewport scale so they're correct size-wise. For instance, let's say that you have a drawing in model space that's been rotated so that it more easily fits on a sheet of paper. Also in model space, you've inserted a North arrow. And, in paper space/layout view, you have inserted a title block at a scale of 1:1 (18″ x 24″, etc.). Inside of the title block, you've created a viewport you've scaled to 1″=40′.

For drafting purposes, it's desirable to have the North arrow in paper space to that it can be moved around and positioned outside the viewport. If you're in AutoCAD, the first step is to make a copy of the North arrow. If you're using IntelliCAD, this step isn't necessary. Then, while in paper space/layout view, double-click inside the viewport to make it active. Type CHSPACE at the Command: line. Follow the various prompts within the command and Voila! Your North arrow is now in paper space and it's been scaled down by 40 times so that it fits properly on your title block.

Did you know… that you can print your CTB files?

September 10, 2012

Several years ago when I started my business, my first contract was as an outside CAD manager for a civil & land planning firm. In trying to document their pen weights, screening, etc. I found a utility available on Autodesk's website that allowed me to export all the values in a CTB file to a .csv file that could be opened (and printed) with Excel.

Here is the old Autodesk Knowledge Base article – it still works for anyone using AutoCAD-based programs version 2007-2008.

Unfortunately, I haven't been able to find a more current version of this utility until recently. Govert's Tools has a program called PlotStyleViewer. You can download it here.

In his words,

> *This inspired me to create a CTB/STB view/print application*

> *that works completely **independent of AutoCAD and Autodesk tools**! The program consists of just one executable file, there are no other exe's or dll's needed. It should work with CTB's/STB's from AutoCAD 2000 upto the latest version. The purpose of this tool is that you can **view** CTB's, **print** them and **save as** text file that you can open in Excel etc.*

It's a handy little utility and doesn't seem to be limited to a particular version. Hope you get as much use out of it as I do.

Esri GIS Starter Kit for Carlson's IntelliCAD Users – Repost

September 10, 2012
[This offer ended on 12/31/2013]

That CAD Girl

Since there's a renewed interest in IntelliCAD with the improvements to 7.0, I'll re-post this…

Those currently using Carlson with IntelliCAD are eligible for a FREE "GIS Starter Kit" from ESRI. The Kit includes:

- ArcGIS ArcView desktop software
- A copy of the book *A to Z GIS: An Illustrated Dictionary of Geographic Information Systems*
- A copy of *GIS Tutorial: Workbook for ArcView 9*, Third Edition
- A 10% discount for the ESRI Survey & Engineering GIS Summit ($325 – standard registration price)

To take advantage of the offer, call 1-800-GIS-XPRT (1-800-447-9778) and request the **Carlson-IntelliCAD GIS Starter Kit** and **please have your Carlson Serial Number available**.

You can read more about ESRI's commitment to survey and engineering services by visiting http://www.ESRI.com/engineering.

Did you know… About DWG Convert & True View?

September 10, 2012

As most everyone knows, every 3 years Autodesk ruins a perfectly good DWG format by introducing a new one…

With the 2013 version of the Autodesk products now released, anyone using a version of AutoCAD older than 2013 can expect to start receiving 2013 .dwg files that they can't access because its an incompatible version. This is where the DWG Convert function inside of DWG TrueView can be a lifesaver.

DWG TrueView is FREE utility available from Autodesk. They release a new version of this program every year, just like their other products.

With the True Convert utility you can convert any newer version DWG or DXF to any earlier version. I'd recommend you enable the option that creates a .bak file with the original

just in case you need it later.

Inside the True Convert utility you can also enable several other options that will run routines such as Audit, Purge, XREF Binding, etc. during the convert process.

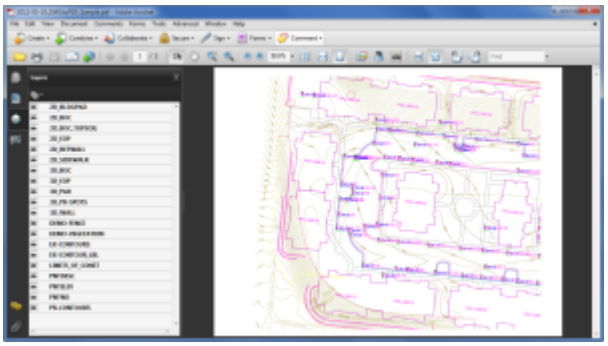
You can download DWG True View 2013 here.

Did you know… about DWG to PDF?

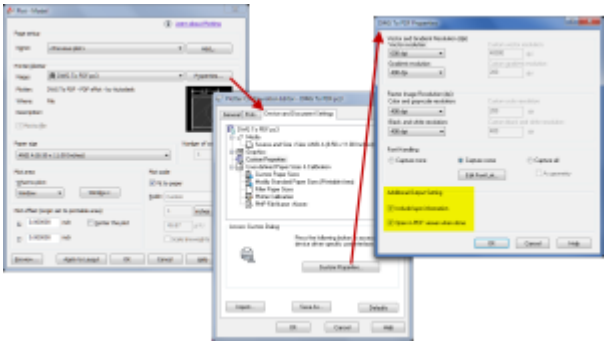
September 10, 2012
Since I have to send so many files to different people in PDF format, I purchased Adobe Acrobat several years ago. Once installed, “Adobe PDF” shows up in my list of available printers just like my HP or Brother printers do. There are also several other programs available online that allow you

to create a PDF printer. Although I've never used them, I've heard good things about CutePDF and Sourceforge PDF Creator and I've used Win2PDF in the past. Each of these have a free version but you may end up getting a watermark or footer or 2nd page that states you're using a Free copy.

Any of these can be installed and will be shown as an available printer in the Plot dialog box of AutoCAD or IntelliCAD. Several years ago AutoCAD started including a DWG to PDF.pc3 file allowing AutoCAD users to use that tool rather than having to purchase a separate application to create PDFs. One advantage of using the DWG to PDF is that there is an option to save all the layers used in the DWG with the PDF file. With this setting enabled, anyone viewing the PDF through a PDF viewer has the ability to make one or more layers invisible. See the image below for an example:



While this is a neat feature, you might not always want your list of layers to transmit with your PDF. If not, it's easy enough to change the option. In the **Plot** dialog, set the current plotter to DWG to PDF.pc3 and then pick the **Properties** button to the right. Under the **Device and Document Settings** tab, you can change several options such as available paper sizes. You can also select the "Custom Properties" item in the tree for special options that are unique to the "printer". You can see in the image below that this is where you can find the option for whether or not to "Include layer information".



Did you know… About the CHSPACE command?

September 10, 2012

The CHSPACE (Change Space) command is simply a lifesaver for anyone using paper space to put together your project drawings.

In AutoCAD, CHSPACE can be typed in at the command line or found in the Modify menu or ribbon panel. In Carlson with IntelliCAD, CHSPACE can be typed in or easily accessed from the right-click context menu after the items have been selected.

This command will move entities from model space to paper space or vice versa. You must be working in model space through paper space in order to move entities from model to paper – it will not work directly from model space. The nice thing about the command is that it will scale the entities (to account for the differences in scale between model and paper space) so you don't have to. The AutoCAD version of this command actually performs a MOVE command on the entity

whereas the IntelliCAD version gives you the option of moving the original or making a copy to the other space. If you're using AutoCAD, make a copy of the entity before performing the CHSPACE command.

I find this command most handy when I have a linear project such as a water line or force main extension project with many sheets of plan and profile that change direction. In model space, I make multiple copies of the North arrow and place them along the meandering alignment. Then, from paper space, I make each viewport active and use CHSPACE to move one of the copies to the paper space sheet.

That CAD Girl – April 2012 Newsletter

September 10, 2012
In case you missed it, here is our April 2012 Newsletter…