Did you know… About the CHSPACE command?

May 7, 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

May 7, 2012
In case you missed it, here is our April 2012 Newsletter…

Did you know… About Coordinate Display Toggles?

May 7, 2012

Did you know that, when you're in AutoCAD or IntelliCAD, you have a couple of different options when it comes to displaying the coordinate position of your crosshairs?

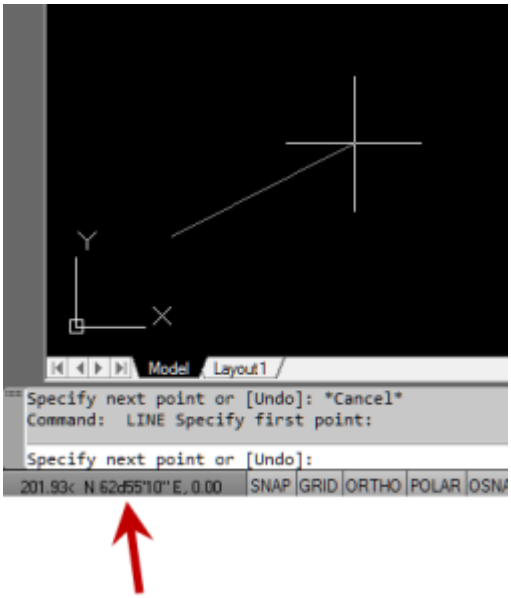
For instance, when you're NOT in a command, you have two options for displaying the coordinate position of your crosshairs as it moves across your screen: On or Off. If the coordinate display is toggled ON, then the X, Y and Z position (rectangular coordinates) of your crosshairs are displayed and if it's OFF, then the X, Y and Z display is frozen and doesn't update as your mouse moves.

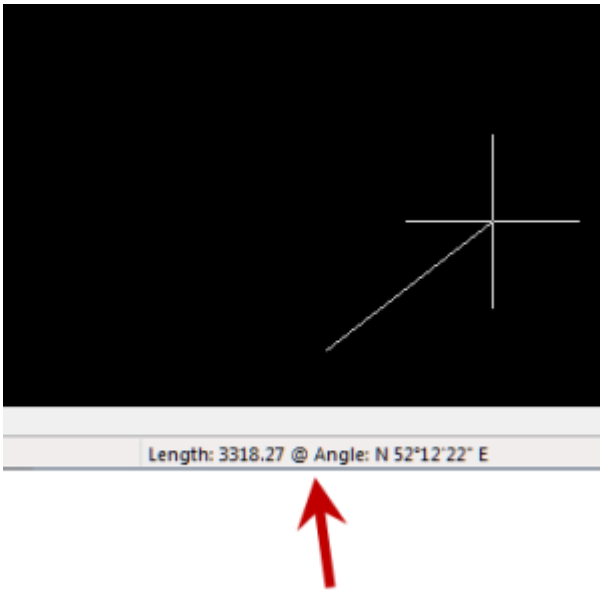
However, if you are currently in a command that requires two points be picked to specify an angle and distance (commands such as Line or Move, etc), you have a 3rd coordinate display available to you: polar coordinates. Unlike rectangular

coordinates that display X, Y and Z position, polar coordinates report a distance and angle from the original point. For instance, when you start the Line command you can toggle the coordinate display so that rectangular coordinates are ON or OFF. But, after picking the first point of the line, you can toggle the coordinate display so that rectangular coordinates are ON, rectangular coordinates are OFF or that polar coordinates are ON.

The image below on the left shows the polar coordinate display in AutoCAD and the IntelliCAD version is shown below on the right:

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To toggle the coordinate display in newer versions of AutoCAD (since 2009?) double-click on the coordinate display. In older versions of AutoCAD and in IntelliCAD, the F6 button toggles the display.

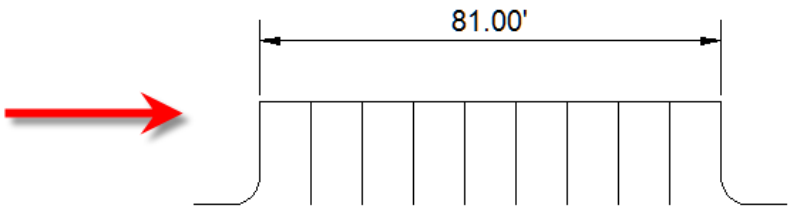
Did you know… How easy it is to spruce up your dimensions?

May 7, 2012

Anyone who has worked with AutoCAD for any length of time can usually create a standard dimension object. However, if you pay close attention to two items in the Object Properties dialog box, you can get very creative with the way simple dimensions are displayed.

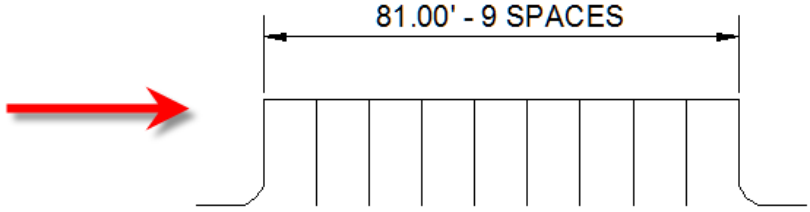
For instance, in the image just below, you can see that there are two Object Properties items highlighted in yellow. One is the “Measurement” and the other is the “Text override”. The Measurement is the measured distance between the dimension definition points (DEFPOINTS) and is read-only. You can also see that the current value for Text override is “< >”. Whenever the less-than and greater-than signs are shown as the Text override value, the Measurement will be substituted for the symbols when displayed in the drawing.

Text position X	218.1896
Text position Y	4.7700
Text rotation	0.0000
Text view direction	Left-to-Right
Measurement	81.0000
Text override	<>



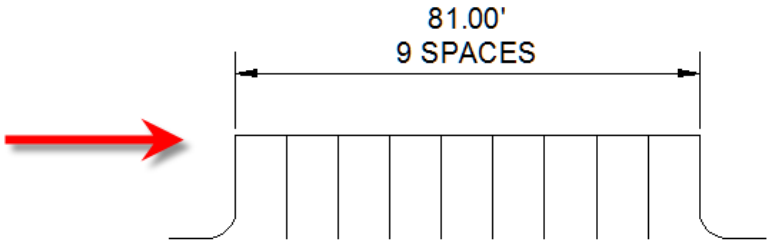
To add just a little more detail to the dimension, you can add descriptive text before or after the “< >” in Text override as shown in the next example below. As long as you keep the “< >”, the correct measured distance will always be displayed as part of the dimension text:

Text position X	69.3555
Text position Y	-15.5952
Text rotation	0.0000
Text view direction	Left-to-Right
Measurement	81.0000
Text override	<> - 9 SPACES



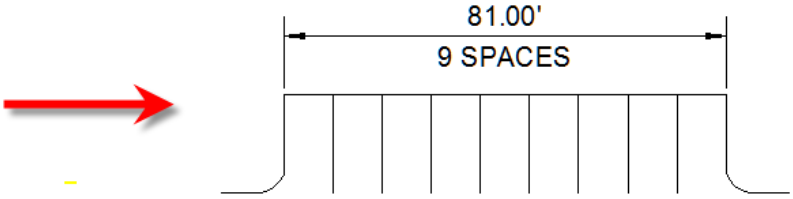
And, making it fancier… In the example below, I have added a “P” between < > and “9 SPACES”. This is like pressing Enter to go to a second line and has the effect of stacking two lines of text above the dimension line:

Text position X	69.3555
Text position Y	22.7861
Text rotation	0.0000
Text view direction	Left-to-Right
Measurement	81.0000
Text override	<>\P9 SPACES



And, finally, one more option. Rather than entering “P”, if you enter “X” as part of your Text override, you will stack the text partially above and partially below the dimension line.

Text position X	69.3555
Text position Y	-61.5130
Text rotation	0.0000
Text view direction	Left-to-Right
Measurement	81.0000
Text override	<>\X9 SPACES



The “P” and “X” modifiers can also be used in combination to create 3 or more lines of text and allowing you to control how many lines appear above and how many appear below the dimension line.

Did you know… About Temporary Overrides?

May 7, 2012

There are others, but my two favorites are:

- Holding **Shift** while in a Draw or Modify command allows you to override your current ORTHO setting.

So, if you're drawing a line and ORTHO is Off, holding **Shift** will temporarily turn ORTHO On. As soon as you let up on the **Shift** key, ORTHO will be Off again. Likewise, if ORTHO is On, holding **Shift** will temporarily turn it Off.

- Holding **Shift** while in the Fillet command allows you to override your current Radius setting and apply a Radius of 0.0 between the two selected entities.

So, if you're drawing a parking lot and find yourself

constantly changing your Fillet Radius between 0.0 and another value to create both sharp and rounded corners, leave the Radius set to something other than 0.0 and just hold **Shift** when you pick the two entities to apply a 0.0 Radius.

These Temporary Overrides are available in all “flavors” of AutoCAD as well as in IntelliCAD.

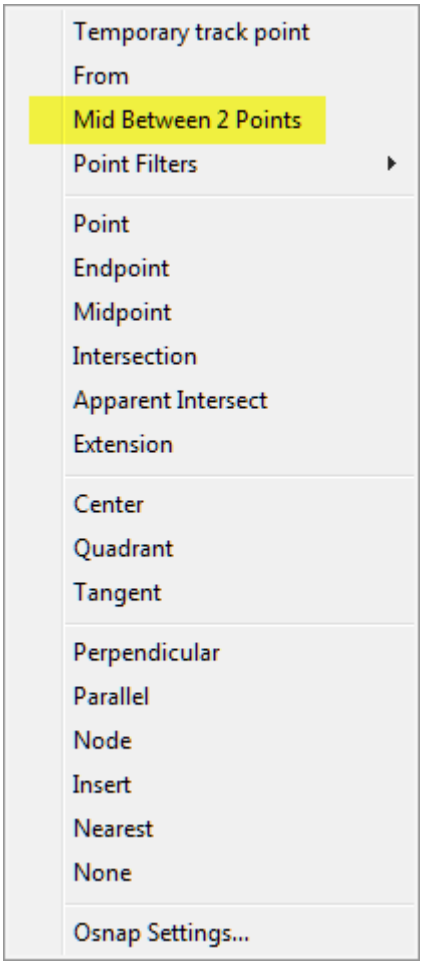
Did you know… About the “Mid Between 2 Points” OSnap?

May 7, 2012

It hasn’t been around forever, but this Object Snap is such a handy little tool you’ll wonder how you ever managed to live

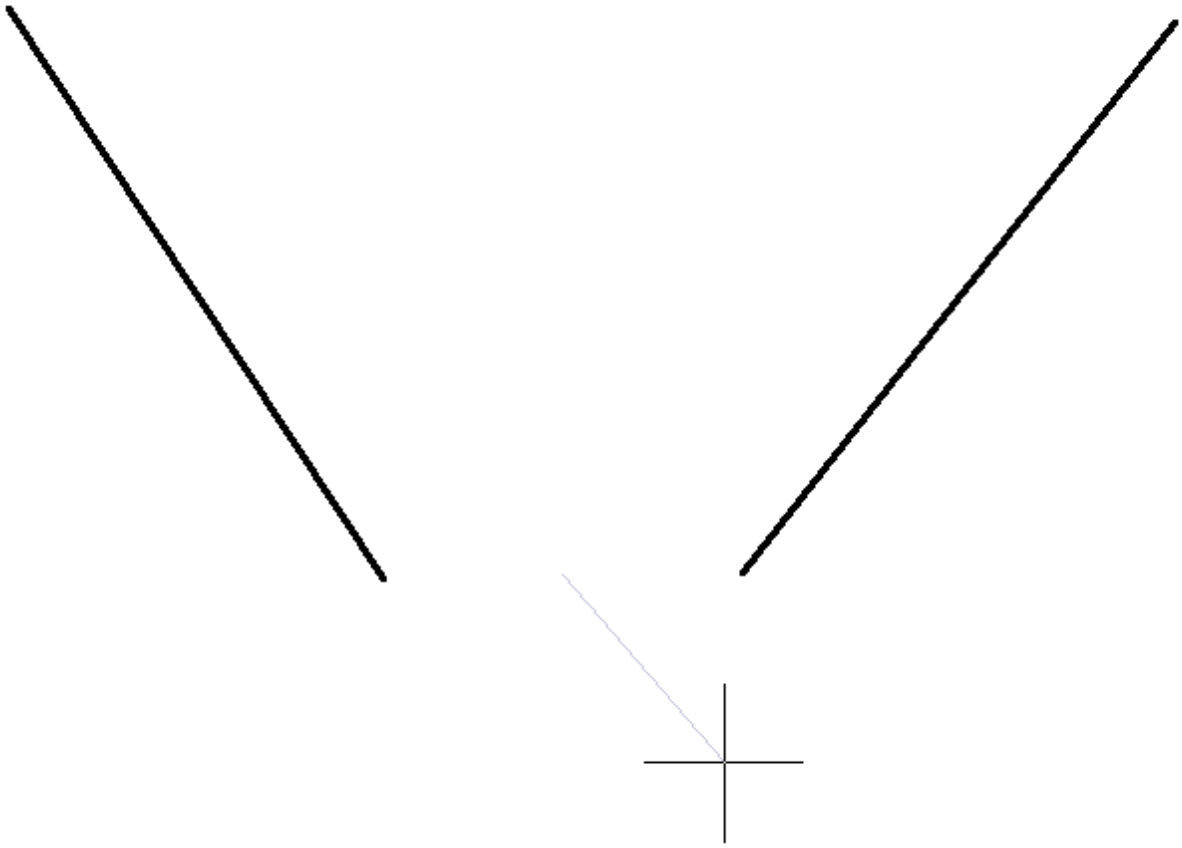
without it! The best news is that it’s available both in AutoCAD and IntelliCAD.

Whenever you’re prompted to “Specify a point:”, you can enter “M2P” at the Command: line or you can hold your shift key + right-mouse to display the pop up box and select “Mid Between 2 points” option. This allows you to snap to the MidPoint between two other points. The pop up box is shown below.



Next you'll be prompted to specify two new points for which you can use additional OSnap settings. The example below

shows a new line that starts at the Midpoint between the ENDpoints of the two existing lines.

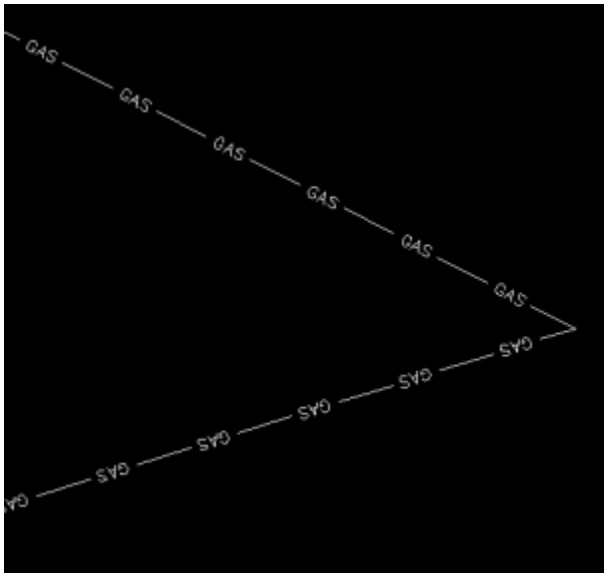


Did you know… About the Upright flag for linetypes?

May 7, 2012
I didn't until this weekend.

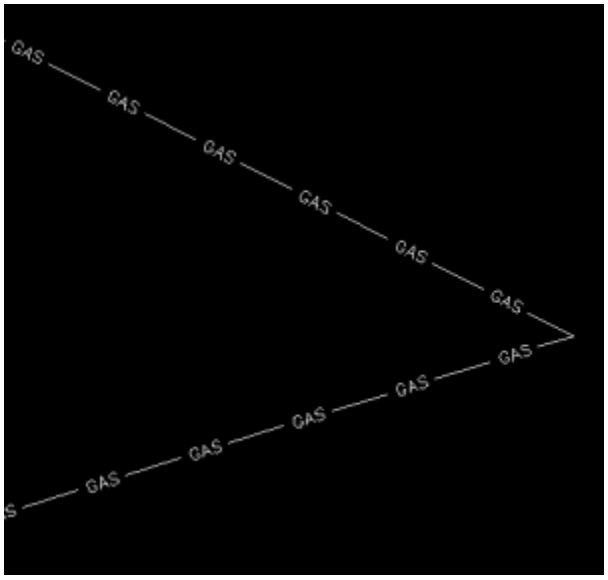
While working on a new Picks and Clicks article for Professional Surveyor magazine I stumbled on something incredibly handy. This setting keeps text that's inserted into a linetype in an Upright position rather than allowing it to be upside-down.

Notice the polyline in the picture below. The top segment (drawn from left to right) has the text upright but the bottom segment (drawn from right to left) shows the text upside-down.



The reason this happens is because of the definition of the “GAS_LINE” linetype in the acad.lin file.

The R=0.0 parameter formats the linetype text so that it aligns with the line segment. Therefore, whether text is upright or upside-down depends on the direction the line is drawn. However, if you simply change the R=0.0 to U=0.0, the polyline displays like this:



Notice the text is now upright in both segments. Using the U in the linetype definition sets the “Upright” flag. Setting it to 0.0 keeps it Upright relative to the line. I played around with it a bit and, unfortunately, it doesn’t seem to help much when rotating with DVIEW or UCS. But, when you’re working in world coordinates, this is a great tool.

To my knowledge this is a recently added enhancement to AutoCAD – but I thought it was cool enough to put up here!

My next column in Professional Surveyor will be… Surprise! Standardizing Linetypes! I’ll post a link here when it’s

posted on their site. Follow this link to see if you are eligible for a free subscription to the print magazine: Subscribe to Professional Surveyor magazine.