

Autodesk® AutoCAD® 2006 New Features  
By Ellen Finkelstein

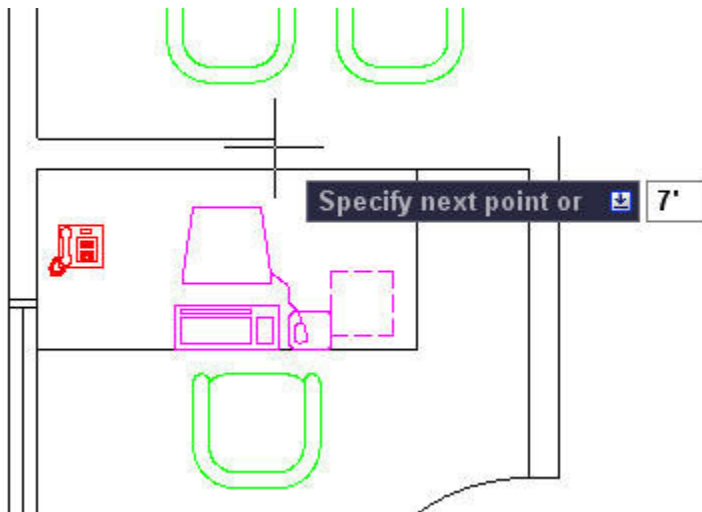
Here are some of my favorite new features. If you want a detailed description and applicable exercises, you'll find them in my book -- [AutoCAD 2006 and AutoCAD LT 2006 Bible](#).

## ***Heads Up Design: Focusing on the drawing area***

### **Dynamic Input**

The first thing you'll notice when you open AutoCAD 2006 and start to draw is that there's a sort of command line at the mouse cursor, as you see here. This is called the Dynamic Input (DI) tooltip and it has three parts:

- The prompt
- A down arrow: press the down arrow on your keyboard to see the current command's options
- A text box, where you can enter values, such as the length of the line, or a coordinate.



The DI tooltip isn't a perfect match for the command line, but it's close. You may even want to experiment with closing the Command Line window altogether (you can toggle its display by pressing Ctrl+9), although this will probably give you the jitters from a long habit of depending on that trusty command line. If you don't like DI, you can turn it off by clicking the new DYN button on the status bar.

You can customize the tooltip quite a bit to specify when it appears, what it looks like, and how it behaves. For example, if you type coordinates in the tooltip, by default they

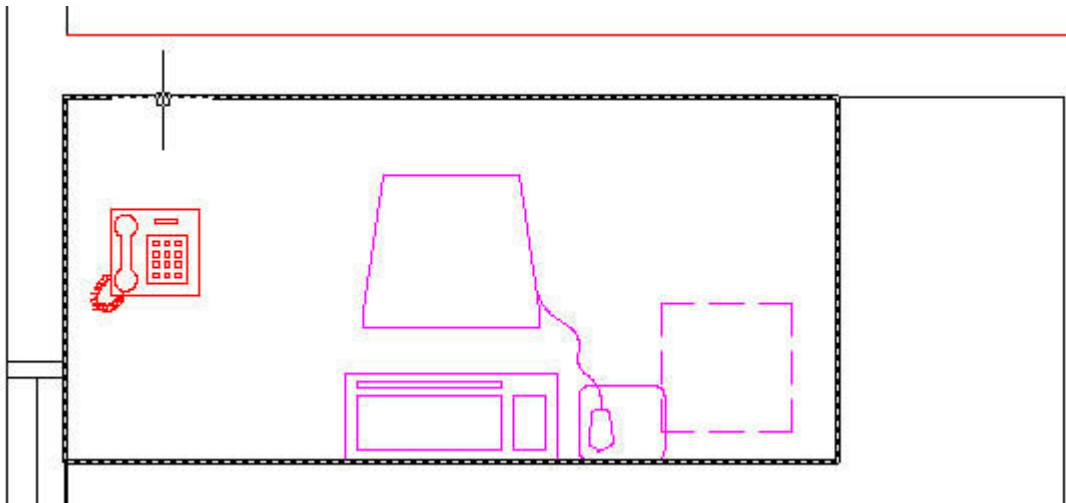
act like relative coordinates. You can change this, but don't. You may never have to type the @ symbol again!

**Tip:** Set the brand new TOOLTIPMERGE system variable to 1 to merge the OSNAP and DI tooltips and simplify the display.

**Conclusion:** I like DI a lot. I'm looking at the command line less. I like having text input, prompts, and coordinates up near my cursor. I love not having to type @ when I want to draw a rectangle. It takes a little getting used to, though.

## Selection preview

Another heads up feature is the new selection display. Have you ever been frustrated because the wrong object was selected when you clicked? Now you can pass your cursor over an object and it darkens to show you which object you would select. This feature is called rollover highlighting. Also, when using a selection or crossing window, a transparent box (blue for selection; green for crossing) appears so you can see what will be inside the window.



The desk and the wall overlap, but here you can see that if you click, you'll select the desk not the wall.

**Conclusion:** Rollover highlighting is very helpful and you'll avoid selecting the wrong object, pressing Esc, and starting again. You may want to customize the look. For example, you can keep the thickening effect, but not the dashed effect.

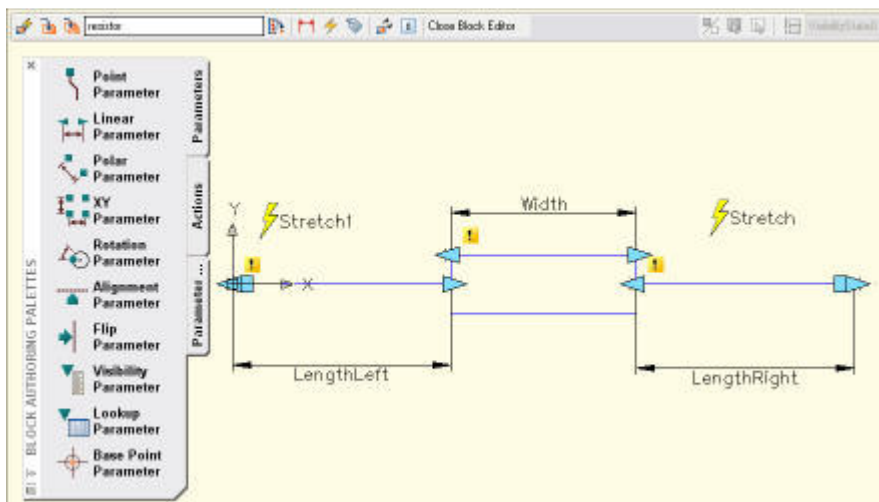
## Dynamic Blocks

Everything is dynamic in 2006. Do you have large block libraries? You're going to love the new dynamic blocks. The main idea is that you can create one block with many possibilities. So you can create one block to replace many, reducing your block library size significantly. For example, you can create a block that you can:

- Scale
- Rotate
- Stretch
- Move one component of independently
- Change the insertion point of -- on the fly -- during insertion
- Array

Imagine one desk block with multiple desk sizes or one door with multiple sizes and rotations.

You use the new Block Editor and Block Authoring palette to create dynamic blocks, shown here:



You add parameters to blocks to set the special properties of the block, such as a distance, point, or angle. Then you add actions to specify how the properties will change. Each parameter has an action. You can constrain actions to certain values. For example, you can specify that a desk can only be stretched in 6' increments or even create a list of allowable widths and lengths. Any block can have several parameters and actions.

Dynamic blocks are not a simple feature. You are essentially programming blocks to act intelligently -- using an interface rather than programming code. But they have incredible capabilities. I believe that Autodesk will provide some special tutorials and documents for this feature. My new book, AutoCAD 2006 and AutoCAD LT 2006 Bible, will include a thorough description of dynamic blocks as well as a tutorial that you can use to create dynamic blocks.

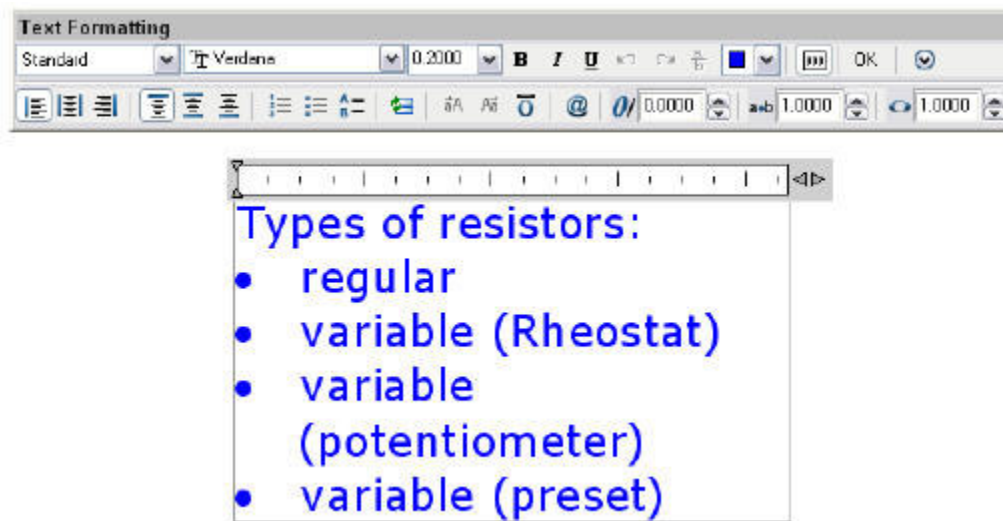
**Conclusion:** If you use many blocks and especially similar blocks that come in several variations, I recommend that you take the time to learn and use dynamic blocks.

## Annotation

### Text improvements

Finally, you can edit any Mtext and single-line text in its place in the drawing area, without going into an editor window. The editing process looks similar to that in 2005, but you're not in a separate window, and the text doesn't move or resize when you finish editing.

You can now easily add numbered and bulleted lists, just like in your word processor. If you need to add an item in the middle of a numbered list, the remaining items renumber themselves automatically.



**Conclusion:** What's not to like?

### Hatching improvements

A number of hatching improvements have been added to 2006:

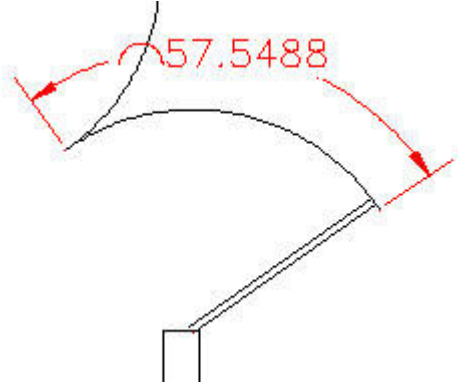
- You can specify the hatching area more flexibly by adding and removing boundaries.
- You can hatch areas that extend beyond the visible display.
- You can specify the origin of the hatch pattern, which otherwise would be 0,0.
- You can hatch several, non-contiguous areas as one hatch object.
- You can find the area of the hatched boundary in the Properties palette.

**Conclusion:** A better hatch.

## My favorites

### 1: Better commands

Many of the most common editing commands have been enhanced, making your everyday drawing easier. For example, COPY, CHAMFER and FILLET have their own Undo option (like the LINE command). ROTATE and SCALE have Copy options (like their grip-editing versions).



### 2: You can dimension arc lengths.

### 3: Temporary overrides of common settings

As part of the new customization interface, you can temporarily override settings such as Ortho and Osnap. My favorites:

- Hold down the Shift key to turn off Ortho while you're placing a line. As soon as you release the Shift key, Ortho comes back. This is MUCH easier than finding the F8 key or clicking the ORTHO button on the Status bar.
- Hold down Shift+A to temporarily turn off Osnap. Again, much easier than F3 or the OSNAP button.
- Hold down Shift+E to temporarily turn on the Endpoint Osnap.

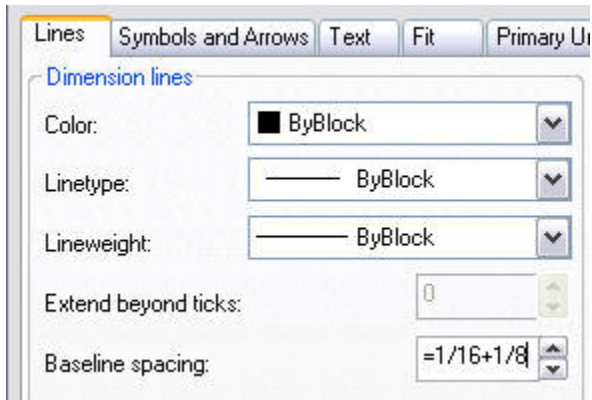
**Conclusion:** So much nicer than finding the F3 or F8 key, or opening up the OSNAP shortcut menu.

### 4: Calculations anywhere

While many people have mentioned the new QuickCalc, a graphical calculator that you can use on its own or within another command, few have mentioned what is perhaps a more far-reaching improvement: calculations anywhere! In any text box of any dialog box or palette where you can enter a value, you can now enter an expression. Here you see an expression used to change the text size of a dimension in the Properties palette.



Below is an expression used to set baseline spacing for a dimension style.



The rules are simple. You start with an equal sign (=). You can use the following symbols: + - \* / ^ and sqrt. Here's the important part. You must press the End key on your keyboard, not the Enter key, to end the expression. I haven't experimented with more complex expressions.

This new feature is thanks to the CALCINPUT system variable which defaults to 1, or on. If you turn it off (0), you can't put expressions in text boxes.

**Conclusion:** This feature is almost hidden, but I think it's very fine.

## 5. Tables become spreadsheets

Tables now function like simple spreadsheets. You can add, average, and count cells. You can reference other cells and enter expressions, like the ones I discussed above. This makes tables much more useful and flexible. Here's what a table looks like while editing. Is this MS Excel or AutoCAD?

|   | A                   | B                        |
|---|---------------------|--------------------------|
| 1 | <b>Plat Acreage</b> |                          |
| 2 | Plat                | Acreage                  |
| 3 | 1                   | 22.93                    |
| 4 | 2                   | 2.85                     |
| 5 | 3                   | 1.51                     |
| 6 | 4                   | 1.38                     |
| 7 | Total               | <code>=Sum(B3:B6)</code> |

**Conclusion:** This is what tables should really be like.