

## **AutoCAD® Super-Duper Click Savers**

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### **AC1572**

Return on investment on the AutoCAD platform is all about saving picks and clicks, and this class is all about exposing the super-secret tools in the AutoCAD platform. The biggest issue is that you don't know what you are missing from release to release unless someone exposes these little secrets. In this class, we will provide a one-stop-shopping document to help you remember all of them and refer back to them. Updated from last year, this class includes new tools and uncovers AutoCAD 2013 secrets. Your repetitive steps and tasks won't know what hit them.

### **Learning Objectives**

At the end of this class, you will be able to:

- Use some of the best tips and tricks that are out there for instant productivity
- Share secrets about AutoCAD that trump repetitive steps and tasks
- Use fewer pick and clicks and get work done faster on any AutoCAD platform
- Smack your forehead and say, "I could have used that tip last week"

Target Audience: Industry professionals with beginner to intermediate experience on the AutoCAD platform. Plus anyone who uses the AutoCAD platform and wants to increase their productivity and leave repetitive steps and tasks in the dust.

### **About the Speaker**

*I possess more than 24 years of extensive experience in and knowledge of how to position technical products and services to the architectural-engineering-construction (AEC) industry. I am skilled at delivering creative solutions to address challenging issues, and this experience enables me to provide invaluable insight and direction to sales staff, technical staff, and clients. I have mentored and implemented AutoCAD based and building information modeling (BIM) solutions for hundreds of clients and have become a trusted and respected advisor in the Denver AEC community. My qualifications include working as an Autodesk Certified Instructor and earning certifications in Revit Architecture®, AutoCAD® Architecture, and AutoCAD®. Speaker at Revit Technology Conference and Autodesk University. My past work has resulted in many awards from Autodesk® for sales and training excellence, including Instructor of the Year (2004) and Top Autodesk® Training Center for Americas (2007).*

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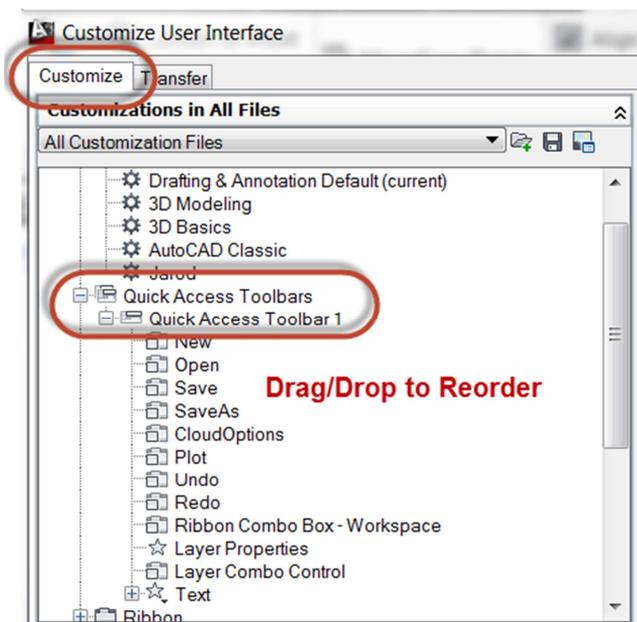
*Blog: [JarodSchultz.com](http://JarodSchultz.com)*

## 1) Quick Access Toolbar

*If you have dived head first into the Ribbon interface then the only real toolbar that is left on the screen is the Quick Access toolbar. What I like to do is have it below the Ribbon, the reason I like it this way is because I can add additional tools since I have a lot more room now. To do this right-click on the Quick Access toolbar and you should see “Show Quick Access Toolbar below the Ribbon”. To start adding some of your favorite commands just right-click on them to add them, especially the Layer drop-down tool. Don’t forget to right-click the Workspaces drop-down and remove it since it is down at the bottom right of the screen (the little cog gear icon).*



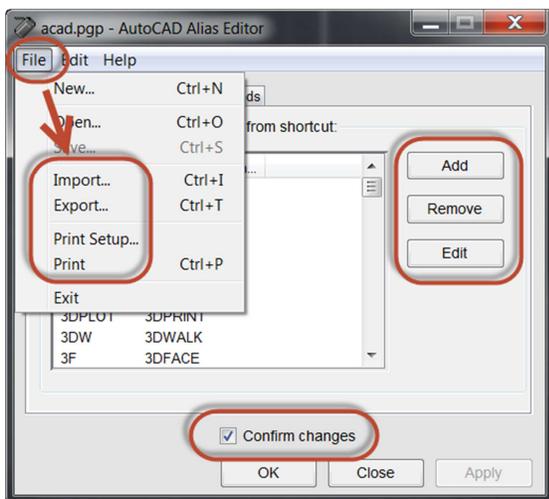
*By the way the order of the icons is the order that you put them on. I have not found a way to drag and drop them around unless you go into the CUI command. If you type in CUI, at the top right, you can open up the category for “Quick Access Toolbars” and drag and drop around the icons to put them in the order you want.*



## 2) Shortcuts

*Shortcuts are still the power user of choice when it comes to productivity in AutoCAD. There are a couple of ways to get to the list but my favorite is using the ALIASEDIT command since it has a nice dialog box interface to it. Another way of doing it using the traditional Notepad Editor in Windows but this has always been somewhat of a pain since you need to find where the ACAD.PGP resides.*

*If you want to use the Notepad way then on the Ribbon go to the Manage tab and pick on Edit Aliases under the Customization panel. This automatically opens the ACAD.PGP file using Notepad as the editor. If for some reason ALIASEDIT or the Edit Aliases is not available then you can type at the command line (findfile "acad.pgp"), include the parentheses to make this work. It will tell you where your pgp file is located. Now remember, if you make any changes to the ACAD.PGP file using the Notepad method then you will need to run the REINIT command or restart AutoCAD in order to have your changes take effect.*



*When using any of these methods to edit the ACAD.PGP make sure that you create a copy of it and save it to safe location. The last thing you want to do is make all of these changes again on a new computer or new release of AutoCAD.*

### 3) Autodesk 360 Super-Secret Folder

*Autodesk 360 is a new way of sharing and storing files in the cloud. What is unknown is that there is an ability to do a Dropbox like update without having to login and upload your content through a web browser. What I'm going to show you is undocumented and is only for AutoCAD 2013 platform. Two things must happen to get this setup correctly, first you need to have installed a version AutoCAD 2013, the next is you need a Autodesk 360 account: <https://360.autodesk.com>. Once that is done open AutoCAD 2013 and at the top right login into your Autodesk 360 account.*



Now start Windows Explorer and go to this folder: C:\Users\*<User name>*\AppData \Local \Autodesk\Autodesk Sync\Cloud\*<User Email Address>*

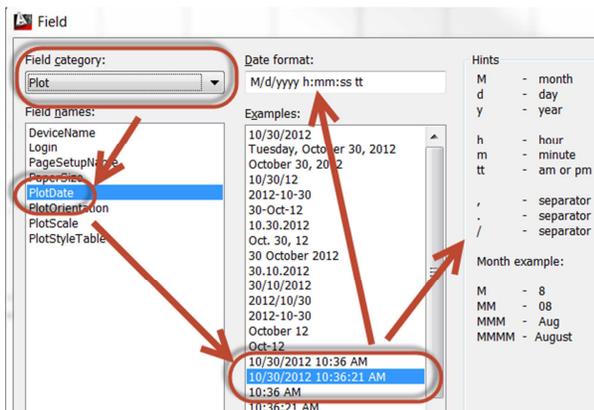


If you are on Windows 7 you can right-click on the Favorites and add a shortcut to get to the folder easily. Now if you add a new folder or add new documents locally then give it a few minutes and it will be automatically uploaded to your Autodesk 360 account. Remember if you are on subscription this goes from 3gig of space to 25gig of space, you got to like that. Also anyone can have an Autodesk 360 account, you don't have to own an Autodesk product to create and use an Autodesk 360 account. Understand that this trick won't work for them but they do have 3gig of storage which is better than an initial Dropbox account.

#### 4) Fields

Fields are still something that is much underutilized in AutoCAD. I will show you two simply and easy ways to start using them in your drawings. One quick method is using them for a Plot Stamp, quite few of my client's need them for their printed drawings to verify when the latest hard copy print was made compared to their digital drawing.

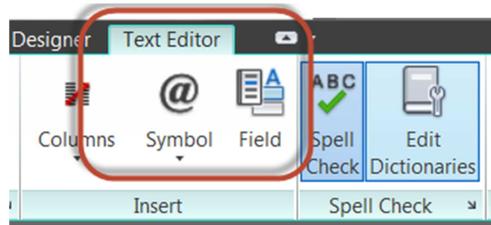
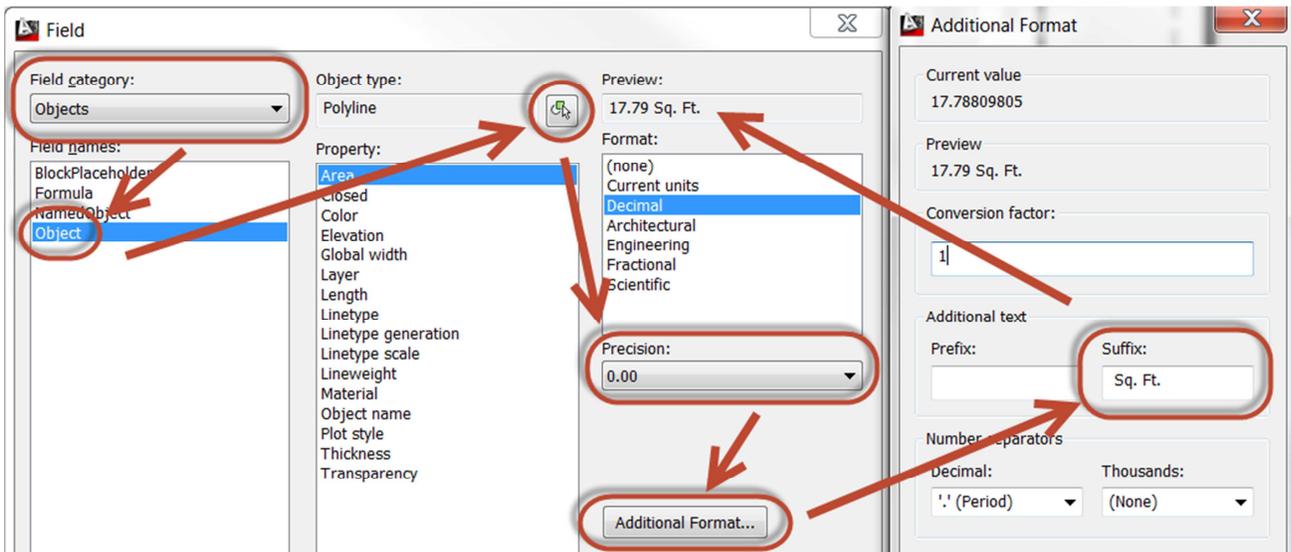
Type in Field at the command line and change the Field Category to Plot. In the listing you can now choose PlotDate and on the right what type of formatting that you would like to use. You can if you want actually make up your own format by using the column of Hints on the far right.



Now pick *Ok* and place the Field, you will notice that the field is showing “----” instead of a date. The reason for this is because you haven’t plotted the drawing yet, once you plot the drawing the field will automatically be filled out for you. The gray background is there to tell everyone that it is a Field and no one needs to update it manually. I don’t recommend changing it but if you want to hide the gray background you can use the *FIELDDISPLAY* system variable and set it to 0.



This next one is doing a Field that will label a polyline and retrieve the square footage of it. If the polyline changes then the Field label will automatically update. Like before, start the Field command and change the Field Category to *Objects*. Now choose *Object* and on the button for *Object Type*, select the polyline that you want to label. On the right you can choose what formatting that you need and use the *Additional Format* button to add the *Sq. Ft.* as a suffix, and a “space” before *Sq. Ft.* to move it away from the original text.



You can also use Fields in *Mtext*:

Last thing to remember is when do fields update? They update if you *Open, Save, Regen, eTransmit, or Plot* the drawing, change this under *Options -> User Preferences*.

### 5) DBLIST

*This command will list every entity in the drawing. Useful when you think you have some entities that are not showing up. You can erase everything visible and then run DBLIST to see what else is still there.*

### 6) XOPEN

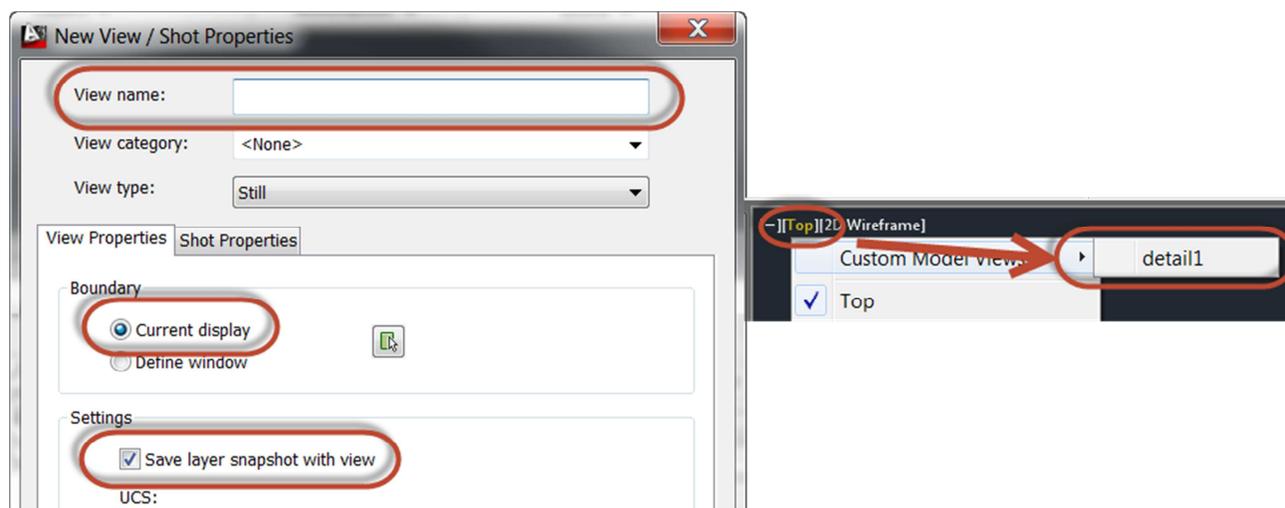
*Use this command to pick an external reference to open it. You don't need to know the name of the xref, you select on it in your drawing to open it.*

### 7) TSPACEINVADERS

*This is an undocumented command, essentially you perform a selection and it will show you any TEXT and MTEXT that is overlapping or hence “invading” another object. It will then ask you if you want it to be included in a selection set. See Number 15 for Select and Previous options.*

### 8) Named Views

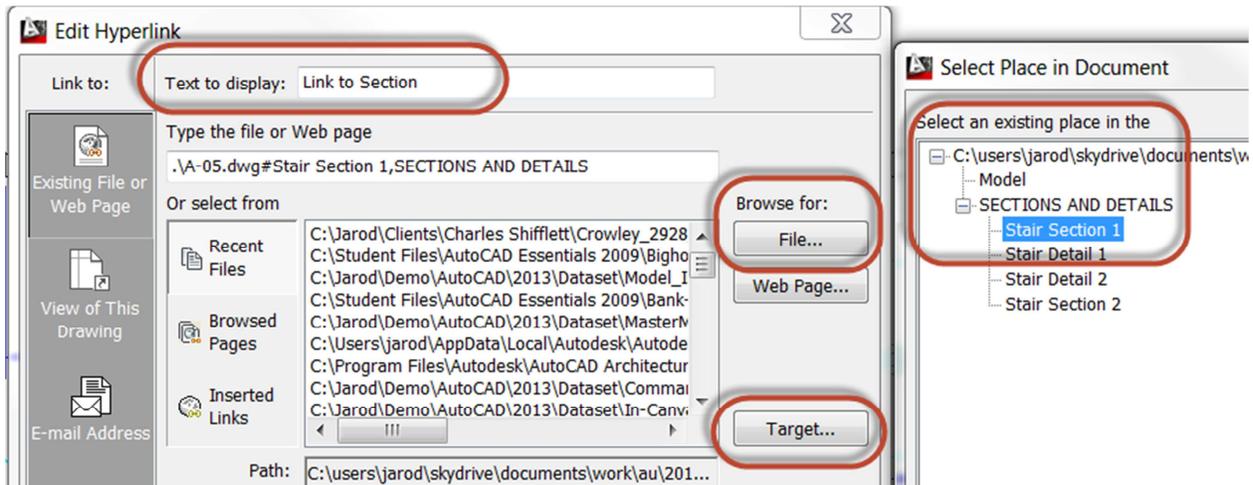
*Do you create large layouts in you drawings? If so, then you probably spend way too much time zooming and panning around your drawing. Named views are pre-saved locations of part of your drawing and it can also remember what layers where turned on when you were looking at it. Type in View at the command line and pick on the New button. Once you are done you can use the top left corner to make it active or get back into the View command.*



## 9) Hyperlinks

*Building upon the idea of using Views in a drawing you can also add Hyperlinks to your drawings. If you work with large drawing sets then you probably are dealing with a lot of callouts, sections and elevations to help document the project. Wouldn't it be great to be able to pick on a section bubble and have it open the drawing for you and zoom to where the section is? If so, then welcome to using Hyperlinks. Don't pigeon hole this command; this will open any file format, word documents, excel spread sheets, pdf files and so on.*

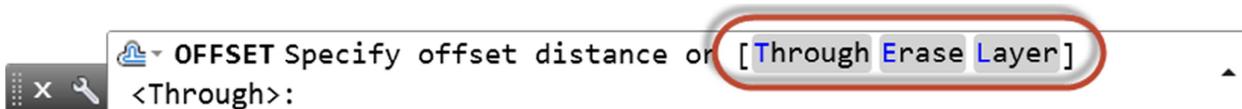
*Before we get started understand the drawing that you want to link to must have a named View in it. Type in Hyperlink and hit enter, now select the objects that you want to attach to the Hyperlink, in my case I going to select a section bubble, when done hit Enter. Use the File button to select the drawing that you want to link to. Pick on the Target button to choose the named View that you want and type in a description into the Text to Display box to finish.*



*Give it a try, if you move your mouse over the objects you will see an "earth" like icon that will pop up to show you that there is a Hyperlink attached to the objects. To activate the Hyperlink either hold down the CTRL key and pick on the objects or select the objects and right-click and choose Hyperlink.*

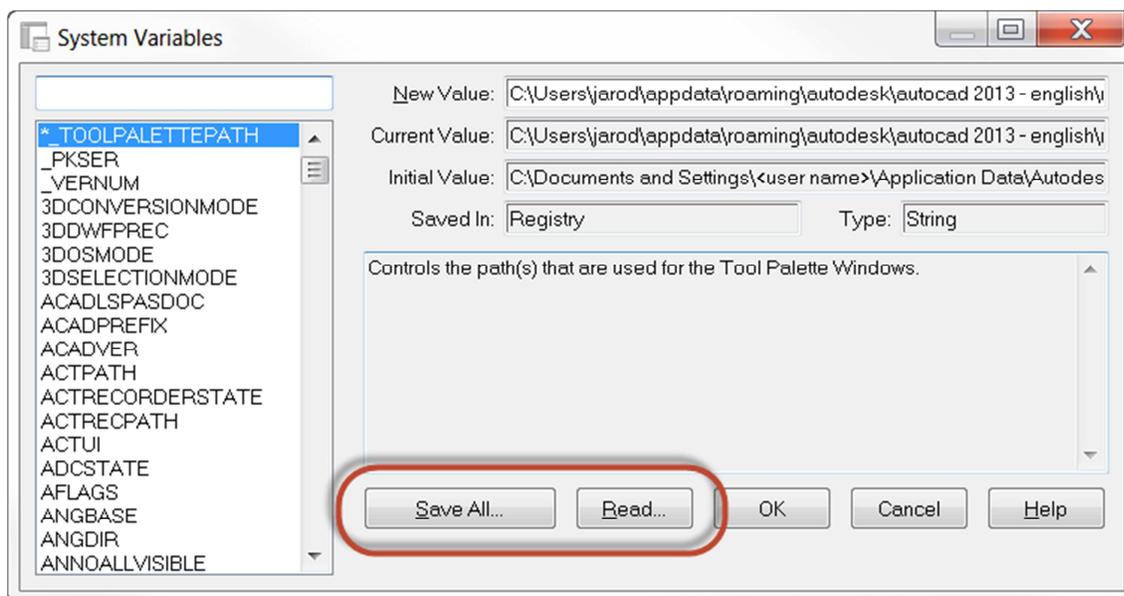
## 10) Pick an Option

*New in AutoCAD 2013 is the ability to pick on the command line to activate the options for commands. To a power user this might not be the way you want to run AutoCAD but you need to be aware of this new feature.*



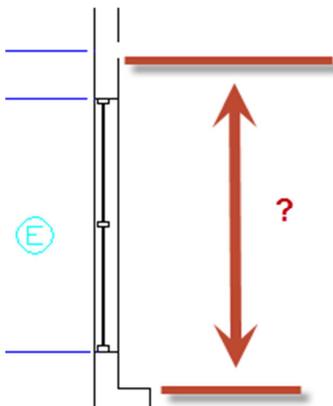
## 11) System Variables

***So how many different System Variables are there in AutoCAD 2013? How about 946? At least that is what one Autodesk Developer has on their website: [http://www.hyperpics.com/system\\_variables](http://www.hyperpics.com/system_variables). So after 30 years AutoCAD has a few to say the least, ever get into a drawing where some of these system variables are not set correctly? Here is how you can fix it, go to a drawing where you feel everything is setup correctly, now type in SYSVDLG and pick on Saveall. Now get into your other drawing and type in SYSVDLG and use the Read button to bring in the SVF file that you created earlier. If there is an error (sysvdlg\_ "file name".err) use Windows Explorer and double click on it to see which variables couldn't be changed.***



## 12) Offset

***Through Option: Pick two points on the screen to define the distance, can be very handy when you do not know what the correct distance needs to be.***

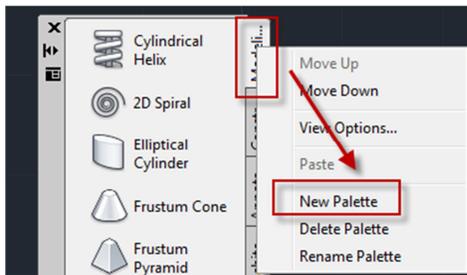


### 13) Tool Palette

*Tools Palettes can be one of the largest productivity tools that one can use, since almost any tool can be placed on it. It can also be the “glue” to hold one’s CAD Standards together for yourself or the office.*

#### Create new Tab on Tool Palette

*Type in “Toolpalettes” at the command line and Right-Click on one of the existing “Tabs” on the Tool Palette. Choose “New Palette” and give it a name of your choice.*

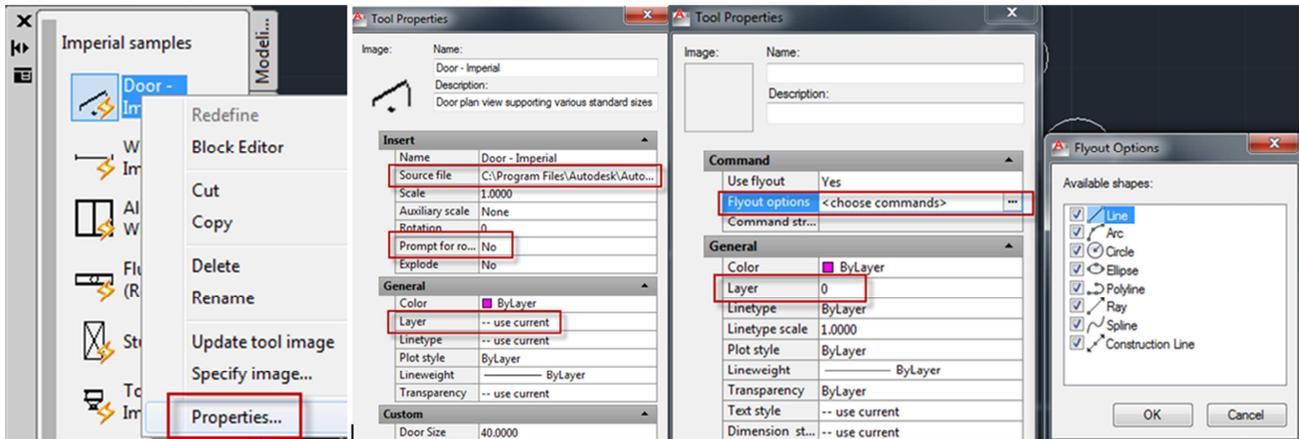


#### Content Drawing

*Open an existing drawing that has some of your favorite content; such as, objects on correct layers, hatch patterns, blocks, etc. Now, do a “Save As” and save it to a secure folder, giving it a new name.*

#### Adding Content to Tool Palette Tab

*Starting with a block, select it and pick an edge of it (not a grip) and drag and drop it onto the Tool Palette. Now, do the same thing with a line and a hatch pattern. Each tool has “Properties” to them. Right-click on a “Block” on the Tool Palette and notice the “Source File” path. If you right-click on a “Line” on the Tool Palette, notice how you can control the “Layer” and the different “Shapes”.*

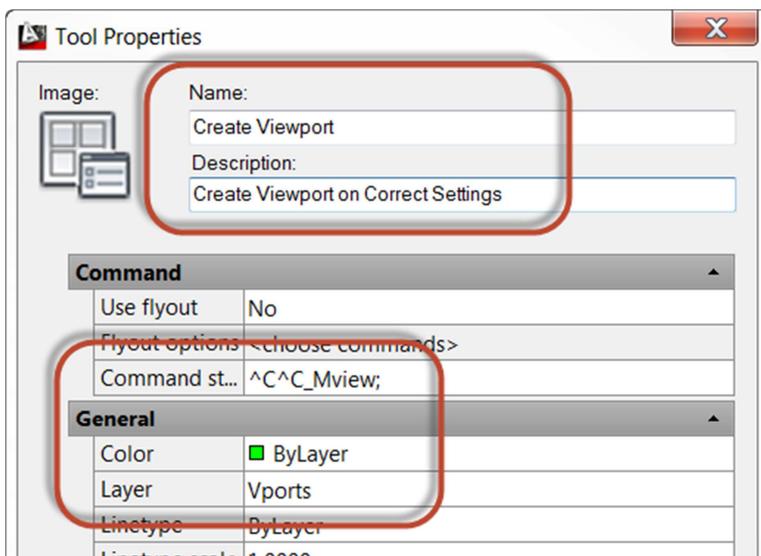


## Creating a Script for a Tool Palette Button

### Viewports on a Layer

*The objective here is to have a command that always puts a viewport on the correct layer automatically for you. The first step is get into one of your existing drawings and make sure that your existing viewport is setup with the correct layer, color, no plot setting and so on. Now drag and drop your viewport from Paper Space to the tool palette, if you pick on it in its current state it will start the Vports command instead of creating a viewport, not what we are looking for.*

*Right-click on the new tool and pick on Properties, give it a new name and change the description. Notice that the Color and Layer is setup correctly, it doesn't show you all of the settings but everything is remembered. The next thing is working on the command String to replace the Vports command with the Mview command.*



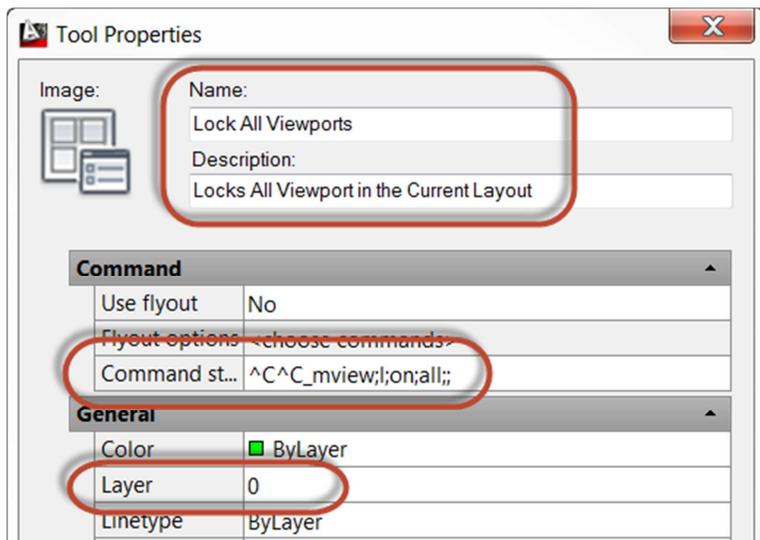
*So let's break it down; ^C^C\_Mview;*

*“;” is used to do “Enter” at the keyboard in the script.*

*<^C^C, cancels the command> <Mview to start creating the viewport that we need> <”;” is doing the Enter to input the Mview command at the command line>*

### Locking All Viewports

*Let's do another one but this time we are going to go a little further with the Command String. On the Tool Palette right-click and pick Copy, and right-click again and Paste, this will make a copy of the tool that it just made. Right-click on the new tool and pick on Properties, we need to give it a new name and change the description like we did before.*



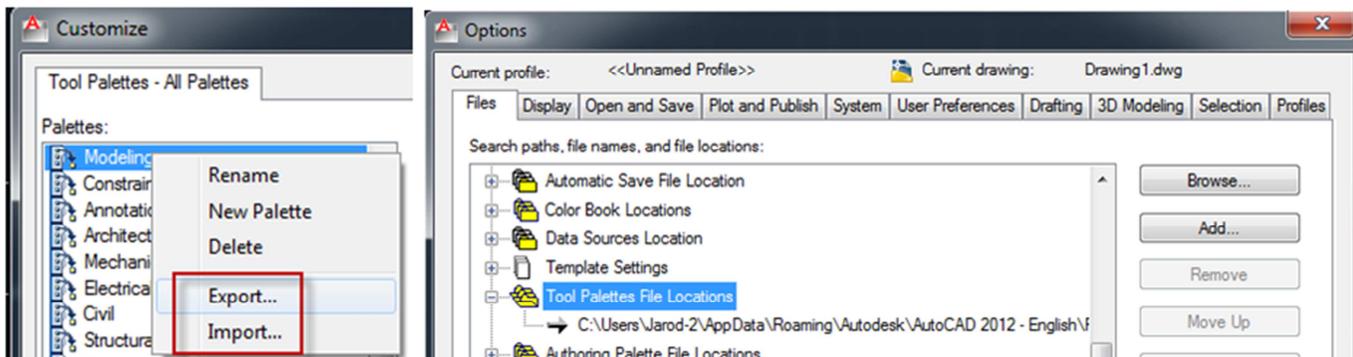
*So let's break it down; ^C^C\_mview;l;ON;ALL;;*

*“;” is used to do “Enter” at the keyboard in the script.*

*<^C^C, cancels the command> <Mview to start the Mview command> <“L” to start the option for Lock> <“ON” to get the viewports Locked> <“ALL” to grab all of the viewports in the current layout tab>*

**Export**

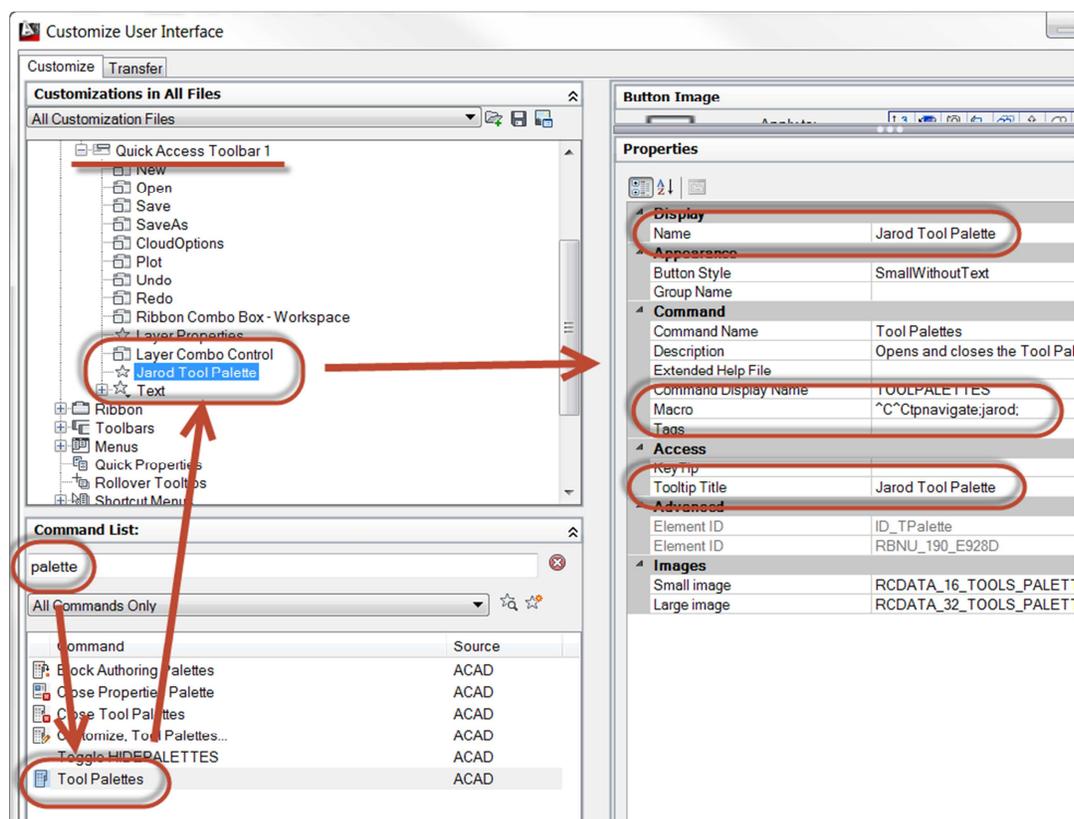
*If you right-click on the “Titlebar” of the Tool Palette, you can select “Customize” to “Export” or “Import” your Tool Palette tabs for safe keeping or to share. It's important to note with blocks that are coming from the content drawings, this path has to be the same on everyone's computer. You can also use the “Options” command and the “Files” tab to have everyone “pointed to” the same location on the server for the Tool Palette content.*



## 14) TPNAVIGATE

*If you get into creating buttons on the Ribbon or the Quick Access toolbar you can use this tool to help open a specific tool palette based on its name. Remember to replace “Jarod” with whatever Tool Palette name you have created in the below steps.*

*To give this a try type in CUI at the command line to open the dialog box. In the command list type in “palette” and drag and drop the button for “Tool Palettes” up to the Quick Access Toolbar location. Now on the right-hand pane change the names and mission critical is changing the Macro to “^C^C\_TPNAVIGATE;Jarod;”. Now you have a cool button on the Quick Access toolbar that not only opens the Tool Palette but opens a specific tab on the Tool Palette.*



## 15) SSX, Select, and Previous Tools

### SSX

*SSX command serves primarily to filter a selection set based on object properties. Some people still prefer it over the Filter or Qselect command since there is no dialog box. You must type this command or maybe add it to your Tool Palette. Remember this command creates a “previous” selection set when you pick on something (subject coming up next). You can also use one of the many options in the command to filter down further to select only what you want.*

Command: *SSX*

Select object/<None>: **Select a line or object of choice**

Current Filter: ((0 . "LINE") (8 . "0") (39 . 2.0) (62 . 1) (210 0.0 0.0 1.0))

Enter filter option [Block name/Color/Entity/Flag/LAyer/LType/Pick/Style/Thickness/Vector]: **Press ENTER**

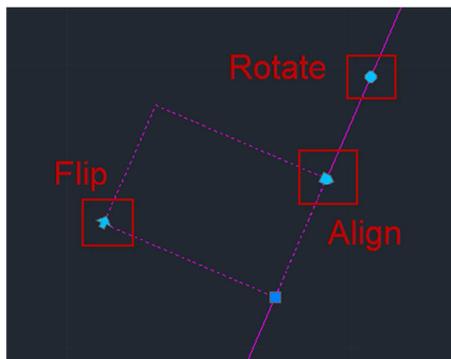
**Using one the Filters can help open up the selection set further so you can select additional objects. To select objects that match the filter, start the Select command and enter "P" for Previous, see below.**

### Select and Previous

**Using the above command you can now type in Select at the command line, "P" for Previous, and then use Properties to modify those objects. You could also use Previous after you have moved something and then immediately needed to "Rotate" the same objects. So next time, type in "P" for previous to re-select objects and maybe you can kill a few picks and clicks.**

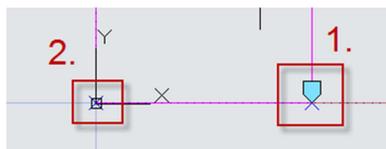
## 16) Dynamic Blocks

**So, you say you have never built a "Dynamic Block"? You say that you've heard they are too complex or too hard to learn? Everyone can update their regular blocks to take advantage of: Alignment, Rotate and, Flip. Select your block and right-click and select "Block Editor".**



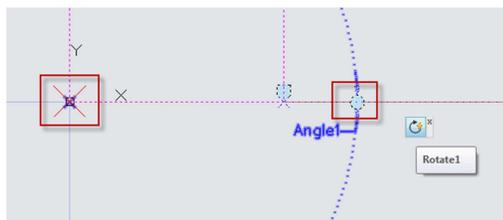
### Alignment

**If you need a block to always align automatically to an edge, type in "BAuthorPalette" to make sure the tools are available. On the "Parameters" tab choose the "Alignment" tool. Now, pick two points along the edge that you would always like to be aligned to something and type in "BClose" at the command line. Remember to save your changes.**



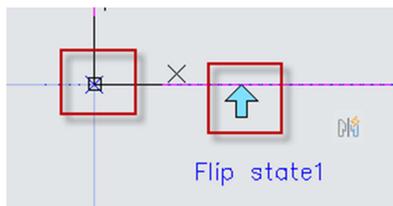
## Rotate

*Do you want to be able to rotate a block without having to start the rotate command? Type in "BAuthorPalette" to make sure the tools are available. On the "Parameters" tab choose the "Rotation" tool. Select a "Base Point" for your rotation point. Select a point to define the location for the "Grip" and hit "Enter" to take the default starting angle. Now, choose "Rotate" from the "Action" tab on the Author Palette; then, select on the "Parameter" that you just built. Next, do a large select window and select everything and hit "Enter". Finish up by typing in "BClose" at the command line and saving your changes.*



## Flip

*If you want to be able to mirror a block without having to start the mirror command, type in "BAuthorPalette" to make sure the tools are available. Next, on the "Parameters" tab, choose the "Flip" tool. Now, pick two points along the edge that you would want to be designated as the "flip" edge and select a location point for the label. Next, choose "Flip" from the "Action" tab on the Author Palette and select on the "Parameter" that you just built. Now, do a large select window to select everything and hit "Enter". Finish up by typing in "BClose" at the command line and save your changes.*



## 17) Qquit

One of the other hidden Express tools called QQUIT. This tool will attempt to save and close all your drawings, and then close AutoCAD down completely.