

Making the CUI Work for YOU!

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AC2253

Are you still struggling to get your users to use the new ribbon interface in AutoCAD® software? You're not alone! If you haven't quite figured out how to get this change implemented or if you still have doubts about how to take advantage of either the Customize User Interface (CUI) and workspaces, attend this class to gain a better understanding. Learn how you can implement both corporate and user CUI customizations the right way! Learn how simple tool changes can impact your production environment in a positive way and feel confident that when you leave this class, you will walk away knowing you can get users to adopt this improved interface.

Learning Objectives

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

- Customize the parts you don't like
- List which CUI features are improved and easier to use than pre-ribbon interfaces
- Manage corporate and user interfaces efficiently
- Motivate users to make the switch

About the Speaker

Jeanne is known for keeping her training sessions fast moving and fun. She is a nationally known speaker and expert in CAD, and presents seminars and workshops on CAD productivity for managers and users in both corporate and college settings. She has over 25 years experience involving production drafting, user support, standards coordination, programming, and training in various CAD applications. Jeanne is an independent consultant offering training and implementation services and is certified in several Autodesk® and Bentley® products. She continues to be actively involved in international, national, and local CAD user groups and has been a popular speaker at AU for several years.

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Making the CUI Work for YOU!

You Can Understand It!

The introduction of the CUI command provided a centralized location for the majority (but not all) of AutoCAD's interface customization. It consolidated the location for menus, toolbars, and ribbons into a single dialog box interface to provide a one-stop shop for most of our customization needs. This consolidation is stored in a .CUIx file that can be edited using the CUI command from inside of AutoCAD. The CUIx files replace the previously used .MNU, .MNS and .MNC files which are automatically converted to .CUI when loaded into AutoCAD. The .MNR and .MNL files are still around and have not changed in function.

AutoCAD 2010 introduced the new compressed CUIx file format using a .CUIx file extension, while previous versions used the .CUI file extension.

Pros

Many of you probably wonder why this interface method is better than the last? Let me enlighten you!

Using the old .MNx system if I wanted to add a custom command to a menu, toolbar or function key, I had to add the command syntax in three different places in the appropriate .MNx file. If that custom command changed, I had to remember where the command was used and make the changes multiple times as well. Of course, that wasn't difficult, but I did forget to change ALL of them occasionally; how about you?

The old system doesn't allow for access to the new "ribbon" interface enhancements provided with today's windows look and feel.

Cons

The biggest "con" I can think of with the new system is that it is NEW! Once you start working with it you will find that it is fairly easy to use and although there might be some "glitches" here and there, it is more stable than the earlier releases... so give it a try!

CUI doesn't store ALL interface items.

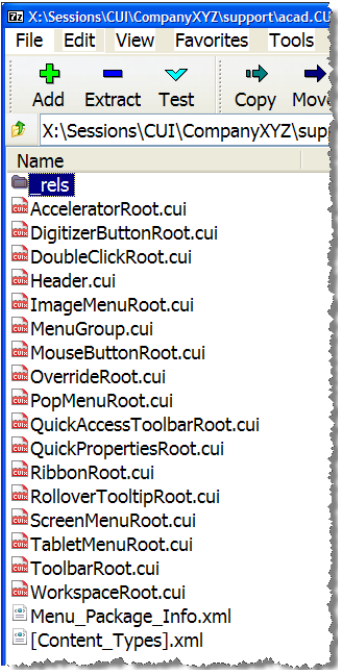
You can't edit the CUI outside of AutoCAD.

What is a .CUIx File?

The CUIx file is a container that holds several other files relating to the interface definitions.



You can see the contents of the CUIx file using a free program called 7-ZIP.



CUI File Definition Types

There are two levels defined for customization files in AutoCAD.

MAIN – stores the out-of-the-box AutoCAD interface definitions. (ACAD.CUIx)

ENTERPRISE - stores custom interface definitions and is read-only so it is not editable by users. (BLANK)

Partial Loaded Files

Many interface definitions can be stored in additional .CUIx files that can be loaded as partial files. These files are “appended” to the Main or Enterprise .CUIx files. There are some partial files loaded by default dependent on the individual software installed.

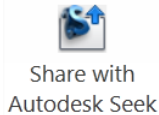
CUSTOM.CUIx - stores custom interface definitions and is BLANK by default.

AUTODESKSEEK.CUIx – stores the out-of-the-box

Autodesk Seek interface items.



MODELDOC.CUIx – stores the out-of-the-box 3D Drawing View interface items.



CONTENTEXPLORER.CUIx – stores the out-of-the-box Content Explorer interface items.

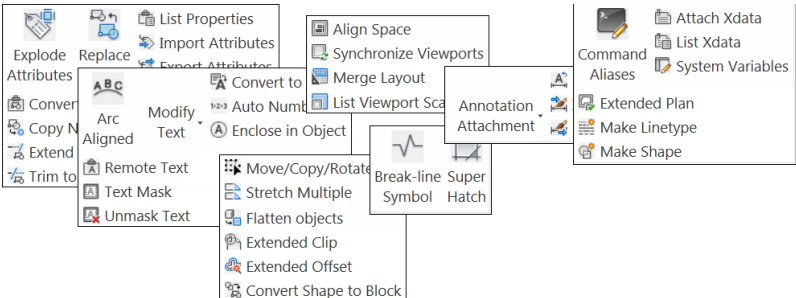


ACFUSION.CUIx – stores the out-of-the-box INVENTOR FUSION interface items.



ACETMAIN.CUIx – stores the out-of-the-box Express Tools interface items.

Edit in Fusion



Where are the .CUIx Files?

The delivered .CUIx files are stored in the following hidden folder locations.

Windows XP

C:\Document and Settings\\Application Data\Autodesk\AutoCAD 2xxx\Rx.0\enu\Support

Vista and Windows 7

C:\users\\AppData\Roaming\Autodesk\AutoCAD 2xxx\Rx.0\enu\Support

What is controlled by the CUI?

The following interface items are stored and controlled using the CUIx file.

Workspaces - store the current state and visibility of the user interface items.

Ribbon Tabs - store the ribbon tab interface items.

Ribbon Panels - store the ribbon panel interface items.

Contextual Tab States (2010-2013 only) - store the context-sensitive ribbon tabs.

Quick Properties - store the settings and status of the mini-properties dialog.

Rollover Tips - store the contents of the object rollover tips and reports.

Shortcut Menus - store the contents of object based *<Right-Click>* menus

Keyboard Shortcuts – store command shortcuts available to the user.

Double Click Actions – store command actions to execute when a user issues a *<Double-Click>* on an object.

Mouse Buttons – store command shortcuts as mapped to the mouse buttons.

What is NOT controlled by the CUI?

The following items are not controlled by the CUI interface command.

Aliases – generated by AutoCAD, or defined by a

Tool Palettes – used to automate access to standards, tools, etc.

Options – such as file paths, user preferences, screen colors, fonts, etc.

Profiles – and associated settings.

What NOT to Do?

Many users need to migrate some old .MNx files into the new interface format and file types. Here are some tips and side-effects you need to know about.

The “Old” MENU Commands

You can use the MENU and MENULOAD commands to load your old .MNU or .MNS files, but you need to know the following consequences to using these old commands.

- Using the MENU command allows you to load an old .MNU or .MNS file into the new .CUIx and converts it automatically. However, it unloads everything else in the process and that might cause you more work than necessary. You can load the old .MNU file from within the CUI dialog and avoid this unintentional side-effect.
- Using the MENULOAD command allows you to load a partial file into the new .CUIs file; similar to the old method and is identical in functionality to loading the file using the CUI dialog.

Tour of the CUI Dialog

First, let's take a look at the CUI dialog so that we understand all the different parts and "panes".



I said "PANES" not "PAINS"!

CUI Panes

Are the "areas" in the dialog that provide access to individual parts of the user interface.

1 - Customization In Pane

Displays the hierarchy list of Workspaces and loaded CUIx files. This pane is used to organize and distribute tools in the interface.

2 - Command List Pane

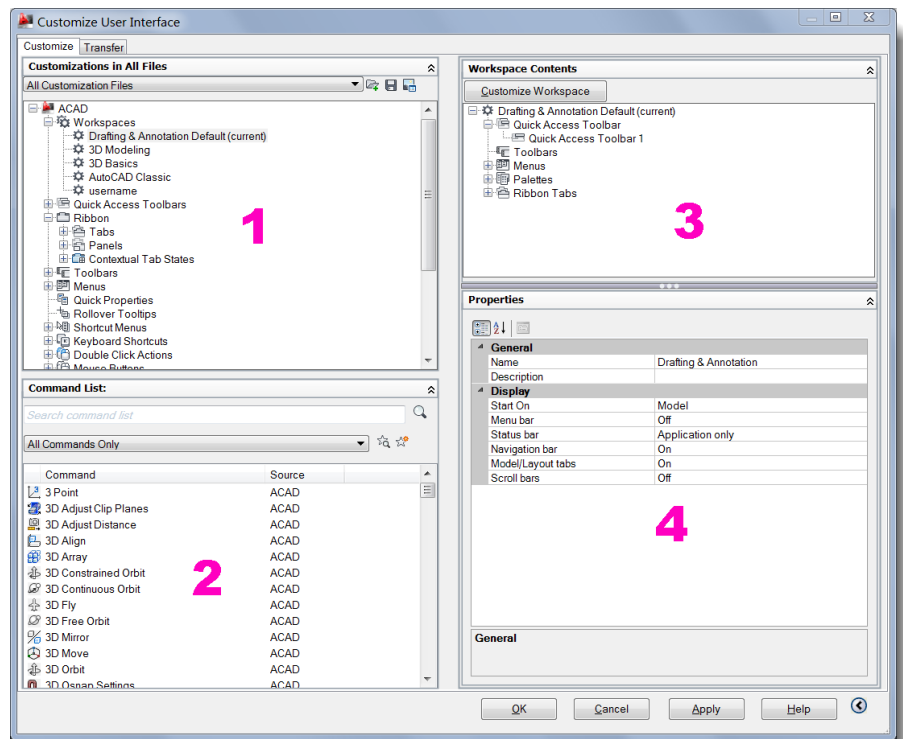
Displays a list of all commands available in the currently loaded CUIx files. This pane provides access to tools and custom commands used for distribution in the interface.

3 - Dynamic Pane

Displays different functions based on the current selection in the 1 – Customization In pane of the dialog. This pane provides access to toolbar previews, button icons, workspace contents, etc.

4 - Properties Pane

Displays the editable tool properties based on the current selection in the 2 – Command List pane of the dialog. The available properties change as needed dependent on the selected command or menu item.



CUI Tabs

There are two tabs available in the CUI dialog.

Customize Tab

Provides the tools needed to create and modify the user interface

Transfer Tab

Provides the tools need to transfer customizations between independent CUIx files.

Getting Started

The first thing you need to do is create your own .CUIx file to store all the customizations you want to create. You do not want to add your personal customizations into the default out-of-the-box ACAD.CUIx file since that file can be re-written without your knowledge at any time. It is safer to create your own personal or corporate .CUIx file for all customizations.

How to Create a Custom .CUIx File

These steps will create a corporate or “enterprise” CUIx file for our customizations.

STEP 1: Run the command CUI using any of the following methods.

- Key-in the CUI command
- Select the MANAGE Ribbon and select the CUI tool
- Select the menu TOOLS → CUSTOMIZE → INTERFACE



STEP 2: Select the TRANSFER TAB from the CUI dialog

STEP 3: Using the RIGHT-TOP-PANE of the TRANSFER TAB select the <Drop-Down-List> to access the NEW command.

You could also use the LEFT-TOP-PANE of the TRANSFER TAB to access the NEW command. However, I recommend using the LEFT-TOP-PANE for accessing existing .CUIx files and the RIGHT-TOP-PANE for accessing NEW CUI files.

STEP 4: Navigate to the server location for your organization and name the file as needed.

I will name the file CompanyXYZ.CUIx

STEP 5: Pick the OK button to close the dialog and create the new CUIx file.

STEP 6: Select the <Drop-Down-List> from the RIGHT-TOP-PANE to access the OPEN command and open the newly created CompanyXYZ.CUIx file.

STEP 7: Use the LEFT-TOP-PANE to select the ACAD.CUIx file

STEP 8: Select the preferred workspace items from ACAD.CUIx and transfer them to your new CompanyXYZ.CUIx file as needed. Use the <Drag-n-Drop> method to transfer the items.

STEP 9: Pick the APPLY and OK buttons to save and close the dialog.

Using a Profile

The next step is to configure our corporate profile to use the new CUI file created in the previous steps.

How to Create a Profile

- STEP 1:** Run the OPTIONS command
- STEP 2:** Select the PROFILE TAB and pick the ADD TO LIST button to create a new profile named AU-CUI.
- STEP 3:** Pick OK to close the dialog.
- STEP 4:** Pick the SET CURRENT button to make the new AU-CUI profile the active profile.
- STEP 5:** Select the FILES TAB and expand the CUSTOMIZATION FILES search path location.
- STEP 6:** Expand the MAIN CUSTOMIZATION FILE search path and select the current path defined.
- STEP 7:** Pick the BROWSE button to navigate to your corporate support path location where you previously created the new .CUIx file.
- STEP 8:** Select the CompanyXYZ.CUIx file and pick the OK button to close the dialog.
- STEP 9:** Pick the APPLY button to save this change without closing the dialog.
- STEP 10:** Pick the OK button to close the dialog.

The current interface will appear to lose the majority of the AutoCAD tools. The reason the ribbon is now empty is because we unloaded the ACAD.CUIx file which contained all the interface item definitions.

Don't panic, we will fix that in the next few steps.

Using a Workspace

One of the first things you need to know is that the workspace is critical to the overall success of the new interface enhancements. You cannot work without a workspace active, so be sure to define one immediately BEFORE you make any interface changes or customizations. You can use one of the delivered workspaces but I recommend that everyone make one of their own to protect their customizations.



You can use a delivered workspace as a template for your own workspace by using the SAVE CURRENT AS command.

What is a Workspace?

A workspace stores the current state of the user interface and is a “part” of the CUI. It remembers the settings for ribbons, menus, toolbars, and tool palettes (yes, tool palettes!)



The current workspace remembers what tool palettes are loaded and there is a workspace related file called PROFILE.AWS that stores tool palette group information.

What is Controlled by a Workspace

Workspaces store the visibility (On or Off) of interface components.

What is NOT Controlled by a Workspace

It is not a PROFILE, it does not keep track of file paths, non-interface resources, user preferences or options settings.

How to Create a Workspace

Using the Status Bar

Most users will create their own workspace using the access point available in the application status bar. The status bar now provides a “workspace switching” tool to easily perform any of the following tasks.

- toggle between the available workspaces
- save a new workspace
- modify workspace settings
- customize a workspace

Using this tool you can modify the location and appearance of your current interface environment and then save it as a new personal workspace.

STEP 1: Arrange your interface setup as needed for your personal use.

STEP 2: Select Workspace Switching button from the status bar to access the SAVE CURRENT AS command.

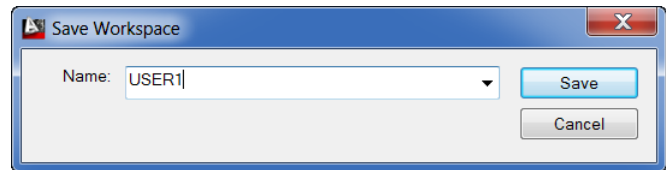


...or...

In AutoCAD 2012-2013, you can select Workspace Switching button from the Quick Access Toolbar to access the SAVE CURRENT AS command.



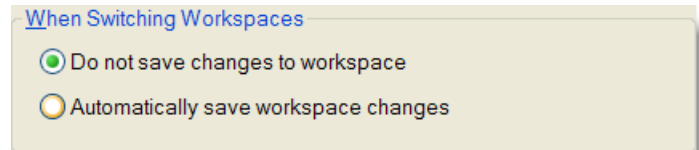
STEP 3: Save the new workspace with the name USER1.



STEP 4: Pick SAVE to save and close the dialog.

Another setting that is important to understand is the “automatic save” option is enabled by default for workspaces (by default, this is now disabled in AutoCAD 2010-2013). This setting is helpful when enabled at the beginning of your interface setup and modifications because it remembers all the changes you are making in the layout. However, this can be problematic if left on once your interface is defined and static.

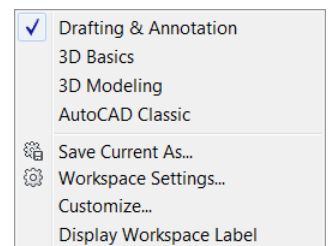
Have you ever had AutoCAD crash and lost toolbars or had your interface scrambled? Yes, we all have! If the “automatic save” is still enabled then this behavior is memorized and your workspace settings are saved, using the “crash” interface settings.



To prevent this, I recommend turning off the “automatic save” option once you have your interface setup defined to protect it. Just in case!



Using AutoCAD 2013 you can display the workspace name using the status bar WORKSPACE SWITCHING icon → DISPLAY WORKSPACE LABEL. I find this a more beneficial location for displaying the active workspace than the QAT. Remember, the QAT is for those commands that you need constant access to daily; I doubt you change workspaces that frequently.



The previous steps automatically loaded your new CompanyXYZ.CUIx file in place of the ACAD.CUIx file. To resolve this side-effect of losing all the tools, we will load the ACAD.CUIx file back into our custom file as a partially loaded file.

STEP 5: Select PARTIAL CUSTOMIZATION FILES and *<Right-Click>* to access the LOAD PARTIAL CUSTOMIZATION FILE command.

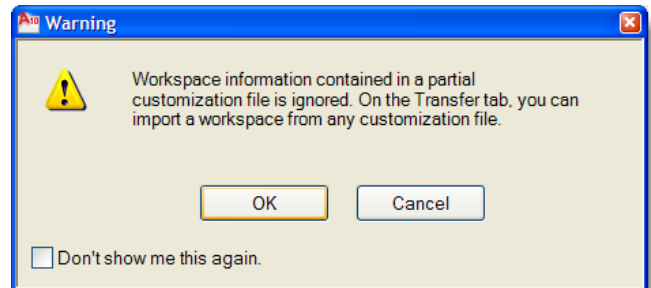
STEP 6: Navigate to the following location to partially load the ACAD.CUIx file.

`C:\users\\AppData\Roaming\Autodesk\AutoCAD 2xxx\Rx.x\enu\support\`

STEP 7: Pick the OK and APPLY buttons to save and close the dialog.



You might get this error dialog when performing this task. Pick OK to close the dialog; since we want to use our own workspace and not a delivered workspace anyway.



Using the CUI dialog

The next step is to create a default corporate workspace in the corporate CUIx file for users to use as a “template” for their own user-based workspaces.

Arrange the interface items as needed for your company.

STEP 1: Key-in the command CUI

STEP 2: Select the CUSTOMIZE TAB and use the *<Drop-Down-List>* to verify that your CompanyXYZ is the only CUIx file currently loaded.

STEP 3: Select WORKSPACE and *<Right-Click>* and select the NEW WORKSPACE command.

STEP 4: Key-in the new workspace name XYZuser.

STEP 5: Select *<Right-Click>* and select the SET CURRENT command. You might want to define this workspace as the default workspace as well using the SET DEFAULT command.

STEP 6: Pick the OK and APPLY buttons to save and close the dialog.

Customizing the Workspace

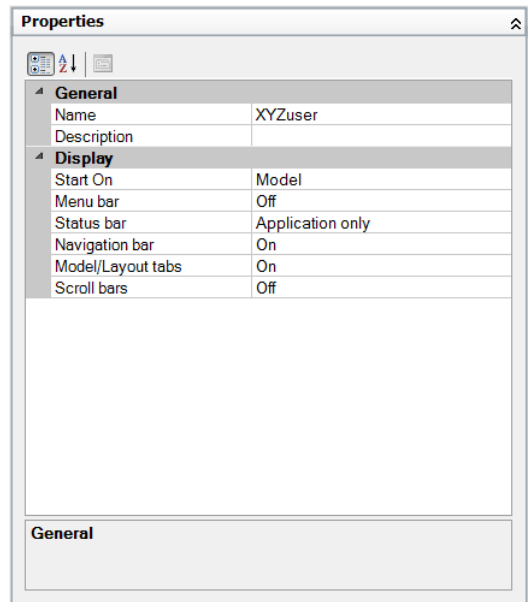
If you forget to pick the CUSTOMIZE WORKSPACE button then AutoCAD assumes that you want to customize ribbons, toolbars, menus, etc. When you pick this button, AutoCAD knows that you want to customize the display of workspace items.

There are three options when customizing the display of interface items in a workspace;

<input type="checkbox"/>	indicates NONE of the items are a part of current workspace
<input checked="" type="checkbox"/>	indicates SOME of the items are a part of current workspace
<input checked="" type="checkbox"/>	indicates ALL of the items are a part of current workspace

Workspace Properties

There are properties defined in the workspace that many find surprising. For example, if you prefer to use SCROLL BARS rather than the PAN command to move around the AutoCAD view window you can define that in your workspace.



The Properties Pane

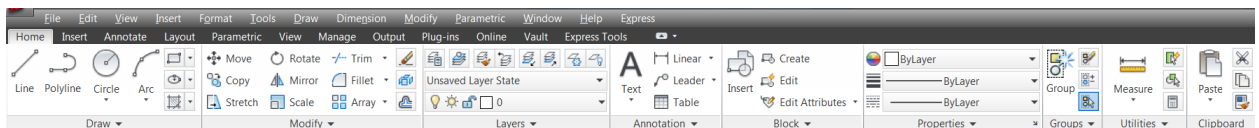
Using the Properties Pane you can specify how you want the following items of the interface handled when using your workspace.

Start On

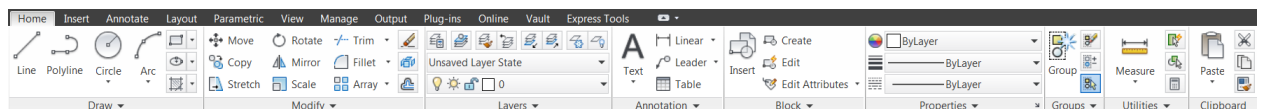
- Model** – open to Model tab by default
- Layout** – open to Layout tab by default
- Do Not Change** – keep current state as-is

Menu Bar

On – open with Menu Bar displayed ON

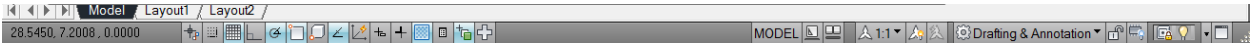


Off – open with Menu Bar displayed OFF



Status Bar

Application Only – open with application status bar



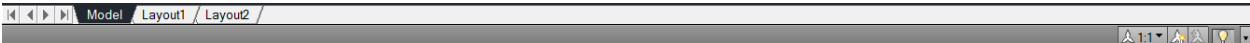
All Off – open with no status bar



All On – open with all status bars



Drawing Status Bar Only – open with drawing status bar only



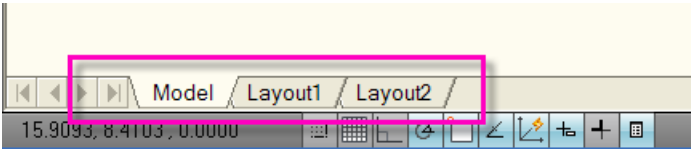
Navigation /Layout Tabs

- On** – open with tabs displayed ON
- Off** – open with tabs displayed OFF
- Do Not Change** – keep current state as-is



Model/Layout Tabs

- On** – open with tabs displayed ON
- Off** – open with tabs displayed OFF
- Do Not Change** – keep current state as-is

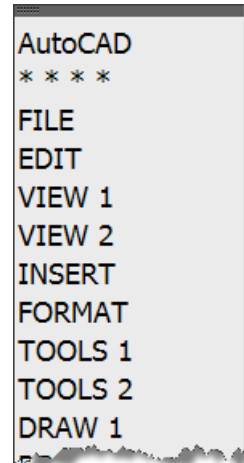


Screen Menus

- On** – open with screen menu displayed ON
- Off** – open with screen menu displayed OFF
- Do Not Change** – keep current state as-is

Scroll Bars

- On** – open with scroll bars displayed ON
- Off** – open with scroll bars displayed OFF
- Do Not Change** – keep current state as-is



You can restore the old "classic" interface using the delivered workspace AutoCAD Classic

Using a CUI

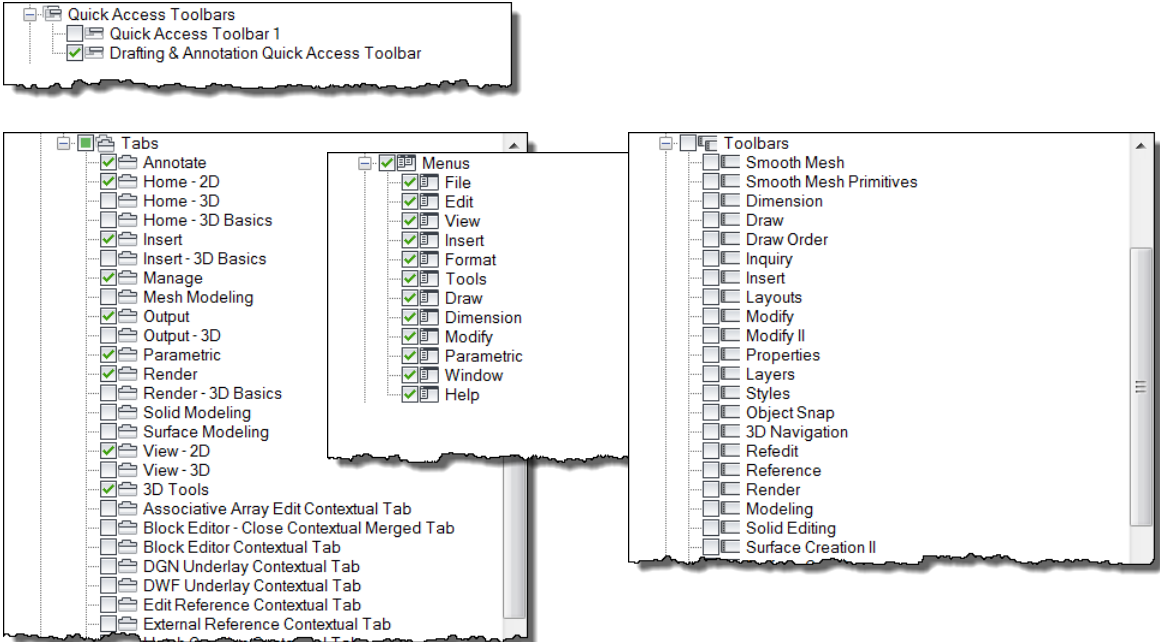
How to Load a .CUIx File

Now we need to turn on the AutoCAD interface components that we want to use in our workspace. I don't recommend just copying or transferring a delivered workspace to your custom .CUIx file since that would copy all the components used in that workspace and duplicate the information. It is better to leave the AutoCAD interface components in the ACAD.CUIx file and turn on what you need in that file. Keep your custom CompanyXYZ.CUIx file as clean as possible containing only custom interface items.

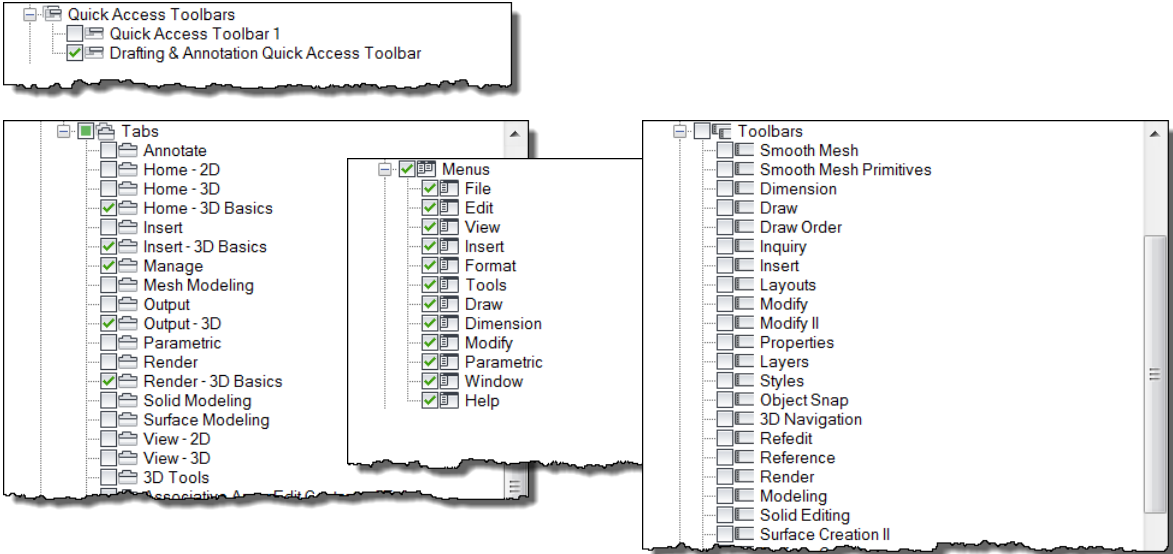
- STEP 1:** Select your workspace XYZuser and pick the CUSTOMIZE WORKSPACE button to modify what is displayed in this workspace.
- STEP 2:** Expand the PARTIAL CUSTOMIZATION FILES → ACAD and add a checkmark in front of the components you want to use.

Below is a chart to help you with what is on by default in the delivered workspaces.

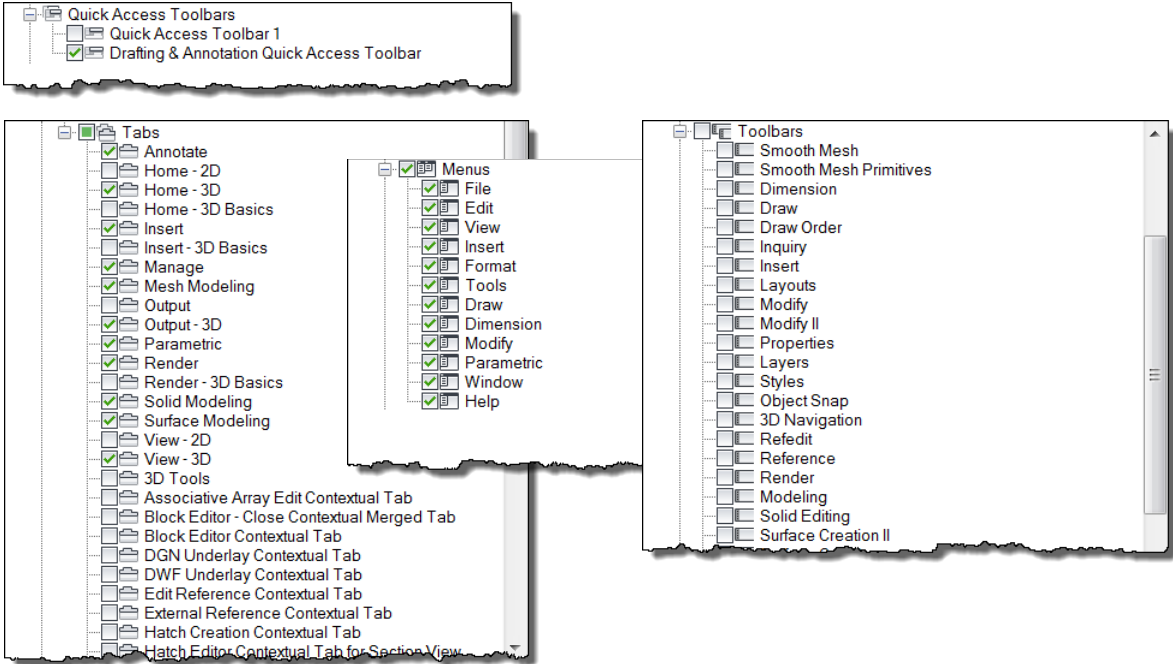
Drafting & Annotation



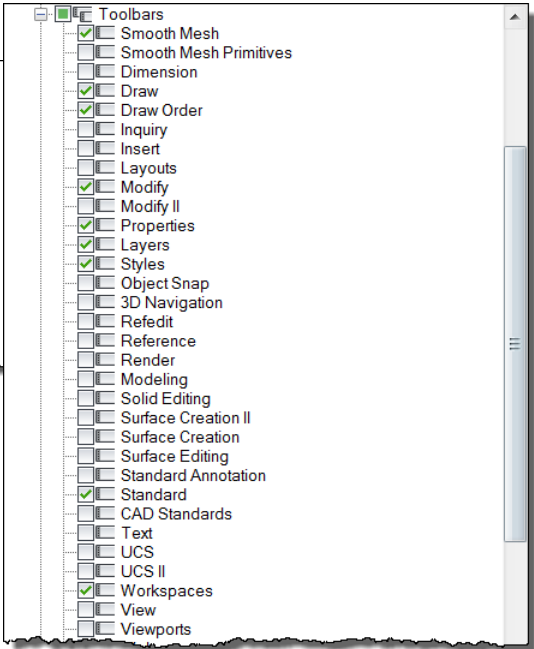
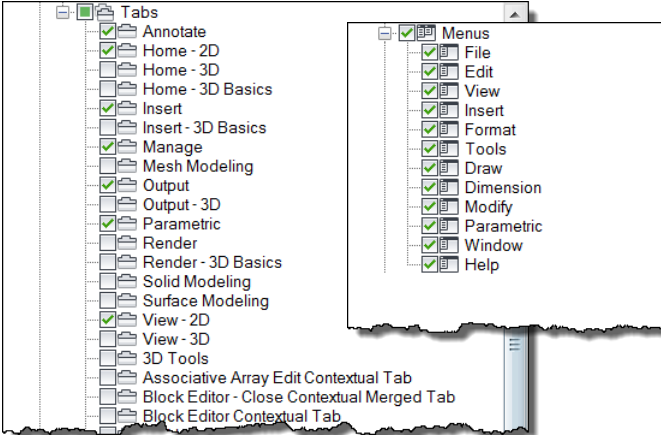
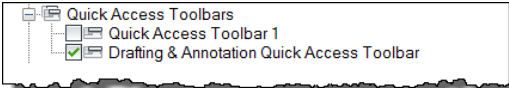
3D Basics



3D Modeling

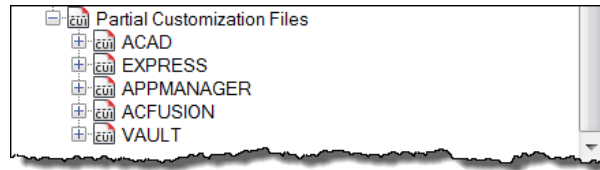


AutoCAD Classic



Loading Additional CUI Files

There are several additional files loaded as partial files in the default out-of-the-box ACAD.CUIx that you may want to load as well. These files may change depending on how your AutoCAD was installed and whether you are on the subscription program. Using the following steps will allow you to load and control what CUI files are loaded into your corporate environment.



In this example, I will load the EXPRESS TOOLS into AutoCAD.

- STEP 1:** Key-in the command CUI
- STEP 2:** Select your workspace XYZuser and expand the PARTIAL CUSTOMIZATION FILES
- STEP 3:** Select PARTIAL CUSTOMIZATION FILES and <Right-Click> to access the LOAD PARTIAL CUSTOMIZATION FILE command.

a. Navigate to the following location to partially load the ACETMAIN.CUIx file.

C:\users\\AppData\Roaming\Autodesk\AutoCAD 2xxx\Rx.x\enu\support

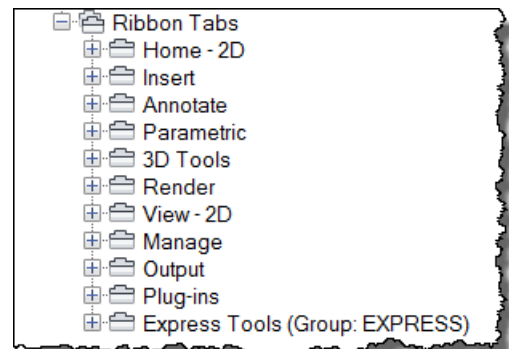
- STEP 4:** Use the <Drop-Down-List> in the CUSTOMIZATION IN pane to select ALL CUSTOMIZATION FILES and select your workspace XYZuser.
- STEP 5:** Pick the CUSTOMIZE WORKSPACE button and expand PARTIAL CUSTOMIZE FILES → EXPRESS and modify what parts of the new CUI are displayed in your workspace.
- STEP 6:** Pick the APPLY and OK buttons to save and close the dialog.



It may be necessary to re-arrange some of the ribbon tabs and menus after they have been loaded or set to ON. Use the LEFT-TOP-PANE to <Drag-n-Drop> and re-arrange the order.



You can also load a .CUIx file using <Drag-n-Drop> from Windows Explorer into AutoCAD.

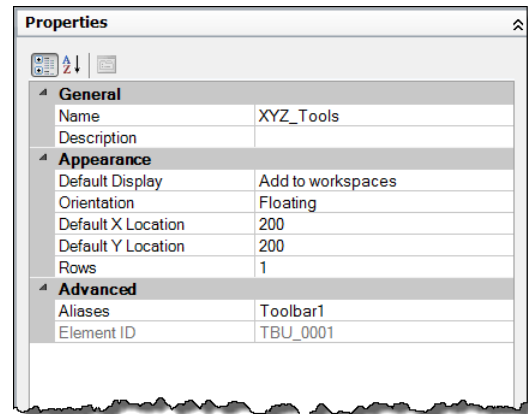


Using Toolbars

How to Create a Toolbar

The toolbar is one of the first interface items that most users want to create. Use the following procedure to create a custom toolbar.

- STEP 1:** Key-in the command CUI
- STEP 2:** Select your workspace XYZuser
- STEP 3:** Select the TOOLBARS section of the file and *<Right-Click>* to access the NEW TOOLBAR command.
- STEP 4:** Name the new toolbar as needed.
XYZ_Tools
- STEP 5:** Select the new toolbar XYZ_Tools and use the PROPERTIES PANE located on the LOWER-RIGHT-PANE of the CUI dialog to modify settings as needed.
- STEP 6:** Define whether this toolbar should be displayed by default in the current workspace.
- STEP 7:** Define if the toolbar will be “floating” and if so, define the default pixel location on the screen. You can also define it to be docked automatically using the options top, bottom, left, and right.
- STEP 8:** Define if the toolbar will display with more than 1 row by default.



General Properties

Default Display - specifies whether the toolbar is turned on when the CUI file is loaded as a partial file.

Orientation - Specifies the location of the toolbar, Floating, Top, Bottom, Left, or Right.

Default X Location - Specifies the X location of the toolbar when floating.

Default Y Location - Specifies the Y location of the toolbar when floating.

Rows - Specifies the number of rows the items on the toolbar are displayed in when the toolbar is floating.

Advanced Properties

Aliases – defines a name that can be used by macros and programs that need access to this toolbar. More than one alias can be defined.

ElementID – defines the ID number automatically assigned by AutoCAD.

Now it's time to populate the new toolbar with existing tools that can be accessed using the COMMAND LIST pane of the CUI dialog.

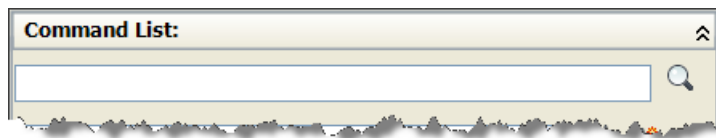
STEP 1: Using the CUSTOMIZATIONS IN ALL FILES pane select the <Drop-Down-List> and select ALL CUSTOMIZATION FILES.

This allows you to select any commands available in the loaded .CUIx files.

STEP 2: Use the COMMAND LIST pane and select the <Drop-Down-List> to access command categories such as ACAD Commands, EXPRESS commands, etc.

STEP 3: Use the <Drag-n-Drop> method to populate commands onto the new toolbar XYZ_Tools.

Use the FILTER area of the COMMAND LIST pane to limit the commands in the list and to help you find commands more efficiently.



STEP 4: Use the <Drag-n-Drop> method to drop the following commands on the new toolbar XYZ_Tools.

Viewports, Single Viewport
Viewports, Object
Viewports, Join



STEP 5: Select the tool VIEWPORTS, SINGLE VIEWPORT from the XYZ_Tools toolbar.

STEP 6: Using the PROPERTIES pane located in the LOWER-RIGHT-PANE of the CUI dialog to modify settings as needed.

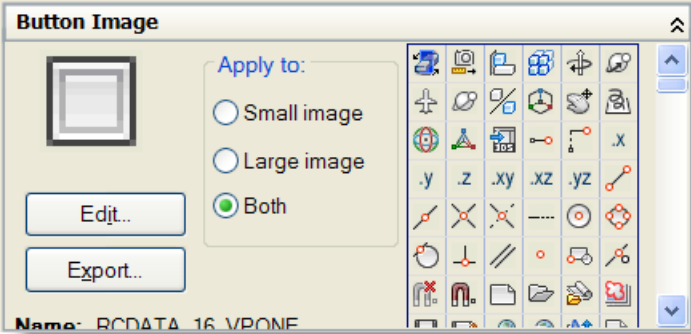
STEP 7: Pick the APPLY and OK buttons to save and close the dialog.

Button Image Properties

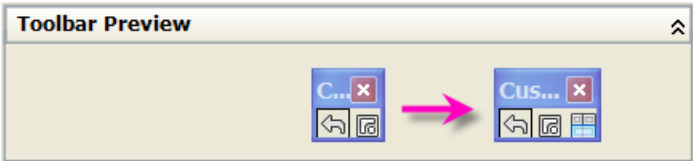
Use this portion of the dialog to modify the image display for the new toolbar as needed.

The AutoCAD CUI allows you to EDIT an image for both SMALL and/or LARGE tools as specified by the user preferences.

Icons can also be created using an external program.



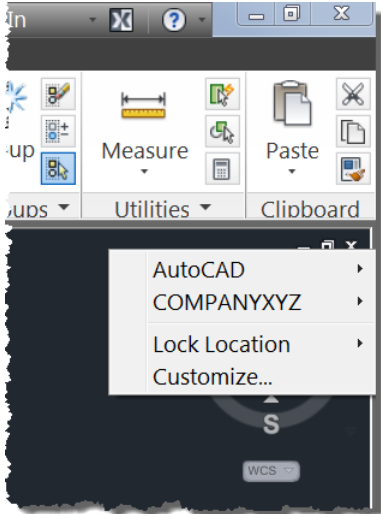
You can <Drag-n-Drop> a command from the command list to the TOOLBAR PREVIEW section of the CUI dialog to add a tool to the toolbar.



You can remove tools from a toolbar by dragging them off of the TOOLBAR PREVIEW. Did you notice that the icon changes to a “cloud of dust”? I think some programmer is spending way too much time alone with AutoCAD, eh?

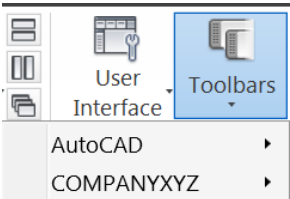


You can no longer access toolbars from the Quick Access toolbar. But you can use the left and right “view edges” to access loaded toolbars while using the ribbon interface. (at least sometimes!)



Controlling Toolbars in AutoCAD 2013

You can use the ribbon View → Toolbars to easily access the toolbars list and control what toolbars are display on or off.



How to Add Separators to Toolbar

You can add separators to the toolbar to help organize the tools in a single toolbar.

STEP 1: Key-in the command CUI

STEP 2: Select the CUSTOMIZE TAB from the CUI dialog

STEP 3: Select the current workspace XYZuser



STEP 4: Expand the TOOLBARS section

STEP 5: Expand the XYZ_Tools toolbar

STEP 6: Select the tool where you want to add a separator and *<Right-Click>* to access the INSERT SEPARATOR command.

STEP 7: Pick the APPLY and OK buttons to save and close the dialog.

Customizing Tools

Things You Need to Know to Write MACROS

The following chart contains information you need to write macros for tools in AutoCAD. I won't go into all of these in this class; since we want to focus on the CUI portion of customizations, but I thought many of you might find this useful for future reference.

Hope this helps!

MACRO Language		
Macro Syntax		AutoCAD Command Line Syntax
\	<i>Backslash</i>	Pause for user input
;	<i>Semi-colon</i>	Issues an ENTER key
^M		Issues an ENTER key
	<i>Space</i>	Issues a SPACEBAR key
^C		Issues an ESC key
^R		Suppress command versioning for macros
^Z		Suppress SPACE at end of command
^H		Issues a BACKSPACE key
^I		Issues a TAB key
^X		Issues a DELETE key
'	<i>Apostrophe</i>	Changes command to TRANSPARENT
_	<i>Underscore</i>	Used as a SPACER or INTERNATIONAL key
-	<i>Dash</i>	Suppresses dialog box command option
+	<i>Plus</i>	Specifies which tab to display in a dialog (0 - #) i.e. +0 displays the first tab in dialog
\$M=		Allows the use of DIESEL expressions
*	<i>Asterisk</i>	Changes command to MULTIPLE option
@		Recalls coordinates stored in the LastPoint system variable
Warning: Be careful of SPACE characters in your macro as they will issue an ENTER key!		

How to Create a Custom Tool

Once you have a custom toolbar most users want to add customized tools as well. In this example I will create two custom OFFSET tools to take advantage of the new OFFSET enhancements more easily than what is required at the command line. These enhancements have been available for a while; but many users don't use them because they are buried in the command line options.

The first tool will be the OFFSET MULTIPLE option that allows the user to offset a line multiple times without having to identify the original object each time.

Before writing a tool macro you must know all the steps required to run the command from the command line.

Let's look at what is required to run the OFFSET command and access the MULTIPLE option.

Command: **OFFSET**

Specify offset distance or [Through/Erase/Layer] <Through> **USER INPUT** or **ENTER**

Select object to offset or [Exit/Undo] <Exit> **SELECT OBJECT (USER INPUT)**

Specify point on side to offset or [Exit/Multiple/Undo] <Exit> **M**

(USER INPUT) for remainder of command

The following MACRO is required to issue these command options from a toolbar or other interface option.

^C^C_OFFSET;\\M;

Now let's continue making our custom command tool OFFSET MULTIPLE.

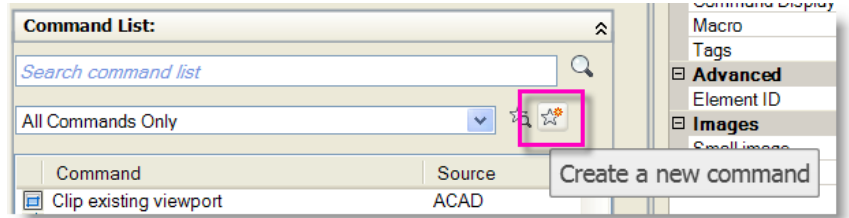
Button Properties

Use the PROPERTIES pane of the CUI dialog to define the specific settings for the tool.

- STEP 1:** Key-in the command CUI
- STEP 2:** Select the CUSTOMIZE TAB from the CUI dialog
- STEP 3:** Select the workspace XYZuser

STEP 4: Using the COMMAND LIST pane of the CUI dialog, select the CREATE NEW COMMAND button.

This creates a blank command named COMMAND1 that should appear at the bottom of the command list automatically.



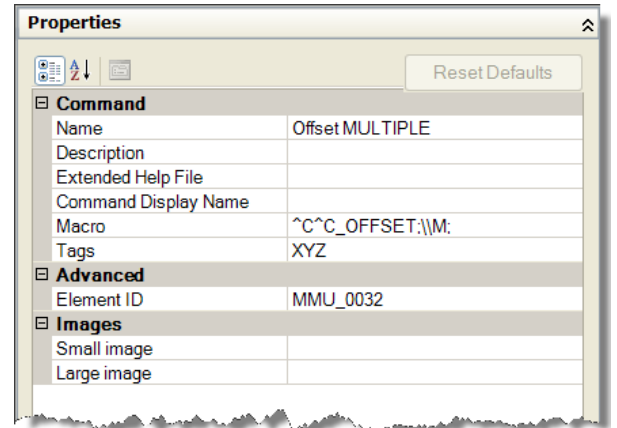
STEP 5: Select the new command COMMAND1

STEP 6: Using the PROPERTIES pane of the CUI dialog, rename the command to OFFSET MULTIPLE

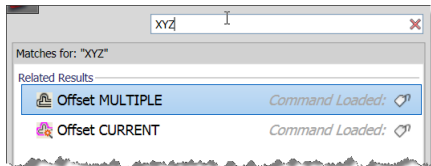
STEP 7: Add a description if needed

STEP 8: Key-in the required MACRO as determined earlier in this document.

^C^C_OFFSET;\M;



STEP 9: Add a TAG definition as needed.



Define tags that can be used as keywords when searching for a tool in the AutoCAD application.

Using a custom tag allows you to easily search for YOUR custom commands.

XYZ

STEP 10: Using the BUTTON IMAGE pane of the CUI dialog select an icon image from the delivered icons as needed.

If you do not select a button image; AutoCAD will automatically add a QUESTION CLOUD as the button image.



Use the delivered icon images where possible; but you can make your own icon images if needed.

AutoCAD stores its button images in the following file.

C:\Program Files\AutoCAD 2xxx\ACADBTN.XMX

STEP 11: Pick the APPLY and OK buttons to save and close this dialog.

Creating Custom Icon Images

AutoCAD provides over 600 icons with the software including both new and old icons from previous versions. I recommend using those if possible, but sometimes you just need to create your own icon. You can do this by using the Button Image → EDIT button which opens a dialog that allows you to draw your own icon.



You can also use any windows icon generating software to generate your own icons for use in AutoCAD icons should be saved in a .BMP format using a 16x16 pixels for small icons and 32x32 pixels for large icons.

AutoCAD Button Editor

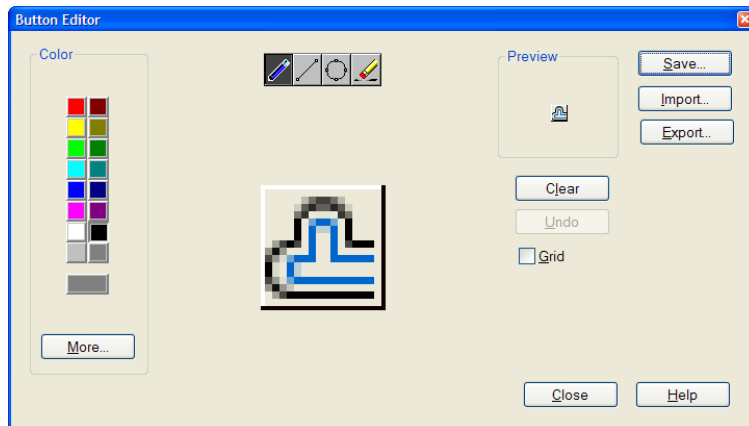
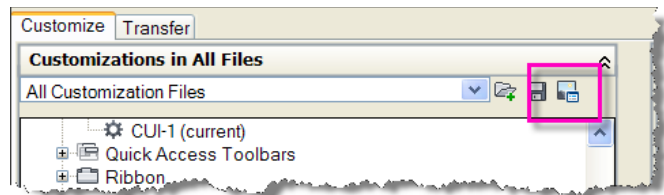


Image Manager

AutoCAD 2010 introduces a new Image Manager tool to enable access to externally stored icon images for use with the selected customization file.



Using Quick Access

How to Customize the Quick Access Toolbar

Be sure to customize the new Quick Access toolbar provided in the application window titlebar.



This handy toolbar gives you “quick access” to many of your favorite commands.

For example, I like having the following commands readily available from the Quick Access Toolbar.

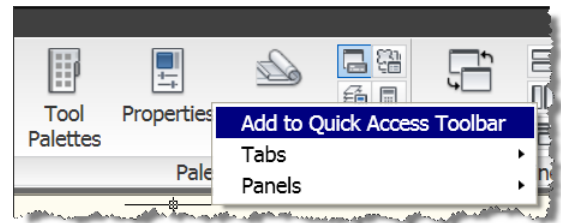
ATTACH REFERENCE and PROPERTIES

The first method to modify the Quick Access Toolbar is by using the built-in *<Right-Click>* feature to add any tool dynamically. I will refer to this as the Quick Edit Method.

Add Tools

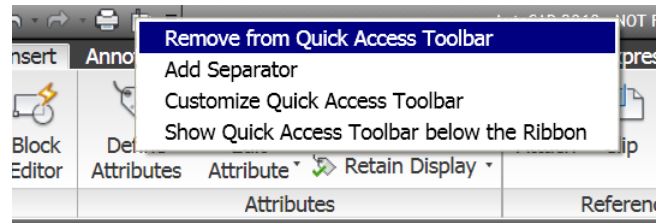
Attach Reference Tool

- STEP 1:** Select the INSERT Ribbon Tab and *<Right-Click>* on the ATTACH REFERENCES tool to access the ADD TO QUICK ACCESS TOOLBAR command.



Properties Tool

- STEP 1:** Select the VIEW Ribbon Tab and *<Right-Click>* on the PROPERTIES tool to access the ADD TO QUICK ACCESS TOOLBAR command.



Command List:

Command	Source
Hatch Layer Gallery	RIBBONCONTROL
Ribbon Toggle Button - Layer Properties	RIBBONCONTROL
LayerFilterComboControl	RIBBONCONTROL
Layer State Gallery	RIBBONCONTROL
Ribbon Toggle Button - Locked Layer Fading	RIBBONCONTROL
Locked Layer Fading	RIBBONCONTROL
Layer List Combo Box	RIBBONCONTROL

Layer Combo Toolbar (NEW in AutoCAD 2010-2013)

You can directly *<Right-Click>* and add this drop-down list using AutoCAD 2013; if you use a previous version you will need to add it using the CUI dialog.

- STEP 1:** Key-in the CUI command
- STEP 2:** Using the COMMAND LIST PANE select the drop-down RIBBON CONTROL ELEMENTS.
- STEP 3:** Use the FILTER field to filter out all commands not related to LAYER.
- STEP 4:** *<Drag-n-Drop>* the combo box onto the QUICK ACCESS TOOLBAR.
- STEP 5:** Pick the APPLY and OK buttons to save and close the dialog.

Remove Tools

- STEP 1:** *<Right-Click>* on the Quick Access Tool to access the REMOVE FROM QUICK ACCESS TOOLBAR command.

You can also add and remove tools to the Quick Access Toolbar using the CUI dialog.

- STEP 1:** Key-in the CUI command
- STEP 2:** Select the CUSTOMIZE TAB from the CUI dialog
- STEP 3:** Select the workspace XYZuser and expand the QUICK ACCESS TOOLBAR section
- STEP 4:** *<Drag-n-Drop>* commands from the COMMAND LIST pane on to the QUICK ACCESS area to populate it with your favorite commands.

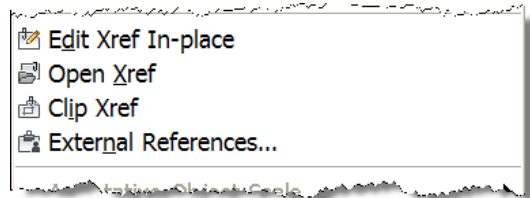
Using Shortcut Menus

How to Customize a Shortcut Menu

This is one of the newer areas for customizations in the AutoCAD interface and is probably one of the most popular areas for customizations. However, there are a few “secrets” you need to know to get them to work correctly.



Unlike other sections of the interface, you need to copy ALL shortcuts from the ACAD.CUIx into the XYZuser.CUIx file before making any customizations. This tends to “wake up” the shortcut menus in your CUI file for use. (Don’t ask me why – I have no idea!)



Add Mirror to <Right-Click> Menu

One of the first commands I noticed missing on the <Right-Click> menu was the MIRROR command. Let’s add that to the standard OBJECT <Right-Click> menu.

- STEP 1:** Key-in the CUI command
- STEP 2:** Select the CUSTOMIZE TAB from the CUI dialog
- STEP 3:** Select the workspace XYZuser and expand the SHORTCUT MENUS section
- STEP 4:** By default this list will be empty and we want to add a customized menu here.
- STEP 5:** Navigate to the PARTIAL CUSTOMIZATION FILES → ACAD → SHORTCUT MENUS and select all shortcut menus from ACAD.CUI
- STEP 6:** Use the <Right-Click> menu to access the COPY command.
- STEP 7:** Navigate back up to the XYZuser → SHORTCUT MENUS section and use the <Right-Click> menu to PASTE all items into the XYZuser.CUIx file.

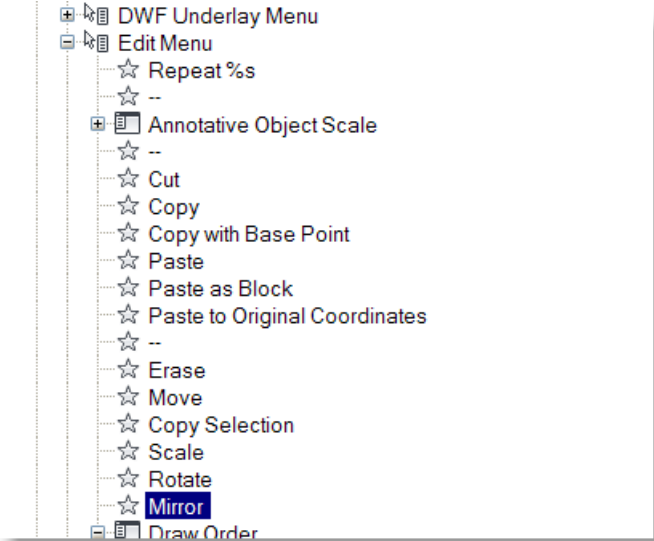
STEP 8: Select the shortcut menu EDIT MENU and review the properties to determine if this is where we want to add the MIRROR command.

General	
Name	Edit Menu
Description	
Advanced	
Aliases	POP502, CMEDIT
Element ID	PM_0007

The ALIASES definition is defined as CMEDIT which means this <Right-Click> menu displays when an object is selected for editing.

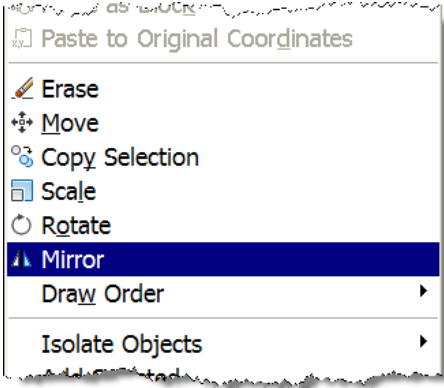
This is where we want to add the MIRROR command as a shortcut menu.

STEP 9: Using the COMMAND LIST pane in the dialog find the MIRROR command and <Drag-n-Drop> it onto the EDIT MENU shortcut menu item.



STEP 10: Pick the APPLY and OK buttons to save and close the dialog.

Try out the new <Right-Click> menu with an object selected.



If your customizations are still not working, try unloading the ACAD.CUIx file. This should encourage your shortcut menus to “wake up” more completely. You can load the ACAD.CUI file again, after you know your shortcut menus are working.

Thanks to Robert Bell for this little secret!

There are some default Aliases for the shortcut menus that might be helpful to know listed in the table below.

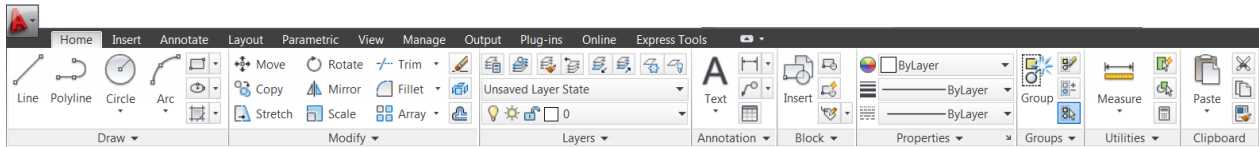
Shortcut Menu Aliases	
Alias Name	Definition
CMCOMMAND	<Right-Click> menu when a command is active
COMMAND_commandname	<Right-Click> menu for a specific command i.e. (COMMAND_line)
CMDEFAULT	<Right-Click> for the DEFAULT shortcut menu
CMEDIT	<Right-Click> menu when an object is selected
GRIPS	<Right-Click> menu when a grip is selected
OBJECTS_object	<Right-Click> menu for a specific object type is selected i.e. (OBJECTS_mtext)
POP	<Right-Click> on a menubar
SNAP	<Right-Click> menu for object snaps (SHIFT+<Right-Click>)

Tour of the Ribbon

Many users have grown to love the ribbon interface while many others still prefer the old toolbar approach. This is user preference of course, but let's see what we can do with the ribbon that we can't do with toolbars?

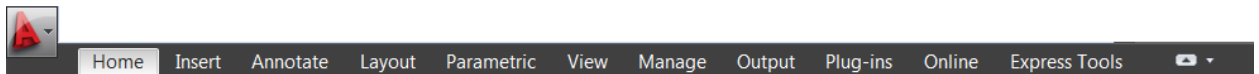
The Ribbon Interface

First, you need to understand the different parts of the ribbon. The ribbon consists of three basic parts, Tabs, Contextual Tabs, Panels, Sub-Panels, and more.



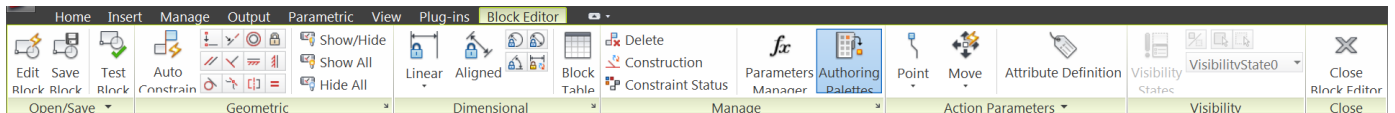
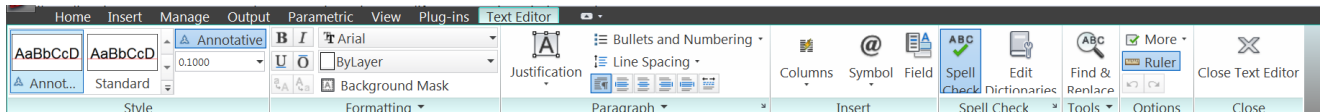
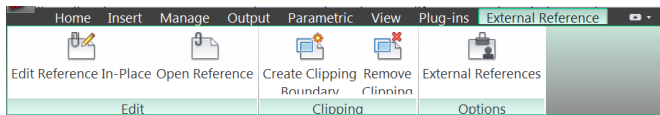
Tabs

Each tab is a named container for other parts of the ribbon interface.



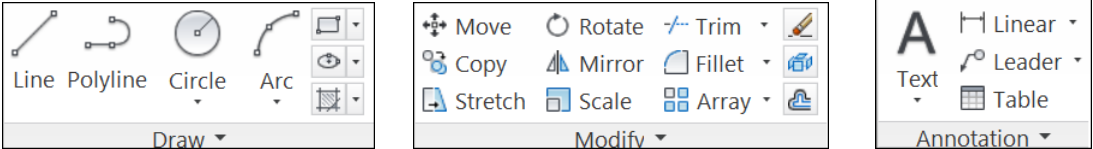
Contextual Tabs

Contextual tabs are defined for specific command functions. A contextual tab displays when an object is selected and provides the appropriate command options.



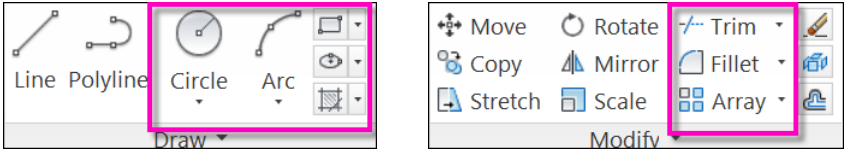
Panels

Each panel contains buttons, flyouts, rows and sub-panels.



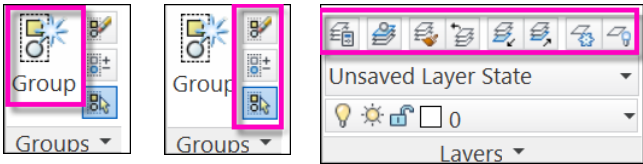
Subpanels

Each subpanel contains buttons, flyouts, rows, etc.

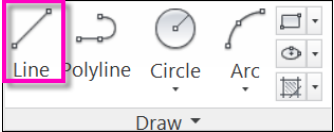


Rows

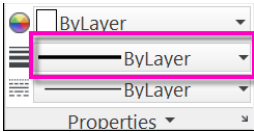
Each row contains buttons, flyouts,



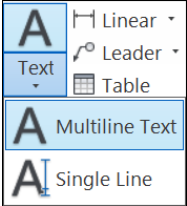
Button



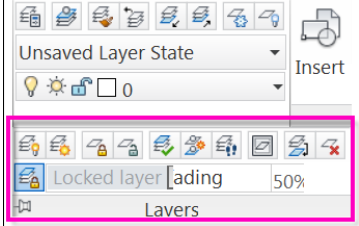
Combo Bar



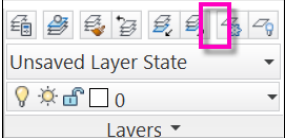
Drop Down/Flyout



Slideouts



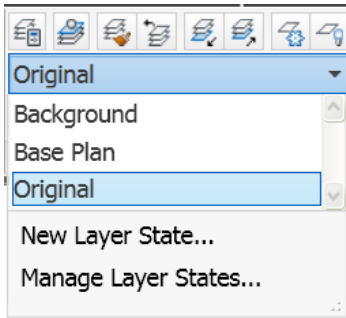
Spacer



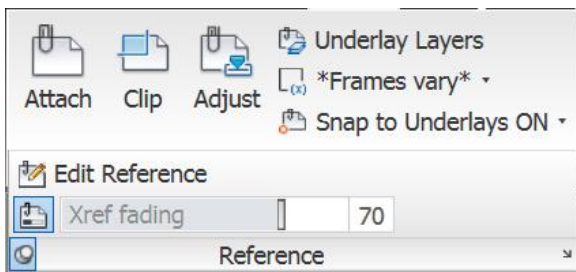
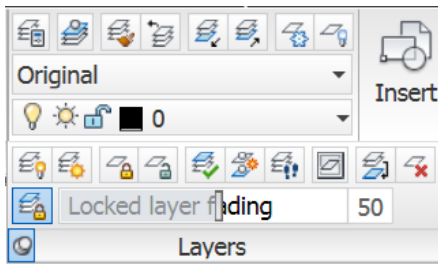
Unique Features of the Ribbon

Some of the unique tool features that you can't use on a toolbar as shown below. I for one want to use these...so I guess the ribbon is the way to go!

Quick Access to Layer States



Quick Access to Fading Controls



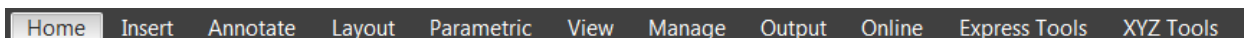
I am sure there are more, but these are some of my favorites!

Using Ribbons

How to Make Your Own Ribbon Tab

I recommend that you keep your customizations on your own ribbon tabs in the CompanyXYZ.CUIx file.

- STEP 1:** Key-in the CUI command
- STEP 2:** Select the CUSTOMIZE TAB from the CUI dialog
- STEP 3:** Select the workspace XYZuser and expand the RIBBON → TABS section.
- STEP 4:** Select TABS and <Right-Click> to access the NEW TAB command
- STEP 5:** Rename the new tab to XYZ_Tools
- STEP 6:** Select the CUSTOMIZE WORKSPACE button and verify that the new tab is turned ON in the XYZuser workspace.



- STEP 7:** Pick the APPLY and OK buttons to save and close the dialog.

The new custom tab has been created but currently has no panels defined.



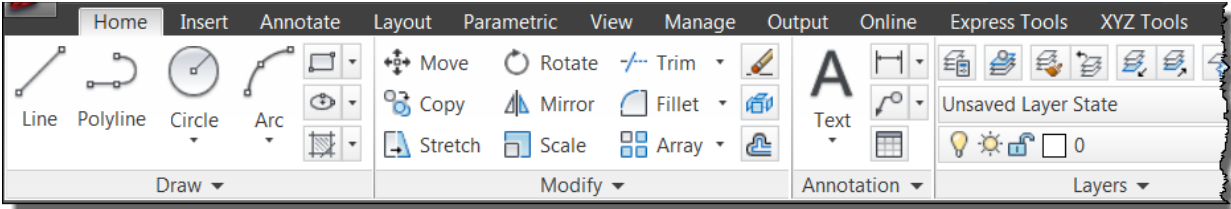
You might need to TURN ON the new tab; as it doesn't turn ON by default anymore.

Understanding the Panel Interface

There are several interface options available when using a panel. It is important that you realize what a panel can do before you try to customize and make one of your own.

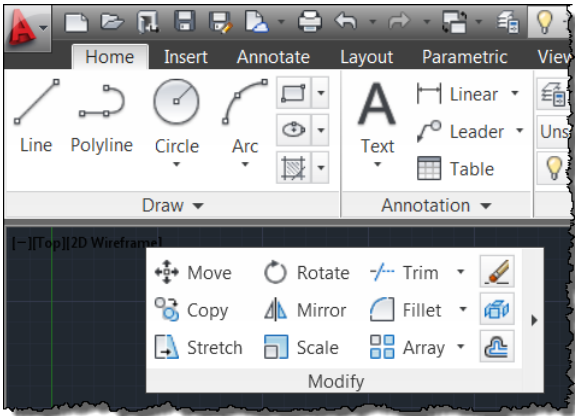
Docked Panel

By default, panels are docked in the ribbon interface. But you can undock them independently of the ribbon if needed.



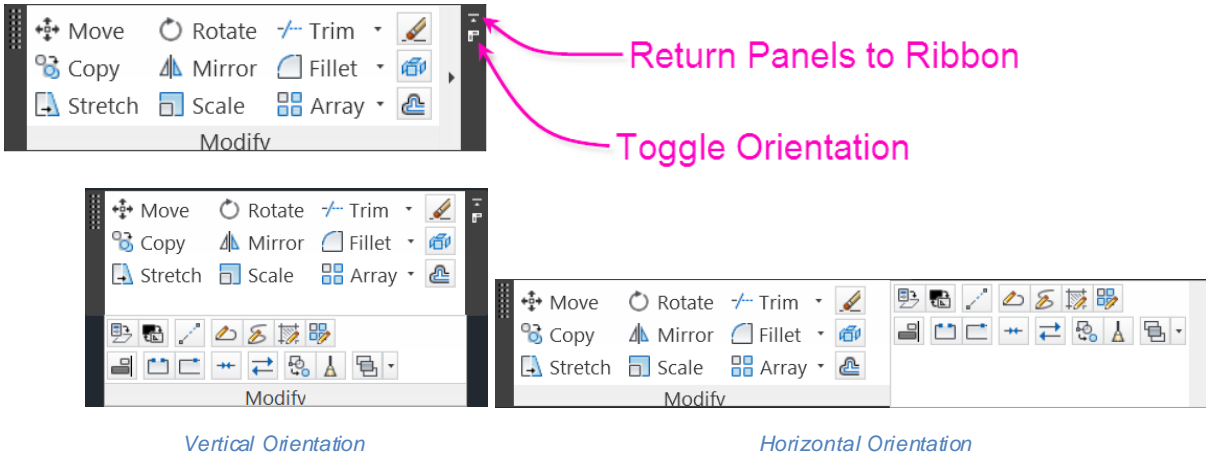
Undocked Panel

Use the <Drag-n-Drop> method to drag the MODIFY panel off the ribbon.



Panel Display Options

You can modify the display of the undocked panels between HORIZONTAL and VERTICAL using the TOGGLE ORIENTATION ICON located on the right titlebar of the panel.



How to Make a Ribbon Panel

Now we need to make a ribbon panel and it to our new XYZ_Tools ribbon tab.

- STEP 1:** Key-in the CUI command
- STEP 2:** Select the CUSTOMIZE TAB from the CUI dialog
- STEP 3:** Select the workspace XYZuser and expand the RIBBON → PANELS section.
- STEP 4:** Select PANELS and <Right-Click> to access the NEW PANEL command.
- STEP 5:** Rename the new panel to COMMON
- STEP 6:** Using the COMMAND LIST panel key in OFFSET to filter the command list to only OFFSET commands.

STEP 7: Locate the default OFFSET command from the ACAD.CUIx file and <Drag-n-Drop> it on ROW1 of the COMMON panel.

STEP 8: Select the OFFSET command and review and modify the tool properties as shown below.

Button Style: Large with Text(Vertical)

This will display a large tool for the normal OFFSET command.

STEP 9: Select the ROW1 section in the COMMON panel and <Right-Click> to access the NEW SUB-PANEL command

STEP 10: Using the COMMAND LIST pane of the dialog locate the OFFSET MULTIPLE command and drop it on ROW 1 of the COMMON SUB-PANEL

STEP 11: Select the OFFSET MULTIPLE tool and modify the tool properties as shown below:

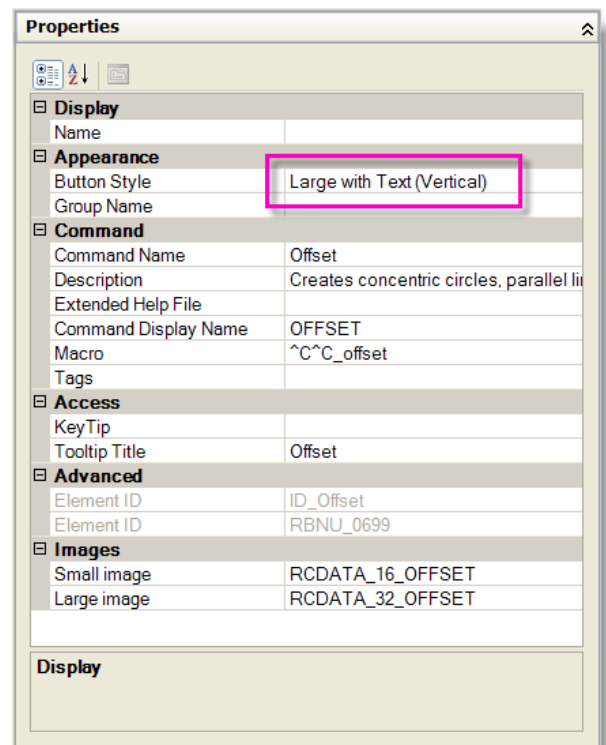
Button Style: SmallwithText

STEP 12: Select the COMMON SUB-PANEL and <Right-Click> to access the NEW ROW command to add ROW 2 on the COMMON SUB-PANEL.

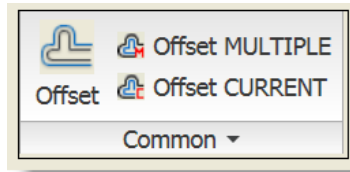
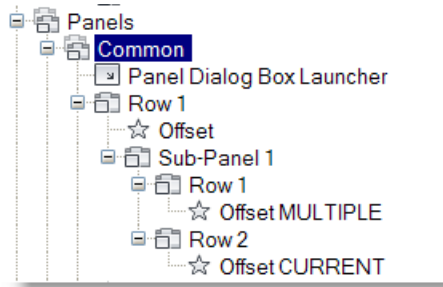
STEP 13: Using the COMMAND LIST pane of the dialog locate the OFFSET CURRENT command and drop it on ROW 2 of the COMMON SUB-PANEL.

STEP 14: Select the OFFSET CURRENT tool and modify the tool properties as shown below:

Button Style: SmallwithText

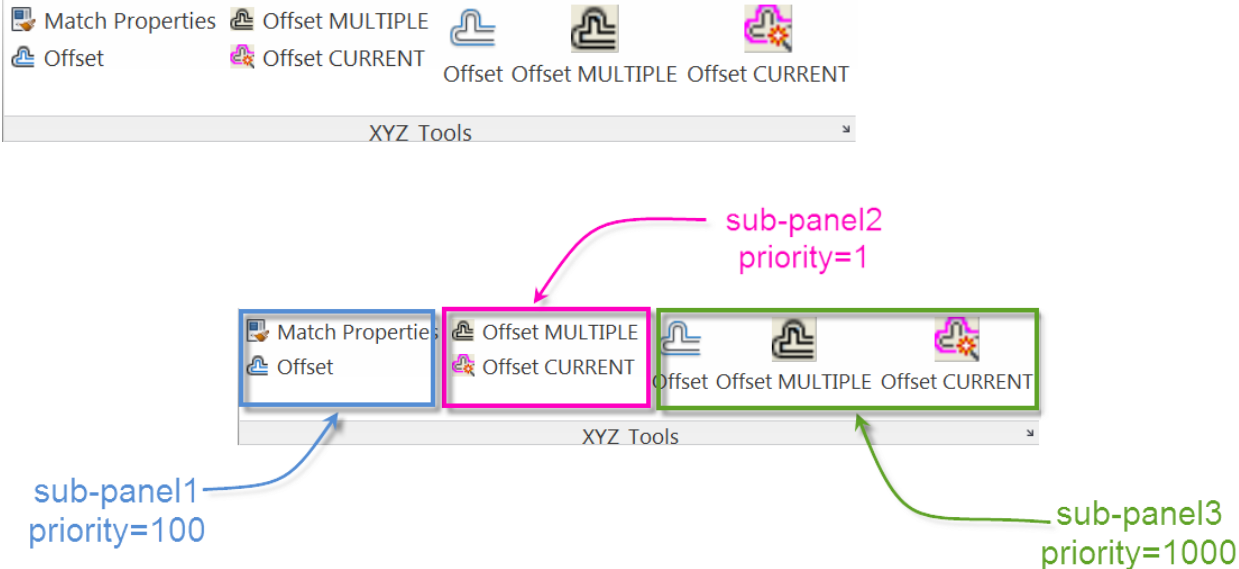


The final panel definition is shown below with the Panel Preview



Understanding How Ribbons Collapse

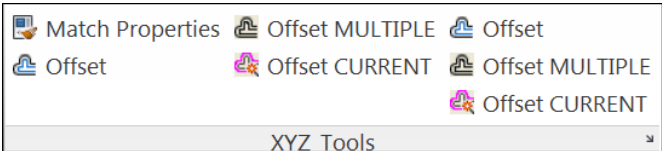
When a panel cannot fully display on a ribbon due to a small application window, too many panels on a single ribbon, or low screen resolution, just to name a few causes; what controls the collapsing process?



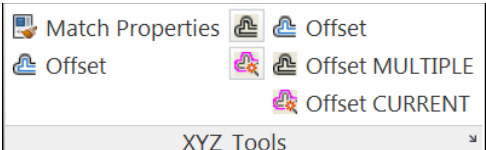
Resize Priority

This setting controls which sub-panel or fold-panel collapses first.

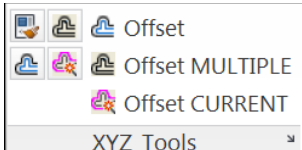
- 1 – resizes first
- 100 – (default)
- 1000 – resizes last



First Re-size



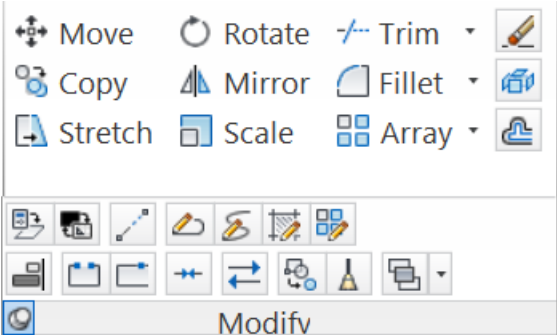
Second Re-size



Third Re-size

Using Panel Push Pins

Pushpins appear on the lower left corner of all expanded panels. Use the new push-pin to lock the panel in the expanded layout for easier command selections.



How to define the Panel Dialog Box Launcher

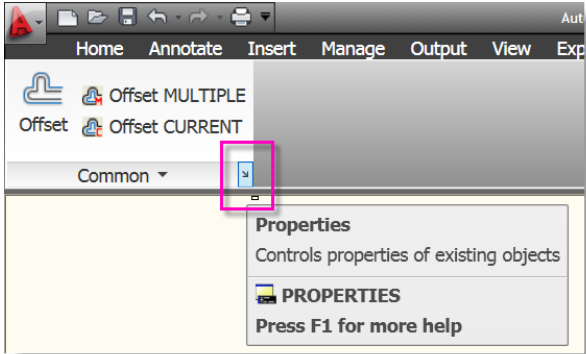
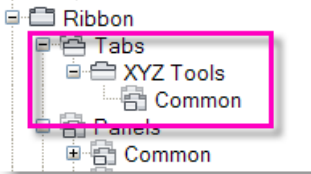
The PANEL DIALOG BOX LAUNCHER is used for launching related dialogs from this panel. For example, if your panel tools all related to layer commands you might want to have the launcher open the Layer dialog.

In this example I will add the PROPERTIES dialog to the launcher for the COMMON panel.

- STEP 1: Use the <Drag-n-Drop> method to drag the PROPERTIES command onto the PANEL DIALOG BOX LAUNCHER to activate it.
- STEP 2: You can remove a tool from the launcher using the <Right-Click> menu to access the REMOVE COMMAND.

There is still one more step to complete the COMMON panel on our ribbon. You must manually <Drag-n-Drop> the panel onto the XYZ Tools ribbon tab.

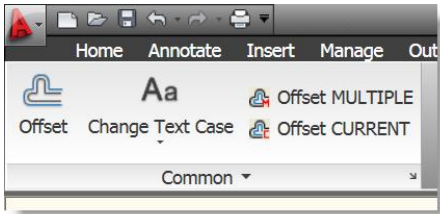
- STEP 3: <Drag-n-Drop> the COMMON panel and drop it on the XYZ Tools tab.
- STEP 4: Pick the OK and APPLY buttons to save and close the dialog.



How to Add a <Drop-Down> Tool to a Panel

Another nice feature is the ability to add a <Drop-Down> or “flyout” tool to the panel.

- STEP 1: Key-in the CUI command
- STEP 2: Select the CUSTOMIZE TAB from the CUI dialog
- STEP 3: Select the workspace XYZuser and expand RIBBON → PANELS → COMMON
- STEP 4: Select the ROW1 section of the COMMON panel and <Right-Click> to access the NEW DROP DOWN command.
- STEP 5: Name the new drop down section MY FAVORITES
- STEP 6: Using the COMMAND LIST pane of the dialog, <Drag-n-Drop> your favorite tools on the new MY FAVORITES section.
- STEP 7: Select the MY FAVORITES section and modify the properties as shown.



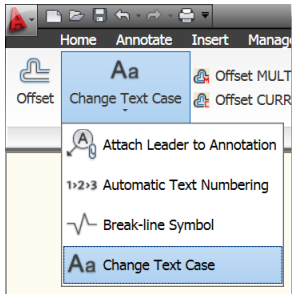
Button Style: Large with Text (Vertical)

- STEP 8: Pick the APPLY and OK buttons to save and close the dialog.

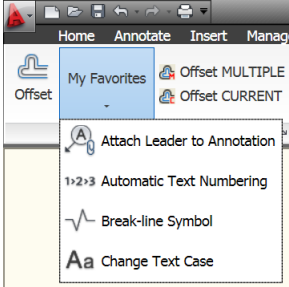
There are several methods for displaying <Drop-Down> tools in a panel as shown below.

For these displays let’s assume that I most recently selected the CHANGE TEXT CASE command from this <Drop-Down> toolbar.

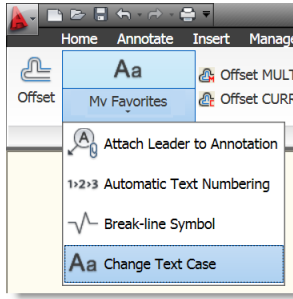
Drop Down Menu with Recent



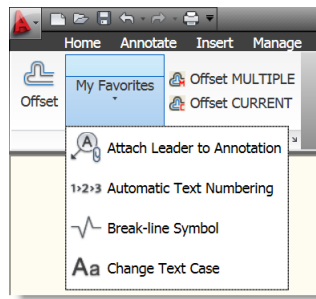
Drop Down Menu



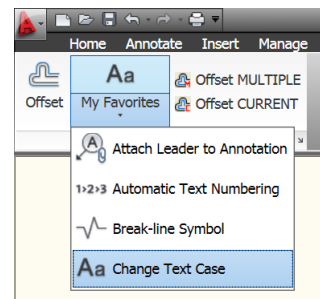
Split with Recent



Split



Split with Recent (Static)

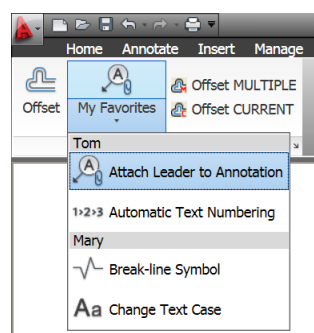
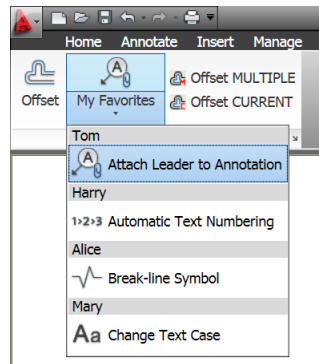


You can select either the top or bottom of “Split buttons” to execute and select tools. The “top-half” displays the “last used command” and the “bottom-half” displays the “drop-down” tools.

Split Button List Style – displays the contents of the button using the icon only, icon text, or descriptions.

Key-Tips – displays the keyboard hotkeys when pressing down the ALT key + another key as specified.

Grouping – defines whether the commands in the <Drop-Down> are grouped together and listed by their Group Name. Group names should be defined for each button in the group.



How to Make a Tab Contextual

Once you have some custom tabs defined you might want them to be automatically activated when editing certain items. Let's look at how we can define our new custom XYZ_Tools Tab to be a "contextual" tab.

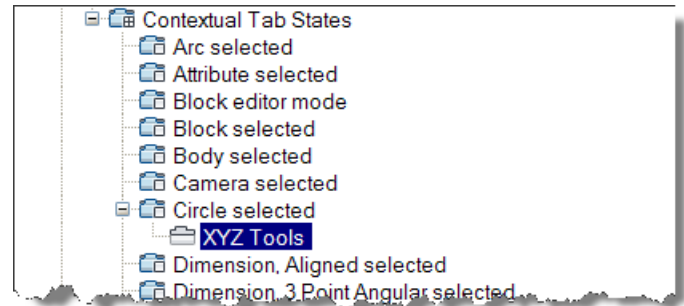
STEP 1: Key-in the CUI command

STEP 2: Select the CUSTOMIZE TAB from the CUI dialog

STEP 3: Select the workspace XYZuser and expand RIBBON → TABS

STEP 4: Select the tab XYZ Tools and use the <Drag-n-Drop> method to drag this tab on to a CONTEXTUAL TAB.

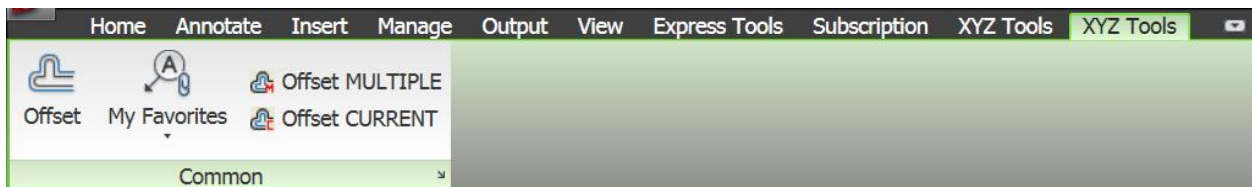
I will drop it onto the CIRCLE SELECTED
SELECTED contextual tab for this
example.



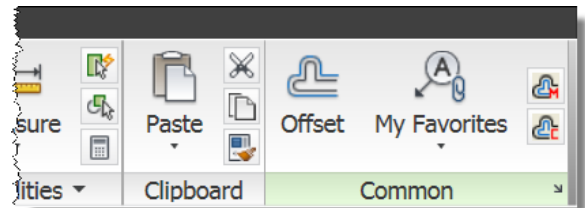
STEP 5: Pick the APPLY and OK buttons to save and close the dialog.

Now let's test if this tab is accessed when we select a circle in our drawing. There are properties defined that control how the contextual tab will display.

Full – displays the contextual tab independent of the current ribbon tab



Merged – merges the contextual tab at the end of the current ribbon tab

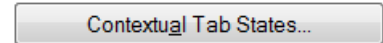


Controlling a Contextual Tab

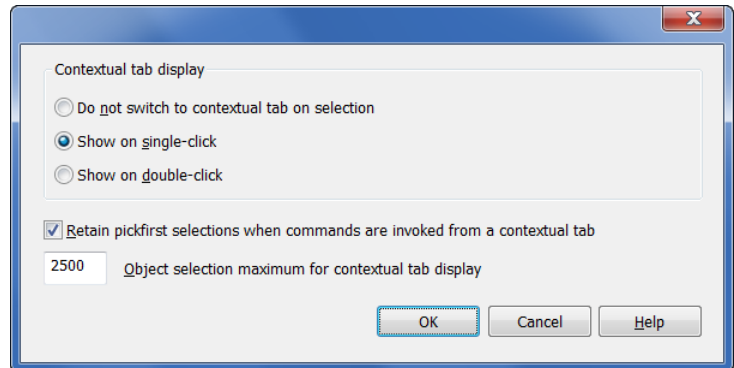
Use the options settings to control how the ribbon displays context-sensitive tabs.

STEP 1: Run the OPTIONS command

STEP 2: Using the SELECTION TAB, select the CONTEXTUAL TAB STATES button located in the lower left corner of the dialog.



STEP 3: Use this dialog to define your preferences for contextual tab display.



Do Not Switch To Contextual Tab on Selection

Prevents the display of a contextual tab when an object is <Single-Clicked> or <Double-Clicked>.

Program focus is not automatically switched to ribbon contextual tabs.

Show On Single-click

Allows the display of a contextual tab when an object is <Single-Clicked>. Program focus is switched to the first ribbon contextual tab.

Show On Double-click

Allows the display of a contextual tab when an object is <Double-Clicked>. Program focus is switched to the first ribbon contextual tab.

Retain Pickfirst Selections When Commands Are Invoked From a Contextual Tab

Controls how a selection set is retained after a command is started from a contextual tab ribbon. If cleared, the selection set does not remain selected after a command is started from a ribbon contextual tab.

Object Selection Maximum for Contextual Tab Display

Limits the number of objects that can be changed at one time with contextual tab ribbon controls.

Using Menus

How to Create a Custom Menu

AutoCAD can have up to 1000 menus between shortcut menus and more typical pull down menus.

AutoCAD Menus	
Type	Purpose
POP0	Reserved for the default shortcut menu
POP1 - POP499	Reserved for the menu bar
POP500 – POP999	Reserved for all other shortcut menus



*You can add the old menubar back into the ribbon environment using the **MENUBAR** command.*

0 – menubar is off (default)



1 – menubar is on

Using Quick Properties

Another new feature found in recent versions of AutoCAD is the Quick Properties dialog. If you take the time to modify the out-of-the-box settings you might find this new feature quite useful.

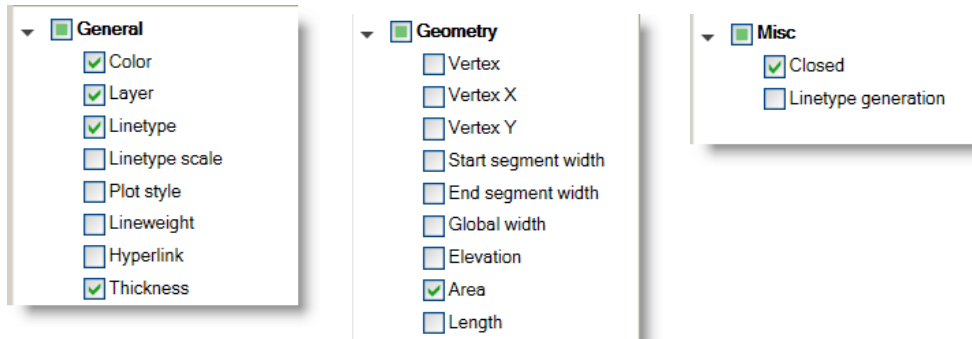
How to Customize Quick Properties

For example, have you ever had a polyline in your drawing and wondered if it was closed or what the area was? Of course you have! Let's customize the Quick Properties dialog so that we can get this information much more quickly.

- STEP 1:** Key-in the CUI command
- STEP 2:** Select the CUSTOMIZE TAB from the CUI dialog
- STEP 3:** Select the workspace XYZuser and navigate to the QUICK PROPERTIES section.
- STEP 4:** Select QUICK PROPERTIES and select the EDIT OBJECT TYPE LIST button. 
- STEP 5:** Scroll down the list until you find the POLYLINE object type and place a green check on that object. 

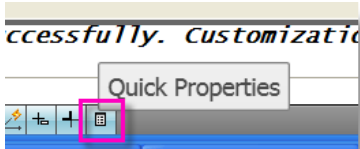
This adds the POLYLINE object type to the RIGHT properties portion of the CUI dialog

- STEP 6:** Select the POLYLINE object type to review the object properties that are available for display in the QUICK PROPERTIES dialog.
- STEP 7:** Turn ON the following object properties for a POLYLINE.

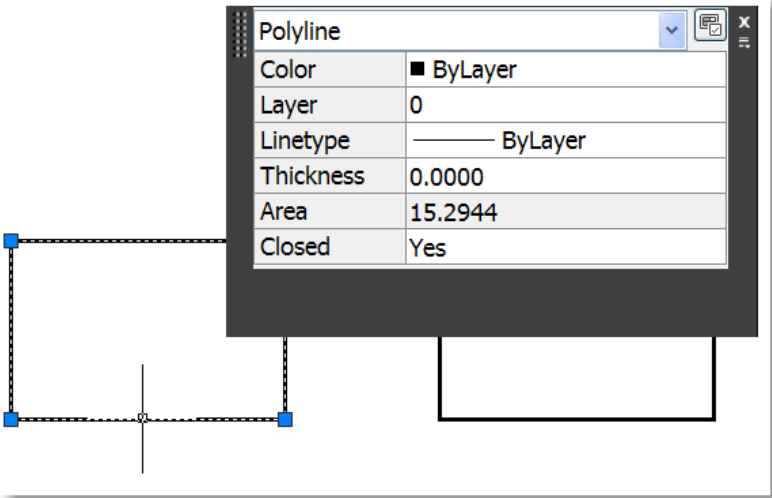


- STEP 8:** Pick the APPLY and OK buttons to save and close the dialog.

STEP 9: Verify that the QUICK PROPERTIES dialog is turned on in the status bar using the Quick Properties icon.



STEP 10: Select a polyline in your drawing and review the QUICK PROPERTIES dialog changes.



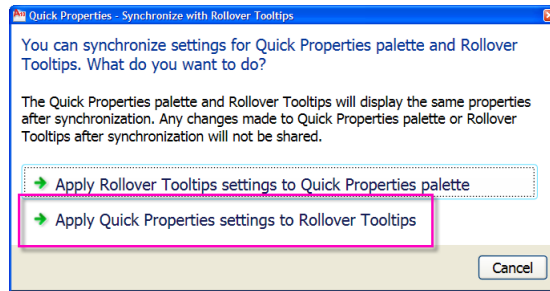
Using Rollover Tooltips

Many users don't like the Quick Properties dialog appearing and disappearing on the drawing view. However, they do like another enhancement to the interface that allows you to see tooltip information by hovering on an object. Let's take advantage of some of these enhancements by customizing the contents of the ROLLOVER TOOLTIPS.

How to Improve the Rollover Tooltips

Using the new CUI you have the ability to coordinate your Quick Properties settings with the Rollover Tooltips.

- STEP 1:** Key-in the CUI command
- STEP 2:** Select the CUSTOMIZE TAB from the CUI dialog
- STEP 3:** Select the workspace XYZuser and navigate to the ROLLOVER TOOLTIPS section.
- STEP 4:** Select ROLLOVER TOOLTIPS and <Right-Click> to access the SYNCHRONIZE WITH QUICK PROPERTIES command.
- STEP 5:** Select the following option to synchronize the Quick Properties settings with the Rollover Tooltip settings.



For some reason, if you have a POLYLINE defined in your customized .CUIx and it is still defined in the partially loaded ACAD.CUIx, the ACAD one wins! I copy all the rollover tooltip definitions in the default ACAD.CUI or partially loaded .CUI files so that users can create the ones they want to use!

Be sure to remove the ROLLOVER definitions from the ACAD.CUIx file.



The "red X" indicates that this object type is controlled by another interface definition (Quick Properties).

Using Keyboard Shortcuts

How to Customize Keyboard Shortcuts

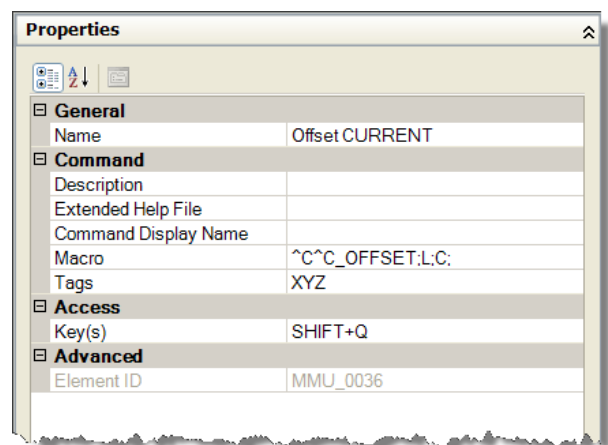
There are two types of keyboard shortcuts.

Shortcut Keys – also called “accelerators” execute an action when you press a key or a combination of keys.

Temporary Override Keys – execute two actions; the first, on the “key-down” portion of the key stroke, and the second on the “key up” portion of the key stroke.

Create a Shortcut Key

- STEP 1: Key-in the CUI command
- STEP 2: Select the CUSTOMIZE TAB from the CUI dialog
- STEP 3: Select the workspace XYZuser and expand the KEYBOARD SHORTCUTS section.
- STEP 4: Using the COMMAND LIST pane of the dialog <Drag-n-Drop> a command onto the SHORTCUT KEYS section.
- STEP 5: Select the new tool and modify the tool properties as needed.
- STEP 6: Define the ACCESS KEY to <SHIFT+Q> or any key combination you prefer.
- STEP 7: Pick the APPLY and OK buttons to save and close the dialog.
- STEP 8: Test your new shortcut key.



Be careful of the CAPS LOCK key when defining shortcut keys; it can cause the incorrect keys to be placed in the dialog.

Using Double-Click Actions

One of the coolest things you can do in the new CUI interface is to customize the *<Double-Click-Actions>*. Many of you probably use this new feature when editing objects such as blocks, hatches, text, and many others. But have you ever *<Double-Clicked>* on an object only to get the Properties dialog, which isn't terribly useful? How about when you *<Double-Click>* on a line object? It runs the Properties command, what good is that?

Let's try to improve on this just a little. I want to *<Double-Click>* on a line have it convert it to a polyline automatically.

- STEP 1:** Key-in the CUI command
- STEP 2:** Select the CUSTOMIZE TAB from the CUI dialog.
- STEP 3:** Select the workspace XYZuser.

The first thing we need to do is create a new command that will run the macro to convert a line to a polyline.

- STEP 4:** Using the COMMAND LIST pane in the CUI dialog select the NEW COMMAND button
- STEP 5:** Rename the new command to PEDIT DOUBLE-CLICK and change the properties of the MACRO to the following syntax.

`^C^C_PEDIT;Y;;`

Now we are ready to assign this new command to our *<Double-Click>* Action tools.

- STEP 6:** Select the DOUBLE CLICK ACTIONS section and *<Right-Click>* to access the NEW DOUBLE CLICK ACTION command
- STEP 7:** Rename the new DOUBLE CLICK ACTION to LINE.
- STEP 8:** Using the *<Drag-n-Drop>* method drag the new command PEDIT DOUBLE-CLICK and drop it on the new LINE action.
- STEP 9:** Pick the APPLY and OK buttons to save and close the dialog.
- STEP 10:** Test out the new *<Double-Click>* action on a line in your file.

Here are some more ideas to try!

1. <Double-Click> on a dimension and restore the dimension text to the “true length” value.

`^^C_dimedit;home;cmddia;0;_dimedit;new;<>;previous;;`

2. <Double-Click> on a dimension arrow and flip the arrow direction.

`^^C_^^C_aidimfliparrow`

3. <Double-Click> on a closed arc and convert it to a circular polyline.

`^^C$M=$(if,$(=,$(getvar,peditaccept),1),_pedit;close;,_pedit;;close;)`



If you have trouble with your custom <Double-Click>Actions being recognized, try placing it in the ACAD.CUIx <Double-Click> Actions instead.

Thanks to Ralph Grabowski and Mohamed Haris for some of these ideas!

Managing CUIx Files Efficiently

One of the CUI topics I get the most questions on is “How do I manage CUI’s in a corporate environment?”

The answer can vary but let’s take a look at some scenarios that might help you to understand how you want to implement a custom CUI. My preference is to manage Software, Corporate and User CUI’s independently.

Software

This level of the interface is delivered with the software and I always recommend that it be left untouched by any customizations since they can be easily overwritten during a software repair or re-install.

Corporate (Enterprise)

This level of the interface is where CAD Managers need to make the customizations that will apply to everyone within their organization.

Users (Main)

This level of the interface is where the USER needs to make their individual customizations that will only apply to their personal interface environment.

Out-of-the-Box Configuration

Let’s take a look at the out-of-the-box configuration first.

Main

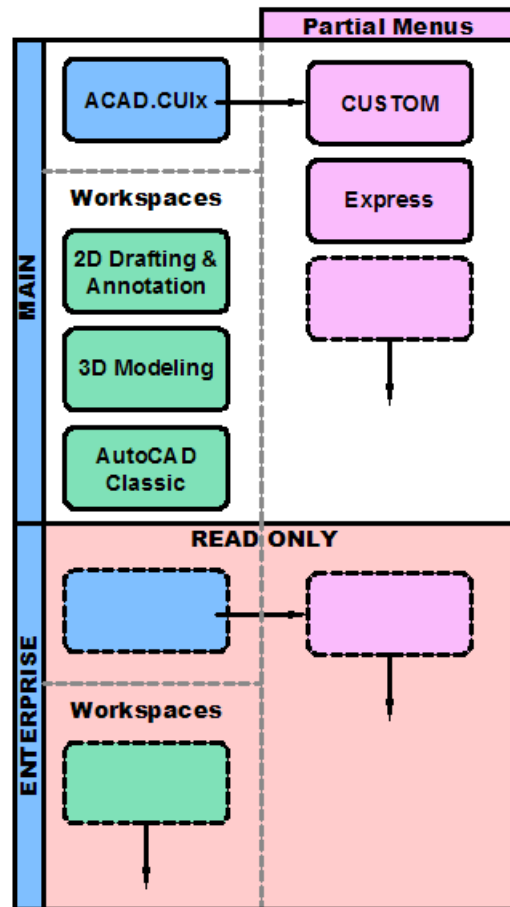
By default, the MAIN customization file is defined to use ACAD.CUIx. This file is delivered with the “software” and if modified could be overwritten during a repair or re-install. I recommend we keep this file as delivered or with little or no changes. When you modify the CUI settings and definitions you are writing those changes to the file defined in MAIN.

Enterprise

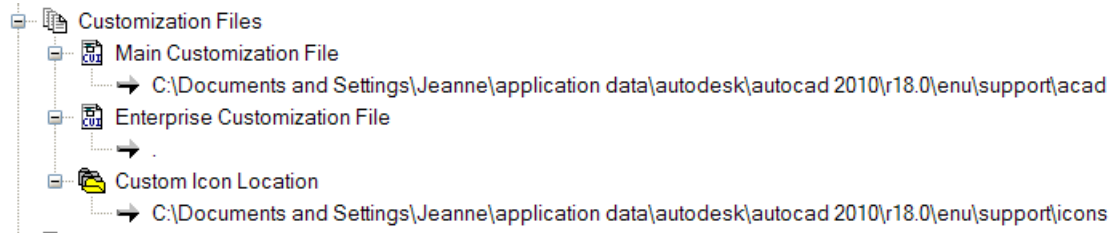
The ENTERPRISE customization file is not defined by default and is READ ONLY. This is BLANK by default

Icons

The ICONS location is also defined to use a folder in the users default folder structure.



This may be adequate for many organizations as users have write access to this folder



Other .CUIx files are loaded as partial files by default. For example, if we look at the CUI dialog and expand the PARTIAL CUSTOMIZATION FILES section you can see that other applications have pre-loaded their own CUIx files depending on what additional applications are installed.

The most common partial file is COMMON.CUIx file which is a “blank” CUI file that is loaded automatically every time AutoCAD starts and is provided for out-of-the-box user customizations. Another CUI that is commonly loaded is the ACETMAIN.CUIx for the Express Tools.

These files is located at the following location:

Windows XP

C:\Document and Settings\\Application Data\Autodesk\AutoCAD 2xxx\Rxx.0\enu\Support

Vista and Windows 7

C:\users\\AppData\Roaming\Autodesk\AutoCAD 2xxx\Rxx.0\enu\Support

Scenario A Configuration

Let's take a look at a possible "corporate" configuration next.

Main

The MAIN customization file is defined to use ACAD.CUIx by default and the users can either use it or the CUSTOM.CUIx discussed earlier to make their individual customizations.

Enterprise

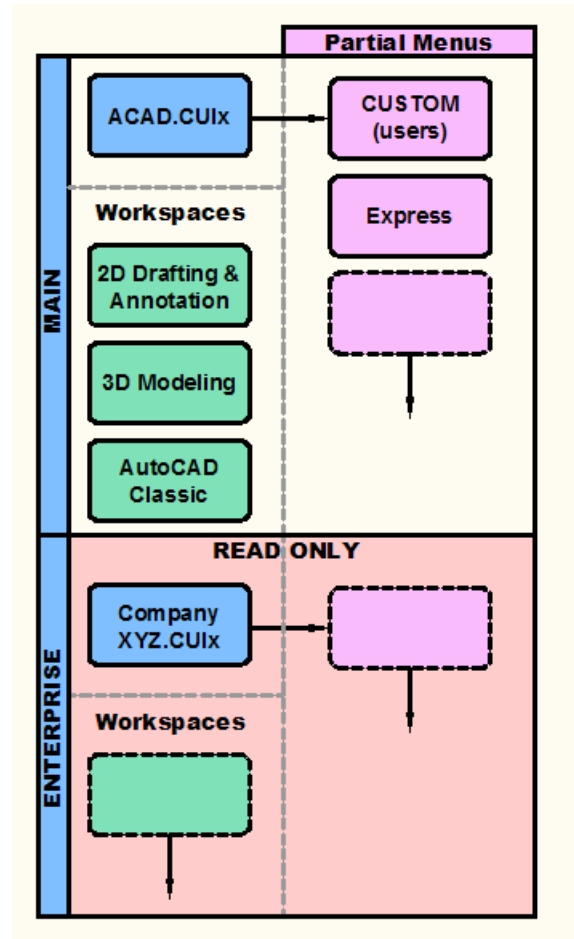
The ENTERPRISE customization file is defined by the CAD manager to use a custom CompanyXYZ.CUIx file. This provides the CAD Manager a single place to make global corporate changes to the interface.

Icons

The ICONS location is also defined to use a folder in the users default folder structure. This may be adequate for many organizations as users have write access to this folder.

This scenario is adequate but presents a few challenges.

1. The MAIN and ICON files are stored locally and not centralized on a server as most CAD Managers prefer.
2. The users will forget to make their changes in CUSTOM.CUIx and invariably they will end up in ACAD.CUIx. Not a problem as long as both files are backed up regularly.
3. One good thing about this configuration is that the corporate interface customizations are stored in a server location and as an ENTERPRISE definition is write-protected from all users.
4. No custom workspace has been provided to the users to simplify the initial interface at startup.



Scenario B Configuration

Let's take a look at a another "corporate" configuration.

Main

The MAIN customization file is defined to use USER.CUIx by default which the users can use by default to their individual customizations. The user can also partially load any additional files they need.

Enterprise

The ENTERPRISE customization file is defined by the CAD manager to use a custom CompanyXYZ.CUIx file.

icons

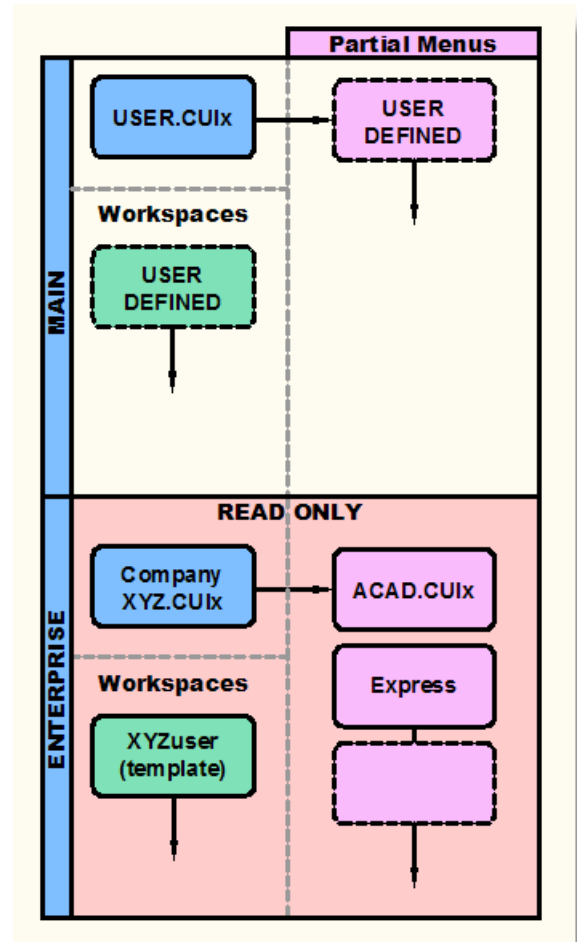
The ICONS location is define to use a folder on a server to easily centralize any custom icons created.

This scenario is better for the following reasons.

1. All files are centralized on a server.
2. The users will not have to think about what file they are creating customizations in. In fact, you might want to place this in the "users" server folder if that is available in your organization.

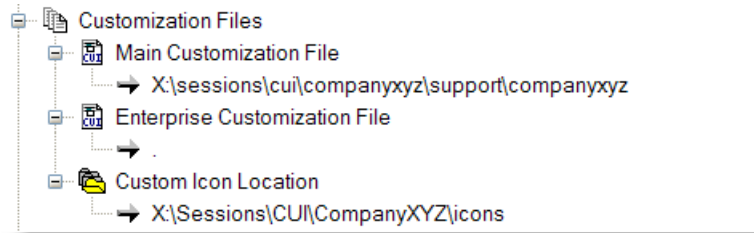
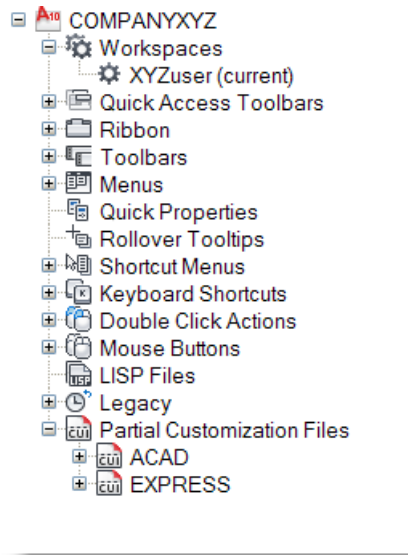
...\USER1.cuix

3. The CAD Manager has also partially loaded the ACAD.CUIx and the ACETMAIN.CUIx into the corporate CompanyXYZ.CUIx file to provide the out-of-the-box interface definitions in a READ-ONLY environment.
4. The CAD Manager has provided a custom workspace XYZuser as a base template for the users to use when creating their own workspaces. This is also helpful when a user has a problem with their interface. This workspace is READ-ONLY so always protected and easily restored when needed.



The CAD Managers Scenario

It is just as important that the CAD Manager have a good method for modifying the corporate interface. To do this I usually create an “ADMIN” profile to use when making changes to the corporate interface environment.



This configuration allows the CAD Manager to modify the file CompanyXYZ.CUIx and save any custom icons in the centralized server location.

The ACAD.CUIx and ACETMAIN.CUIx files are partially loaded.

Restoring the CUI

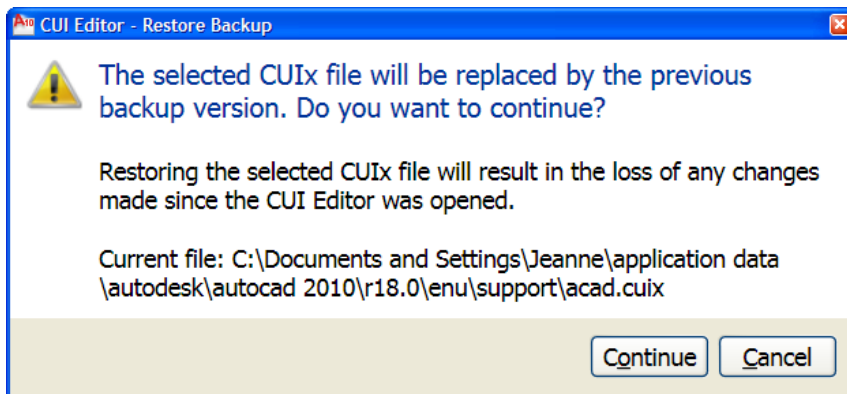
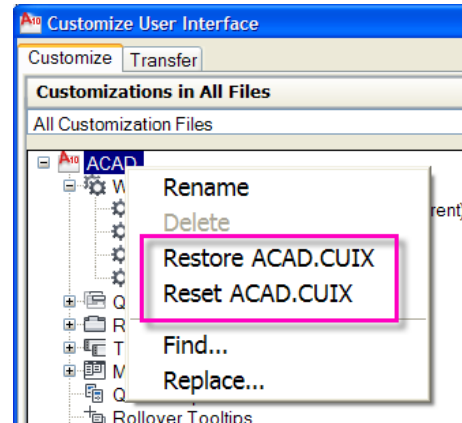
It goes without saying that while learning to modify the CUI files, errors will occur. You can “reset” or “restore” any CUI file using the following procedure.

RESTORE replaces the selected CUI with its backup file, typically named (*name*.BAK.CUIx).

RESET replaces the selected CUI with the original version of the file stored in the following location.

C:\Program Files\AutoCAD 2xxx\UserDataCache\Support

- STEP 1:** Key-in the CUI command
- STEP 2:** Select the CUSTOMIZE TAB from the CUI dialog.
- STEP 3:** Select the menu you need to restore and <Right-Click> to access the RESTORE or RESET command.
- STEP 4:** Pick the CONTINUE button as needed.



I recommend backing up ALL .CUIx files prior to making ANY changes. Store them somewhere on your server so you can easily replace them at any time. As you know AutoCAD can sometimes be unpredictable and this has saved me more than once!



One gotcha is that once the file is “restored” you must select a workspace and set it current to see any interface items.

Miscellaneous CUI Stuff

CUI Commands

CUI – Manages the customized user interface elements in the product.

CUILOAD – loads a CUIx file.

CUIUNLOAD – unloads a CUIx file

CUIEXPORT – exports customized settings from the main CUI file to an enterprise or partial CUI file.

CUIIMPORT - imports customized settings from an enterprise or partial CUI file to the main CUI file.

QUICKCUI – opens the CUI dialog in a smaller “collapsed” form.

Undocumented CUI Commands

CUIXLIST – lists root *.cui* and image files stored in files.

```
Command: cuixlist
All parts in this package file:      .cuix
/AcceleratorRoot.cui 11/9/2011 3:56:50 PM,
/DigitizerButtonRoot.cui 11/9/2011 3:56:51 PM,
/DoubleClickRoot.cui 11/9/2011 3:56:50 PM,
/Header.cui 11/9/2011 4:48:27 PM,
/ImageMenuRoot.cui 11/9/2011 3:56:51 PM,
/LSPFiles.cui 11/9/2011 3:56:51 PM,
/MenuGroup.cui 11/9/2011 3:56:50 PM,
/Menu_Package_Info.xml 2/3/2011 8:21:55 PM,
/MouseButtonRoot.cui 11/9/2011 3:56:50 PM,
/OverrideRoot.cui 11/9/2011 3:56:50 PM,
/PanelSetRoot.cui 11/9/2011 3:56:51 PM,
/PopupMenuRoot.cui 11/9/2011 3:56:50 PM,
/QuickAccessToolbarRoot.cui 11/9/2011 7:38:35 PM,
/QuickPropertiesRoot.cui 11/9/2011 3:56:50 PM,
/RibbonRoot.cui 11/9/2011 3:56:51 PM,
```

CUIXAPPEND – adds *.bmp*, *.dib*, and *.rle* image files to *.cuix* files.

CUIXCREATE – creates a new *.cuix* file, and then prompts you to add *.cui* and *.bmp* files.

System Variables

ENTERPRISEMENU - stores the enterprise customization file name, including the path for the file name. This variable is stored in the windows registry.

MENUNAME - stores the customization file name, including the path for the file name. This variable is stored in the windows registry.

RIBBONSTATE - reports whether the ribbon is open or closed. This variable is read-only.

MTEXTTOOLBAR and **TABLETOOLBAR** - determine where text formatting is displayed. This variable is stored in the user settings.

- 0 - toolbar is not displayed
- 1 – toolbar is displayed
- 2 – toolbar is not displayed when ribbon is active.

LOCKUI - locks the position of toolbars and windows. This variable is stored in the windows registry.

- 0 - toolbars and windows not locked
- 1 - docked toolbars locked
- 2 - docked or anchored windows locked
- 4 - floating toolbars locked
- 8 - floating windows locked

RIBBONSTATE - reports whether the ribbon palette is open or closed.

- 0 = ribbon is closed
- 1 = open (default in most workspaces)

RIBBONDOCKEDHEIGHT - determines the height of the ribbon when docked.

- 0 - the ribbon sizes itself to height of the selected tab.
- 1 to 500 – defines the number of pixels. AutoCAD ignores values smaller than needed to display the ribbon adequately.

RIBBONCONTEXTSELECT - determines when context-sensitive ribbon tabs are displayed.

- 0 - When an object or selection set is single- or double-clicked, focus is not automatically switched to ribbon contextual tabs defined in contextual tab states.
- 1 - When an object or selection set is single-clicked, focus is switched to the first ribbon contextual tab defined in contextual tab states.
- 2 - When an object or selection set is double-clicked, focus is switched to the first ribbon contextual tab defined in contextual tab states.

RIBBONCONTEXTSELLIM - suppresses the display of ribbon contextual tabs when the selection set includes more than the specified number of objects.

The valid range is 0 to 32,767. For example, when set to 1, ribbon contextual tabs are not displayed when more than one object is selected. When set to 0, ribbon contextual tabs are always displayed.

RIBBONSELECTMODE - determines what happens to selection sets after a command is selected from the ribbon.

- 0 - the pickfirst selection set does not remain selected after a command is executed from a ribbon contextual tab.
- 1 - the pickfirst selection set remains selected after a command is executed from a ribbon contextual tab.

RIBBONICONRESIZE - determines the size of icons (button images) on the ribbon.

- 0 - displays icons at their actual size.
- 1 - resizes icons to fit small 16x16-pixel size or large 32x32-pixel size.

That's probably more than I have time for....but hopefully
not more that you wanted to know!



Thank you for your time

Hope you enjoyed the session!

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