Customizing Interface Elements and Commands – Part 01

Sacramento City College
Engineering Design Technology
Introduction

- Learning objectives
- After completing this chapter you will be able to:
  - Explain the features of the customize user Interface dialog box.
  - Describe partial CUIx files.
  - Create custom commands.
  - Create new toolbars, ribbon tabs, and ribbon panels.
  - Customize ribbon tabs and panels with submenus and drop-down lists.
  - Explain how to customize menus.
Introduction

- **Interface elements** are graphic command-entry components of AutoCAD such as the ribbon, toolbars, and menus.
  - They can be quickly modified by removing and adding commands.
  - New commands can also be created and assigned to an existing ribbon panel, toolbar, or menu or to new interface elements.
  - The most powerful aspect of customizing ribbon panels, toolbars, and menus is the ability to quickly create entirely new functions- to help you in your work.
This chapter discusses customizing the ribbon, toolbars, and menus.

Customizing shortcut keys is discussed in Chapter 23.

Customizing workspaces and customizing the Quick Access toolbar are covered in Chapter 25.
Introduction

The key to good customization can be broken down into four simple rules:

1. Always make a backup of the original files, such as the acad.cuix file, before customizing.

2. Do not over-customize your work.
   - Plan your customization in steps to minimize confusion and maximize productivity.
   - Anticipate workflow and where needs exist.
Introduction

3. It is best to locate customized files in folders other than the default AutoCAD folders.
   - This makes it easier to upgrade AutoCAD in the future.

4. Thoroughly test your customizations before implementing them.
   - This will save many headaches for you and the end user.
The Customize User Interface dialog box (CUI db)

- funnels all major graphical user interface elements of AutoCAD into one central area where they can be tailored for productivity,
- The interface elements that will be discussed in this chapter are the
  - Ribbon tabs and panels
  - Toolbars
  - Menus located in the menu bar.
Customize User Interface Dialog Box

- **CUI Command**
  - Displays the Customize User Interface dialog box.

- **Other methods to display the CUI db**
  - right-clicking on a toolbar (when displayed) and picking Customize... from the shortcut menu.
Customize User Interface Dialog Box

◆ The changes made in the CUI db are saved in a customization (CUIx) file.
  ◆ By default, this is the acad.cuix file.
  ◆ The upper-left pane of the CUI db is initially labeled Customizations in All Files (CIAF).
  ◆ The drop-down list located below the pane name contains the name of the main CUIx file and any other currently loaded partial CUIx files.
  ◆ Partial CUIx files are discussed later.
Customize User Interface Dialog Box

- CUlx files installed by default,
  - the main file acad.cuix
  - and partial CUlx files
    - custom.cuix
    - acautocadws.cui
    - Autotodeskseek.cuix
    - modeldoc.cuix
    - contentexplorer.cuix
    - acfusion.cuix
    - and acetmain.cuix (express tools)
Customize User Interface Dialog Box

◆ If you select a different entry from the drop-down list, the name of the pane changes to reflect the selection, either
  ◆ Customizations in All Files or
  ◆ Customizations in Main File
By default, the customization file *acad.cuix* is the *main CUIx file*.

In the box located below the drop-down list, the selected CUIx file is displayed in a tree.
Customize User Interface Dialog Box

- The top level of the tree
  - is the ACAD branch
  - It is the name of the selected CUIx file and
  - The AutoCAD logo icon is shown next to it.
- The tree under the ACAD branch
  - lists the various customizable interface elements.
Customize User Interface Dialog Box

- For example, to see the list of available toolbars,
  - expand the Toolbars branch (node)
  - by picking the plus sign located just to its left.
  - Any other partially loaded CUIx files that have toolbars in them will be listed under the Partial Customization Files branch in the tree and can have their toolbar list similarly expanded.
Customizing Interface Elements and Commands
Customize User Interface Dialog Box

- The shortcut menus accessed by right-clicking in the CUI db
  - provide editing options based on the branch or item selected.
Customize User Interface Dialog Box

- Options are available for
  - Creating new items
  - Renaming
  - Removing/deleting
  - Copying/pasting, and
  - Duplicating items
  - Adding menus or submenus
  - Inserting separators.
Customizing Interface Elements and Commands
Customize User Interface Dialog Box

(remove bullet point indentation)

For example, to delete a ribbon panel from the interface,

- Expand the Panels branch in the Ribbon branch
- Locate the desired panel,
- Right-click, and
- Pick Delete from the shortcut menu.
- Pick the Yes button to delete the item.
- Then pick the Apply or OK button
Customizing Interface Elements and Commands

Customizations in All Files

All Customization Files

Ribbon
- Tabs
  - Annotate
    - New Tab
    - Rename
    - Remove
    - Duplicate
    - Copy
    - Paste
    - Find...
    - Replace...

Render
- Render - 3D Basics

Command List:
However, a better method is to remove a ribbon panel from the workspace.

This way, the ribbon panel is still available to other workspaces.
**Customize User Interface Dialog Box**

- Content can be renamed.
  - To rename a toolbar
    - Select the toolbar in the Toolbars branch
    - Right-click, and
    - Pick Rename from the shortcut menu.
  - You can also rename content by editing the Name property in the Properties pane on the right-hand side of the dialog box.
    - Pick the Apply or OK button
Customizing Interface Elements and Commands

Customizations in All Files

Toolbars
- Insert Separator
- Copy To Ribbon Panels
- New Toolbar
- New Flyout
- Rename
- Delete
- Duplicate
- Copy
- Paste
- Find...
- Replace...

Command List:
You can delete and add commands.

- The Command List: pane of the CUI db contains all commands, including those that are not available by default on an interface element.

- Custom commands can be assigned to all interface elements, such as ribbon panels, toolbars, and menus.
Customize User Interface Dialog Box

- The right-hand side of the CUI db displays specific information of the highlighted content.
- Panes that will appear are
  - Information
  - Preview
  - Properties depending on the selected content.
### Toolbars and Commands

Customizing Interface Elements and Commands

#### Toolbar Preview

**Modify**

![Toolbar Preview](image)

#### Properties

<table>
<thead>
<tr>
<th>General</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Modify</td>
</tr>
<tr>
<td>Description</td>
<td>Modify Toolbar</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Appearance</th>
<th></th>
</tr>
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<tbody>
<tr>
<td>Default Display</td>
<td>Add to workspaces</td>
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<tr>
<td>Orientation</td>
<td>Right</td>
</tr>
<tr>
<td>Default X Location</td>
<td>0</td>
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<tr>
<td>Default Y Location</td>
<td>0</td>
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<tr>
<td>Rows</td>
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</table>

<table>
<thead>
<tr>
<th>Advanced</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Aliases</td>
<td>TB_MODIFY, Modify</td>
</tr>
<tr>
<td>Element ID</td>
<td>ID_TbModify</td>
</tr>
</tbody>
</table>
### General
- **Name**: Modify
- **Description**: Modify Toolbar

### Appearance
- **Default Display**: Add to workspaces
- **Orientation**: Right
- **Default X Location**: 0
- **Default Y Location**: 0
- **Rows**: 1

### Advanced
- **Aliases**: TB_MODIFY, Modify
- **Element ID**: ID_TbModify
**Customize User Interface Dialog Box**

- It is easy to read and navigate the CUI db
- General information
  - is stored in the upper-left pane,
- More specific information
  - Is stored in the Command List: pane and
  - the panes on the right-hand side of the dialog box.
<table>
<thead>
<tr>
<th>Command</th>
<th>Source</th>
</tr>
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<tr>
<td>3 Point</td>
<td>ACAD</td>
</tr>
<tr>
<td>3D Adjust Clip Planes</td>
<td>ACAD</td>
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<tr>
<td>3D Adjust Distance</td>
<td>ACAD</td>
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<td>3D Align</td>
<td>ACAD</td>
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<td>3D Array</td>
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<td>3D Mirror</td>
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<td>3D Move</td>
<td>ACAD</td>
</tr>
<tr>
<td>3D Orbit</td>
<td>ACAD</td>
</tr>
</tbody>
</table>
Customize User Interface Dialog Box

- All changes made in the CUI db are saved in the CUIx file, including
  - workspace, ribbon, toolbar, menu and shortcut key customizations.
Adding a Command to an Interface Element
ALL commands are available in the Command List: pane of the Customize User Interface dialog box.

Included are many commands not found on the default ribbon, toolbars, or menus.

Any custom commands you have created are also available in this pane.
Adding a Command to an Interface Element

To add an existing command to any interface element,

- Expand the tree for the element in the Customizations in All Files pane.
Adding a Command to an Interface Element

Example

To add a command to a toolbar,

- Expand the Toolbars branch so the branch is visible for the toolbar to which you want the command added.
- Select a command from the Command List: pane.
  - The list is alphabetized.
- If you hover the cursor over a command, the macro or command is displayed in a tooltip.
Adding a Command to an Interface Element

- You can search the command list
  - Pick the Find command or text button at the top of the Command List: pane.
  - The drop-down list at the top of the pane can be used to filter the list so that only commands in a certain category appear in the list.
Adding a Command to an Interface Element

- You can also filter the list by typing in the text box at the top of the pine.
- Only those commands containing the characters in this text box are displayed in the list.
Once the command is located,

- **Pick and hold** on the command in the Command List: pane and

- **Drag it into the Customizations in All Files pane.**
  - A horizontal "I-bar" appears in the Pane as you drag the command.
  - This represents the location where the command will be inserted.
  - Position the new command between the commands where you would like it to appear and release the left mouse button.
Customizing Interface Elements and Commands

- Scale
- Stretch
- Trim
- Extend
- Break at Point
- Break
- Join
- Chamfer
- Fillet
- Blend Curves
- Explode
- Modify II
- Properties
- Layers
- Styles
- Object Span

Command List:

- Search command list

All Commands Only

Command

- Arc, Center, Start, Angle
- Arc, Center, Start, End
- Arc, Center, Start, Length
- Arc, Continue
- Arc, Start, Center, Angle
- Arc, Start, Center, End
- Arc, Start, Center, Length
- Arc, Start, Center, Length

Source

- ACAD
- ACAD
- ACAD
- ACAD
- ACAD
- ACAD
- ACAD
- ACAD
- EXPRESS

Properties

Command

- Arc, Start, Center, Length

Name: Arc, Start, Center, Length
Description: Creates an arc using a start point.
Extended Help File
Command Display Name: ARC
Macro: `C^C_arc \c \l`

Advanced

Element ID: ID_ArcStCeLe

Images

Small image: RCDATA_16_ARCSCL
Large image: RCDATA_32_ARCSCL

Button Image

Apply to:
- Small image
- Large image
- Both
Adding a Command to an Interface Element

- The new command is added to the branch for the interface element.
- Pick the Apply or OK button in the CUI db to make the addition permanent.
Deleting a Command from an Interface Element
To delete a command from an interface element,

- Expand the tree for the element in the Customizations in Alt Files pane.
  - You may need to-expand more than one level to see the command you wish to delete.
  - All of the commands currently on the interface element are displayed as branches below the element name.

- Select the command you wish to delete
  - Right-click, and pick Remove
Deleting a Command from an Interface Element

- You can also select the command and press the [Delete] key.
- Pick Apply or OK button in the CUI db to make the deletion permanent.
Moving and Copying Commands
You can move and copy commands between any interface element.

In the upper-left pane of the Customize User Interface dialog box,

Expand the tree for both elements that you wish to edit.
Moving and Copying Commands

- To move a command from one element to another,
  - pick and hold on the command and
  - drag it to the other interface element.
  - The horizontal "I-bar" cursor appears as you drag.
  - Position the cursor between the commands where you want the new command to appear and
  - release the left mouse button.
  - The command is moved from the first element to the second.
Moving and Copying Commands

To copy a command between elements,
- Hold the [Ctrl] key before you release the left mouse button.
- The command remains on the first element and a copy is placed on the second element.
Moving and Copying Commands

- You can also drag commands from the CUI db and drop them onto toolbars and tool palettes that are currently displayed.

- However, this method cannot be used to add a command tool to the ribbon.
Moving and Copying Commands

- A command can be removed from a displayed toolbar while the CUI db is open.
  - Drag it from the toolbar into the drawing area and release.
    - A message appears asking if you want to remove the button.
    - Pick OK to remove the button.
Moving and Copying Commands

- Buttons can also be rearranged on displayed toolbars while the CUI db is open
  - Drag a button to a new position.
Adding a Separator

A separator is a vertical or horizontal line that can be used in toolbars and menus to create visual groupings of related commands.

On ribbon panels, a separator is a gap between tools.
Customizing Interface Elements and Commands
Adding a Separator

- These separators are vertical gaps when the ribbon is docked along the top edge.
- If the ribbon is docked along the sides of the screen, the separators will be horizontal gaps.
Adding A Separator

- To add separators to an interface element
  - Open the CUI db.
  - In the CIAF pane, expand the branch for the element to which you want separators added.
  - For a toolbar or menu, right-click on the command in the tree below which you want the separator added.
  - Select Insert Separator from the shortcut menu.
Adding A Separator

- A separator, represented by two dashes, appears in the tree below the selected command.

- For a ribbon panel,
  - Right-click on the row in the panel to which you want a separator added.
  - Select Add Separator from the shortcut menu.
  - A separator is added to the bottom of the row's branch.
Adding A Separator

- Once a separator is added, it can be dragged to a new location in the tree.
- When done adding and moving separators pick the OK button to close the Customize User Interface dialog box.
Slideouts

- A ribbon panel can also have a panel separator, called a slideout.
- The commands in the tree below the slideout appear in the expanded panel.
Slideouts

- For example, the Draw panel in the Home tab of the ribbon (with the 3D Modeling workspace current) has a slideout below the row of buttons containing the Polygon, Rectangle and Ellipse buttons.
- The slideout is automatically added to all panels.
Partial CUIx Files
Partial CUIx Files

◆ A partial CUIx file is any CUIx file that is not the main CUIx file (acad.cuix).

◆ To load a partial CUIx file
  ◆ Pick Open...entry in the drop-down list in the Customizations in All Files pane.
    ◆ Remember, the name of this pane may be different, depending on what is currently selected in the drop-down list.
Partial CUIx Files

- You can also pick the Load partial customization file button to the right of the drop-down list.
- Next in the Open dialog box that is displayed, navigate to the folder where the CUIx file is located,
- Select the file and pick the Open button
Partial CUIx Files

- If the partial CUIx file that has been opened contains any workspaces, the AutoCAD alert is displayed.
- Any workspace information contained in the CUIx file is not automatically available
Partial CUIx Files

- Once you open the CUIx file, it is automatically selected in the drop-down list.
  - The name of the pane changes to Customizations in Main File.
  - Now, you can manage the items contained within the partial CUIx.
Partial CUIx Files

- If you select either the main CUIx file or All Customization Files in the drop-down list, the Partial Customization Files branch appears in the tree.
- Expanding this branch, you can see the partial CUIx files that are loaded.
- Expanding the branch for a partial CUIx file, you can see the items contained within the CUIx file.
Partial CUIx Files

- These items can be copied from the partial CUIx file to the main CUIx file as needed.

- To unload a partial CUIx file
  - Select All Customization Files in the drop-down list in the customizations' pane.
  - Then, expand the Partial Customization Files branch
    - Right-click on the name of the CUIx file and
    - Select Unload file_name.cuix from the shortcut menu.
Professional Tip

- You can also unload a partial CUIx file by typing `MENULOAD` or `MENUUNLOAD` at the Command: prompt.
- Then, in the Load/Unload Customizations dialog box; select the CUIx file to unload and pick the Unload button.