



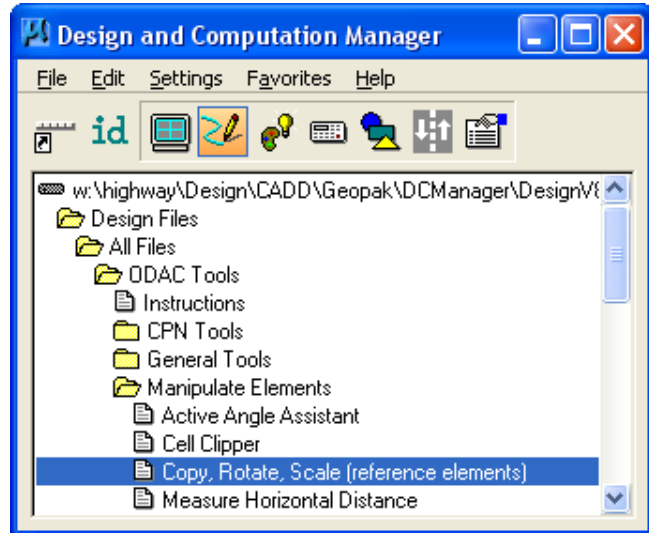
# Copy, Rotate, and Scale tool

Design Manual  
Chapter 21  
Automation Tools  
Instructions

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This tool can be accessed from the Geopak:  
D&C Manager, as shown at the right.

(If the item is not found as shown, use the D&C  
> Edit > Find tool to locate it.)



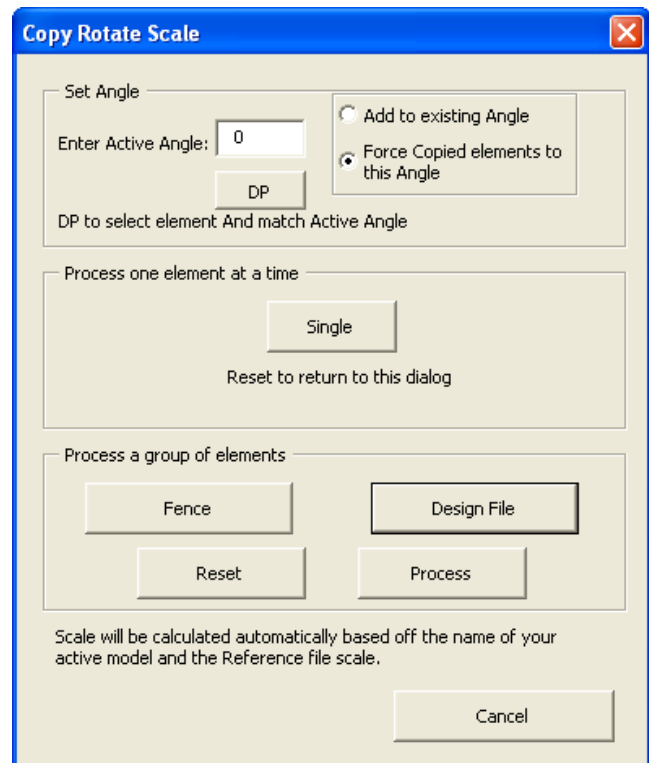
This program produces the **Copy Rotate Scale**  
dialog shown at the right.

The program copies, rotates, and scales  
selected reference file "text and cell elements".

Elements can be selected in any of three ways:

1. Processed individually, as a **Single**, or
2. By a **Fence** grouping, or
3. By **Design File**, which is processing all  
of the referenced and displayed text and  
cells in the entire Design File model.

(Unless the elements are selected individually,  
as a **Single**, the program will not process active  
elements, or referenced elements that are non-  
text or non-cell elements.)



The program will automatically scale the elements, (as necessary), based on a comparison of the “scale portion” of the active model name, and the “scale portion” of the reference file model name. (Example: A model name of “DET\_0050\_Sta920” indicates the model was created for the purpose of developing “50-scale” detour sheets. If the elements to be copied, rotated, and scaled are referenced from a model named “TXT\_0100”, then the original referenced 100-scale text and cell elements are double the size necessary for the Detour sheet, (100/50), and will be scaled down 50%. If the Detour model name was DET\_0020\_Sta920, then the “TXT\_0100” referenced elements are five times too big, (100 /20), and therefore would be scaled to 20% of their original size. If the numbers were reversed, the elements would be scaled up in size.)

The **Set Angle** grouping:

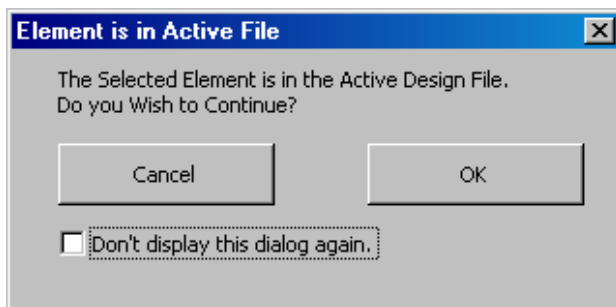
The two “radio button options” allow elements to be copied and rotated to a specific entered angle or to an angle created by adding the entered angle value, (shown in the **Enter Active Angle** field), to the current Active Angle value.

The **Enter Active Angle** textbox displays the current MicroStation Active Angle setting. The Active Angle may be changed by entering a new angle value in the text field, or by clicking the **DP** button and selecting an element from which to copy the angle. The angle of the selected element will become the new **Active Angle**, and this angle will be displayed in the textbox.

The **Add to existing Angle** option causes the angle value displayed in the textbox to be added to the “current placement angle value” of each element to be changed, whether singly, by fence, or by the entire model.

If the **Force Copied Elements to this Angle** option is selected, the program will rotate the copied elements to the exact angle displayed in the textbox, regardless of the current element angle. (Example: If the identified element was originally placed at 0°, and the entered angle is 45°, then the copied element will end up at 45°. If the original element was at 45° and the entered angle is 45°, then there would be no change in the element angle.)

Processing one element at a time: The **Single** option sends prompts, (to the prompt field), to “identify” an element and then “accept” that element. If the element is in a reference file, it is copied and rotated, as per the original intent of the program. If the **Single** element selected is within the “active model”, the **Element is in Active File** dialog, (shown below), will appear, displaying the warning that “**The Selected Element is in the Active Design File**”. If the **Don't display this dialog again** check box is checked, () , the program will not provide additional warnings about the selected element being in the active model.



In the **Copy Rotate Scale** dialog, the group of commands in the **Process a group of elements** area includes processing a fenced collection of elements, (**Fence**), or all elements in the model, (**Design File**).

After a fence is placed in the file, the **Process** button automatically highlights and the program is ready to process the fence contents. Clicking the **Process** button will rotate the elements within the fence.

**NOTE:** Line elements will NOT be rotated.

When the **Design File** button is clicked, the **Process** button automatically highlights and the program is ready to process all displayed elements in the entire model, (of the appropriate type). Clicking the **Process** button will copy, rotate, and scale the elements within the model. Again - line elements will NOT be rotated.

The dialog below is a warning that the selected element has no rotation matrix, (which usually refers to lines), therefore the program is unable to calculate a rotation angle. Since this type of element does not have an origin, the center of the element is used as the origin and rotation location, and the element is copied and rotated about that point. It should be noted that the rotation of an element with “no rotation matrix” may not result in the desired effect.

