

Part IV - Creating a Bevel Extruded Object

Bevel extrusion is the process where in addition to adding depth to a 2-D contour, the straight edges created by the extrusion can be converted to a set of selectable and definable curves. This provides an easy way to put curved or angled edges on objects to make them appear more realistic and natural. If you look around at objects around you, you'll notice that most of them have curved edges. Probably the most recognizable use for bevel extrude is in creating logos. Take a look at printed advertising material and at TV commercials, you'll notice that many of the 3-D logos have curved or angled edges.

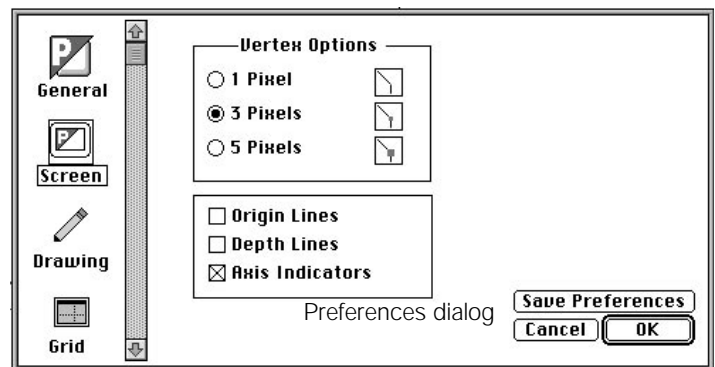
Creating a 3-D Logo

For this exercise, you will use ModelPro's Text tool to set the text and the Bevel Extrude tool to create a 3-D logo using one of the standard bevels and a freeform bevel created by you. If you are not in ModelPro, launch ModelPro by double-clicking on its icon. If you are already in ModelPro, select New under the File Menu.

Note: Notice that many of the tools, palette options, and menu commands can be selected directly using the keyboard. The key names are listed on the lower right part of an icon or next to the command on a menu or palette.

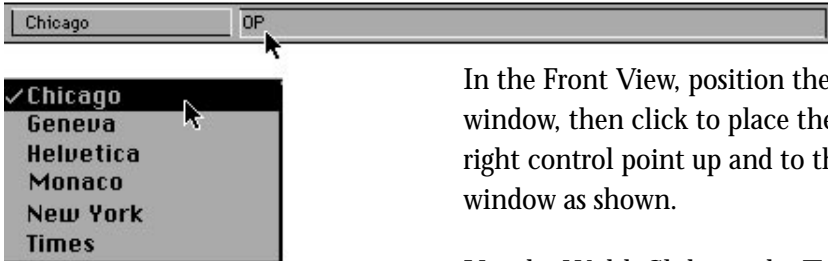
Preparing the Drawing Environment

Start by clearing up and enlarging the screen area available for drawing. Under the Edit menu choose Preferences. Click on the Screen icon. Click in the Origin Lines and the Depth Lines boxes to remove them. This removes all the guide lines from the drawing windows. Click and hold on the Options Menu. drag down to Show Rulers. Release to remove rulers from the View Windows and make more design space available. Select Redisplay in the Windows Menu to clean up the screens. Using each window's Zoom Out icon, make sure that at least three inches is showing at the end of each ruler in each window



Enter the Text

Select the Text Tool or type T. Use the Tool Info Palette to select a font from the pull-down menu, click in the character-string box, and then type "CP" in capital letters.

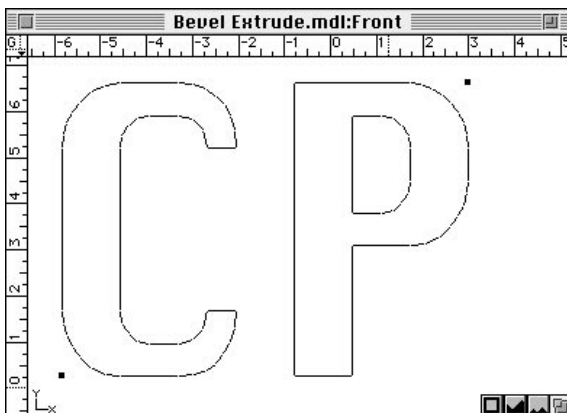


Tool Info palette with Text pop-up, and Character-string box

In the Front View, position the cursor near the lower left corner of the window, then click to place the text. Click, hold, and drag the upper-right control point up and to the right to re-size the string to fit in the window as shown.

Use the Width Slider in the Text Tool Info palette to change the spacing between the letters. Slide to the right to increase the spacing and to the left to decrease spacing between letters.

Click in the Engage button in the Tool Info palette or double-click in any window to set the text.



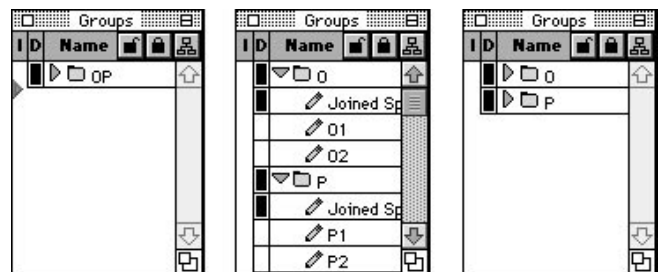
Note: The text will scale to fit the size of the rectangle you drag. After the text is placed, hold the Shift key down while you are dragging to re-size the text proportionally. Move the Width Slider in the Text Tool Info palette to the right to increase the spacing between letters.

Note: Remember to use the Undo Command under the Edit Menu in case you want to choose another proportion for the text.

Using Groups Effectively

The typed text comes in as a group. This let you assign one style of bevel and it will apply to all the letters in the string. Click on any part of the text. Notice that the bounding box covers both letters, meaning that they are grouped together.

In this example, however, the letters need to be selected separately so they can be beveled separately. Move your cursor to the Groups palette and click on the arrow pointing at the "CP" folder. This will open the folder to display its contents. Click on the arrows next to the "C" and "P" groups to close them.



Changes in Groups palette

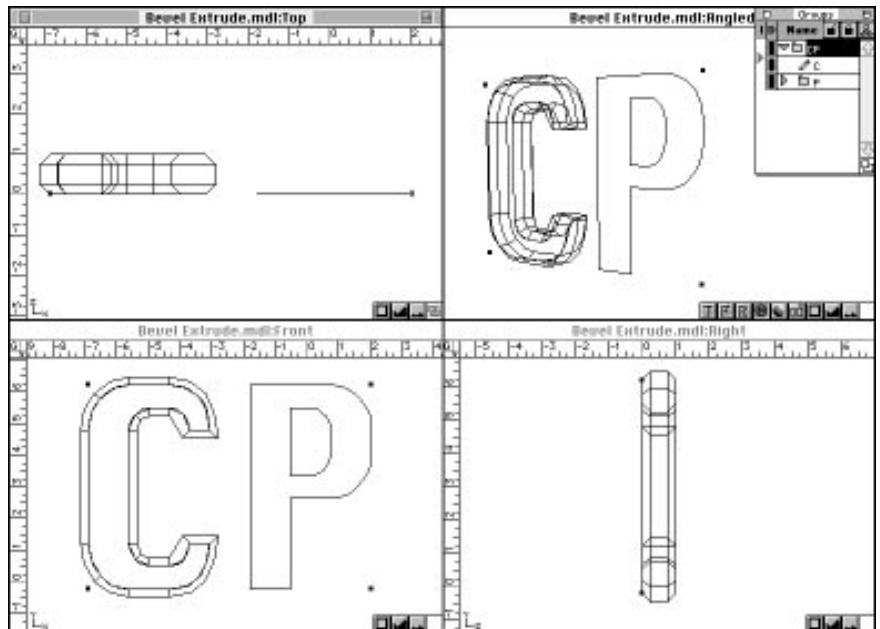
Extrude Using a Standard Bevel

Select the letter “C” by holding down the Command key (or selecting the Arrow Tool) and clicking on it in the Right View or in the Groups palette. Notice that the bounding box now covers only the selected letter.

Click on the Bevel Extrude Tool. Notice the automatic bevel preview displayed in all views.

Click on Bevel in the Bevel Extrude Info palette at the top-right of the screen to apply the bevel.

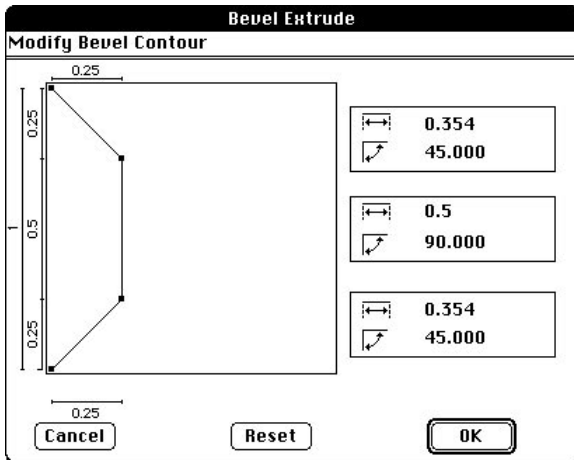
Notice that a new group, Bevel 1, has been added to the Groups palette. If you open it, you will see that it contains one object, Bevel Mesh 1.



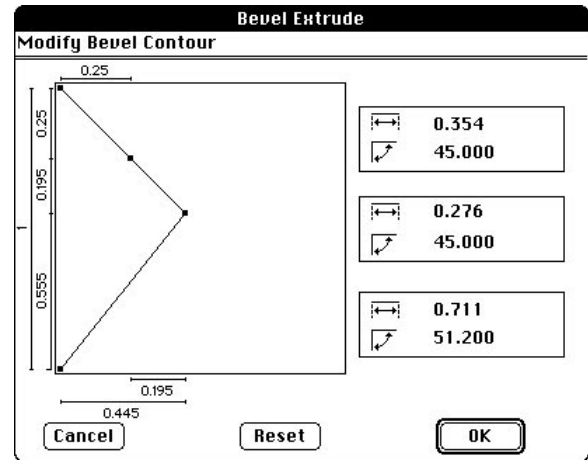
Preview in all views

Alter the Bevel and Extrude

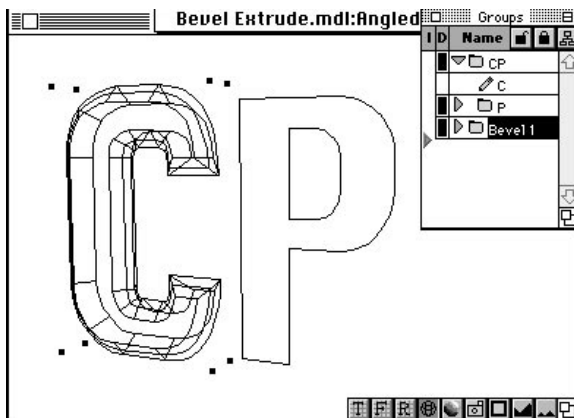
Go to the Edit Menu and select Undo. Click on the Arrow tool and click on the letter “C”. Select the Bevel Extrude Tool and click in the Edit box at the top left of the screen. A Modify Bevel dialog appears for the currently selected bevel style. Click, hold and drag the points to make a new bevel style and click OK.



Before: Bevel Extrude Edit dialog



After: Bevel Extrude Edit dialog



Bevel Extrude Info palette

Click on Bevel at the top-right of the screen to apply the re-designed bevel. Select Re-display under the Edit Menu to redraw the beveled letter shape.

Double click on the folder named, Bevel 1 and rename it by typing these letters: 3D C. Select the letter “C” and click and hold on the Color Tool. This displays the Color pop-up. Drag to a new color and release. Select Re-display under the Edit Menu to show the new color.

Tip: In ModelProl 3.0, a tool “remembers” its last settings. To reset all the tool’s parameters to the default values, hold the Option key down when you select the tool .

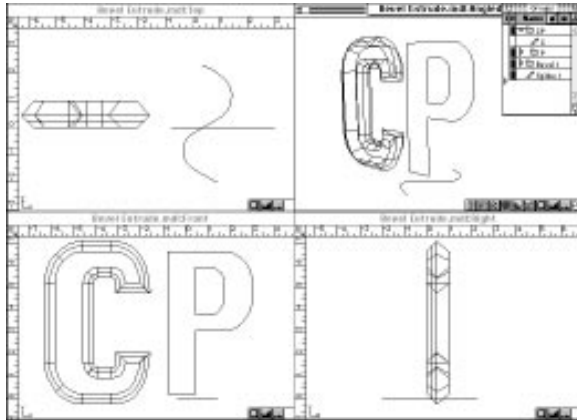
Extrude Using a Self-defined Bevel

Now you are going to apply a bevel of your design to the letter “P”. The bevel can be any curve drawn using a line, spline, or arc. For this exercise, drawn a spline in the Top View similar to the one drawn in the diagram.

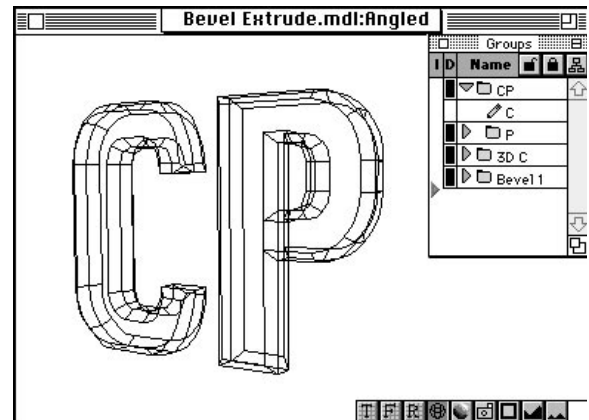
Click on the Arrow tool and click on the letter “P”. Hold the Option key down and select the Bevel Extrude Tool. Click and hold on the current bevel style at the top of the screen to get the pop-up options. Since the “User Defined” appears at the top of the list, release to select it.

Bevel Extrude Tutorial

Creating a 3-D Logo



Bevel Extrude with spline

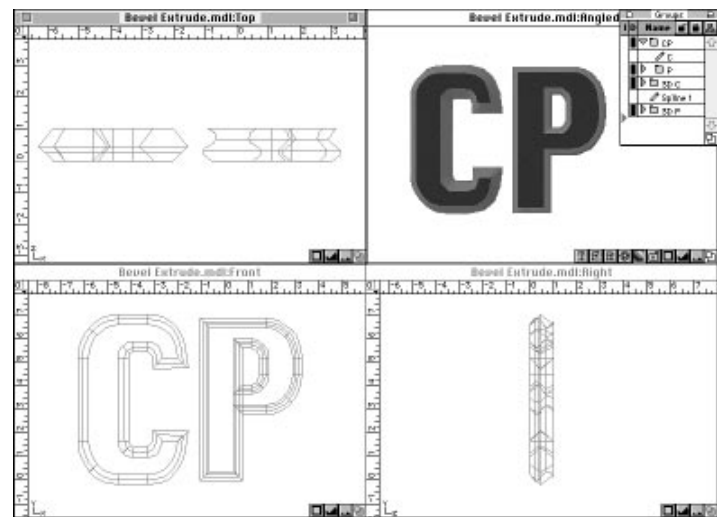


Angled View with groups

Hold the Option key down, and click on the spline in the Top View to select it. You will see a preview of the bevel you designed. Click on Bevel in the Bevel Extrude Info palette at the top-right of the screen to apply your bevel. Select Re-display under the Edit Menu to redraw the beveled letter.

Notice that a new group, Bevel 1, has been added to the Groups palette. Double click on the folder named Bevel 1 and rename it by typing these letters: 3D P.

Select the beveled letter “P” and click and hold on the Color Tool. This displays the Color pop-up. Drag to a new color and release. Click in the D column in the Groups palette next to Spline 1 to make the spline invisible. Select Re-display under the Edit Menu to show the new color.



Final bevel

To shaded preview of your new 3D logo, click on the Smooth-shaded display icon at the bottom of the Angled View. Select Re-display under the Edit Menu to redraw the shaded letter.

Select Save AS under the File Menu. At the prompt for a name, type Logo.mdl. You can now quit or continue on to the next part.

Using other Bevels

Try some of the other bevel styles and create your own personal 3-D logo using the initials of your name.



Notes