Path Extrude Tool

General Information

Path Extrude tool

The contour must be drawn in the Front view window (in the x-y plane).

The path must be selected (holding the option key) in the Top or Side view window.

The total number of contour cross-sections is determined by the number of vertices (points) used to create the path. To increase the number of contour cross-sections, add points to the path.
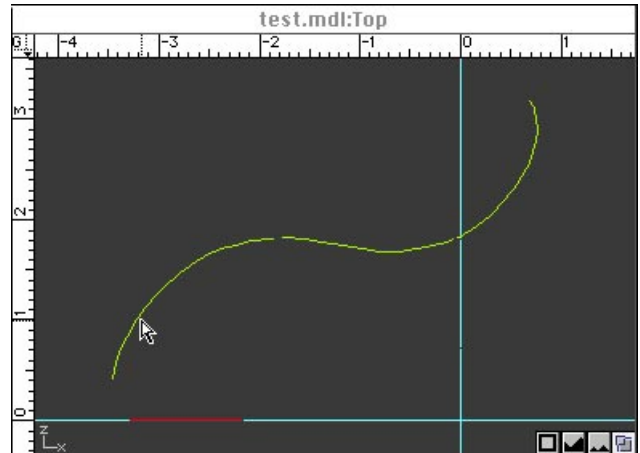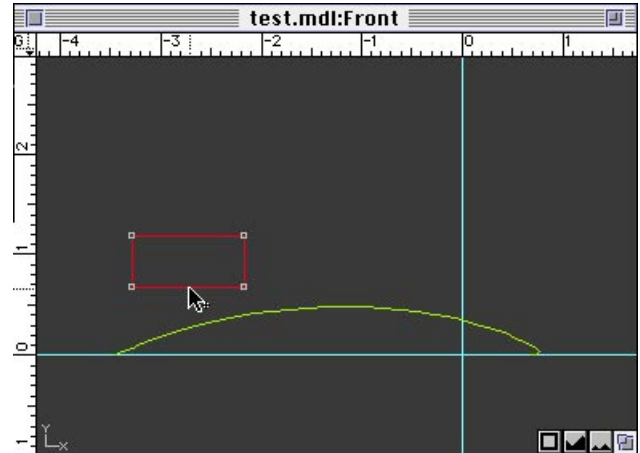
The contour will remain perpendicular to the path at each of the vertices (points) along the path.
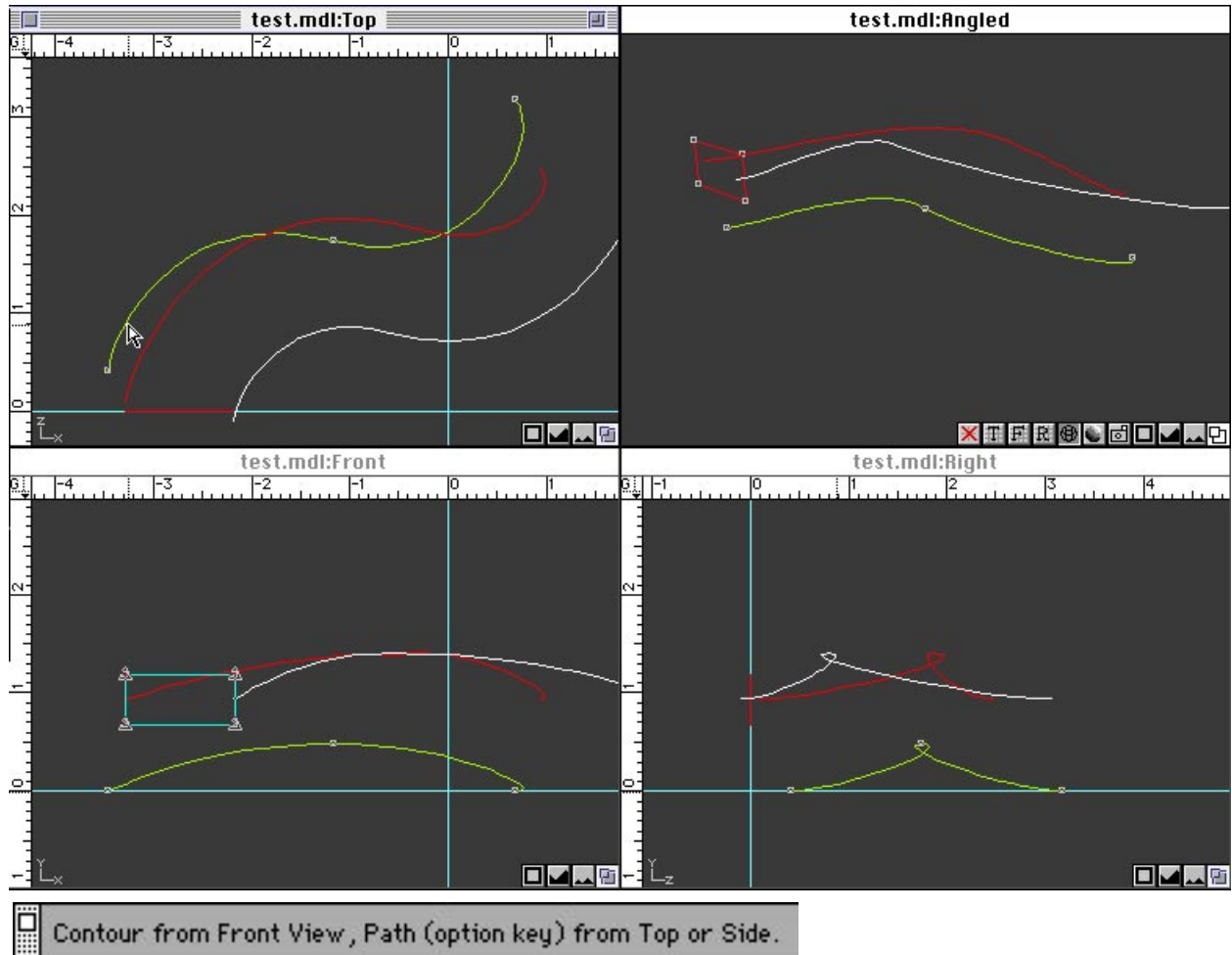
Importing Files

To extrude a contour on a path:

1) Create a contour in the Front view window (this is the one limitation of the Path Extrude tool: the contour must be created in the Front view window).

2) Create the path along which you wish to extrude the contour.

3) Use the Selector tool to select the contour.

4) Select the Path Extrude tool from the Tool palette. (note that the Status line palette at the bottom of the screen prompts you how to select both the contour and the path).

5) Hold the option key and select the path in the Top or Side view window.

   This will expose the intuitive interface for the Path Extrude tool in each view windows.

The intuitive interface initially shows (in all views) how two edges of the contour will follow the path. In this case we have created a red rectangle (contour) and a green spline (path); so, the intuitive interface is defined by the red and white curved lines.

Contour from Front View, Path (option key) from Top or Side.

The Path Extrude tool Info palette (labeled "Position") at the top of the screen displays several features:

two radio buttons

On Path: causes the contour to extrude along the path, using the position of the path to determine its starting position.

On Contour: causes the contour to extrude along a path, using the position of the contour as its starting point.

two data fields

W*, H*: enter data in these data fields to set the size of the last contour (at the endpoint of the path). These values are ratios; <1 shrinks the contour; >1 enlarges the contour. It is possible to intuitively resize the final contour by dragging on the triangle control points displayed on the initial contour.
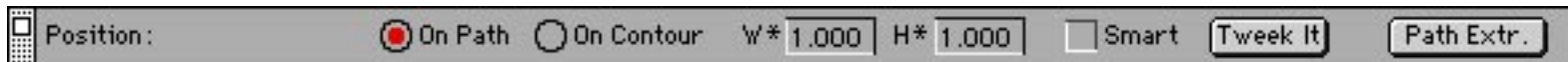
one check box

Smart: enables ModelPro's internal algorithms to define how the contour will follow the path.

two buttons

Tweek It: exposes a Path Extrude tool Info bar labeled "Path Tweek."

Path Extr.: completes the operation; creates a new, surfaced object.

Position: ● On Path ○ On Contour   W* 1.000   H* 1.000   ☐ Smart   [Tweek It]   [Path Extr.]

The Path Extrude tool Info bar (labeled "Tweek It") at the top of the screen displays several features:

two buttons

right- and left-pointing arrows: "moves" the control of the "Tweek" from one contour cross-section to the next, and back.

The total number of countour cross-sections (displayed as "of 3" in this case) is determined by the number of points on the path.

three buttons: all involve rotating the current contour cross-section

up- and down-pointing arrows: determines in which orthogonal view (plane) to rotate the current contour cross-section.

The letter between the up- and down-pointing arrows changes, as you click on the button, from "T" to "F" to "S" (corresponding to Top, Front, Side orthogonal view).

up-pointing arrow: rotates the current contour cross-section 45 degrees clockwise in the current orthogonal plane.

down-pointing arrow: rotates the current contour cross-section 45 degrees counter-clockwise in the current orthogonal plane.

four buttons

Flip: turns the current contour cross-section so that its mirror image is used at that point along the path (still perpendicular to the path).

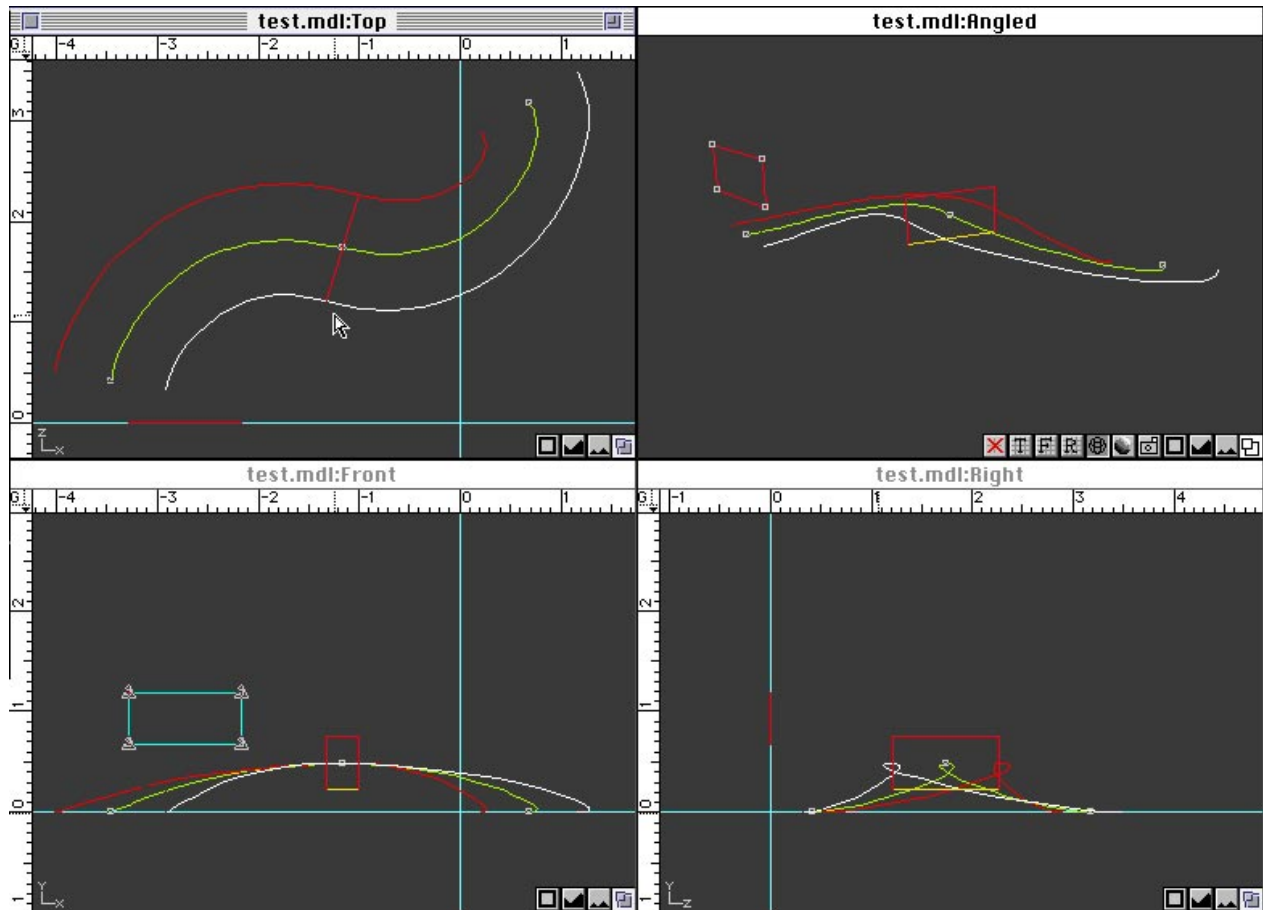Oops: returns all settings in Path Tweek to defaults.

Narrow Chk: uses internal algorithm to smooth overly tight path turns.

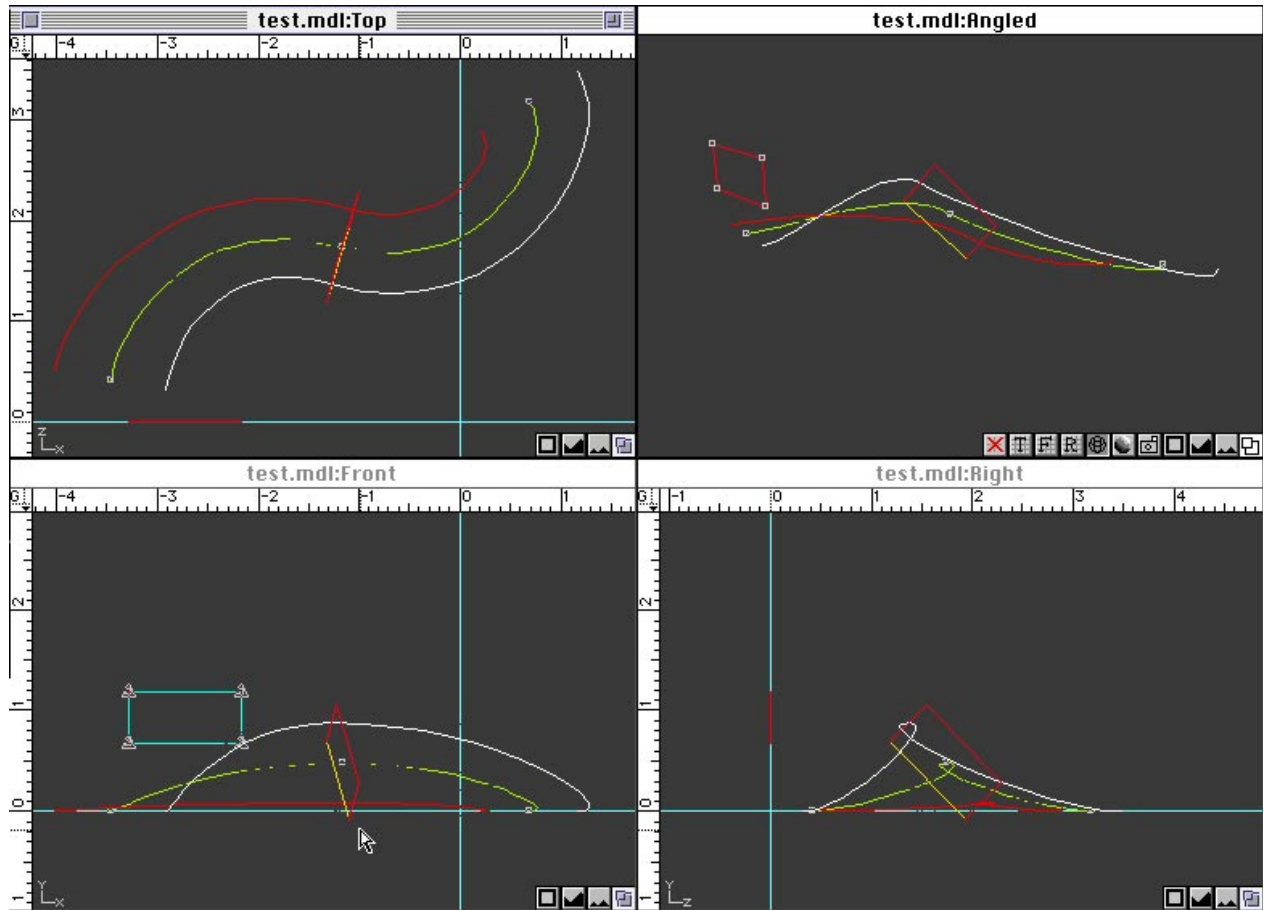Position: exposes the Path Extrude tool Info bar labeled "Position."

Path Tweek [←] 1 [→] of 3 [↑T↓] [↑] Rotate [↓] [Flip][Oops][Narrow Chk] [Position]

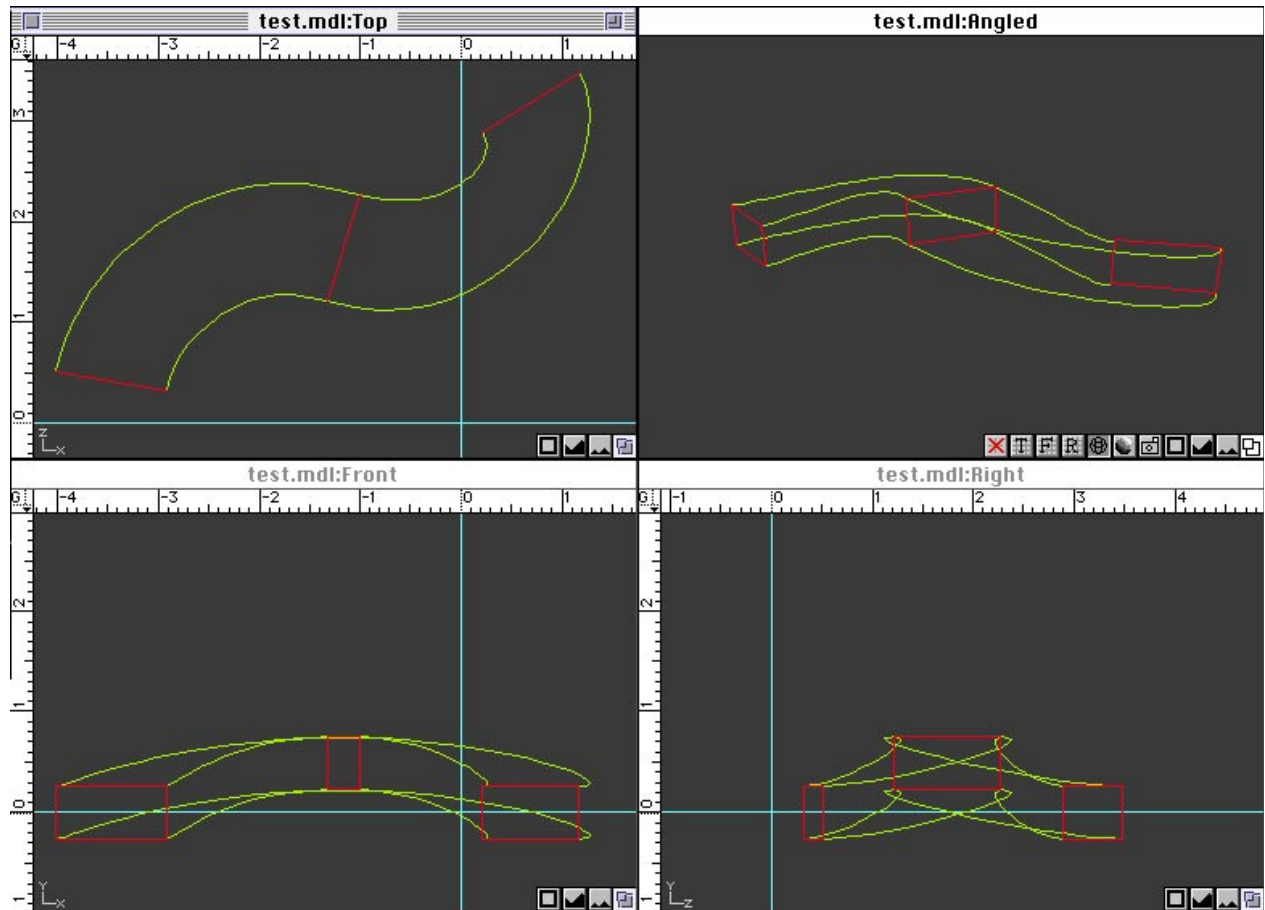# Path Extrude

Showing cross-section 2 of 3

Path Extrude

Showing Front view 45 degree rotation of cross-section 2 of 3

Path Extrude

Showing completed path extrusion

Click on a word or phrase to go to that section