

Chapter III-3 — Drawing

- **Freehand Poly:** Enters create-freehand-polygon mode in which a click starts a freehand polygon. Click and drag to sweep out a smooth curve as long as you press the mouse button. When you release the mouse button, you automatically enter edit mode, where you can change the shape.
- **Edit Poly:** Enters edit-polygon mode for editing an existing polygon as described in the next section.
- **Draw Bezier:** Enters create-Bezier-polygon mode in which a click starts a Bezier polygon. Click and drag to define anchor and control points. Click on the first point to close the curve.
- **Edit Bezier:** Enters edit-Bezier-polygon mode for editing an existing Bezier polygon as described in the next section. You may need to click on a Bezier curve to select it.

Editing a Polygon

To enter edit mode, click and hold on the polygon icon, and choose Edit Poly from the pop-up menu. Then click the polygon object you want to edit.

While in edit mode you can move, add, and delete vertices, and move line segments:

- **Move a vertex:** Click and drag the vertex to move it and stretch the associated edges.
- **Create a new vertex:** Click between vertices in a line segment.
- **Delete vertices:** Press Option (*Macintosh*) or Alt (*Windows*) and click the vertex you want to delete.
- **Offset pairs of vertices:** Press Command (*Macintosh*) or Ctrl (*Windows*), click a line segment, and drag.

Segmented Polygons

It is possible to separate a polygon into segments by adding coordinate pairs that are NaN. By default, such segments are drawn as if they are separate polygons. If you fill such a polygon with a color having transparency, any overlapping areas will darken because they are painted twice.

If you use SetDrawEnv subpaths=1, the segments are sub paths within a single polygon. The segments are drawn with no line linking the subpaths, but when filled the entire polygon are treated as a single polygon, making it possible to create a polygon with internal holes. The way those holes are filled is affected by the SetDrawEnv fillRule keyword.

The subpaths keyword applies only to polygons created with **DrawPoly** and **DrawBezier**, not to those created manually. You can manually create subpaths by entering Edit Polygon mode, right-clicking a line segment of the polygon, and choosing Break Line.

A side-effect of setting SetDrawEnv subpaths=1 is a change to the way arrows are added to segmented polygons: with SetDrawEnv subpaths=0 (the default), arrows are added to each segment as if they are separate polygons. With subpaths=1, the arrows are added only to the first or last points in the entire polygon.

Editing a Bezier Curve

There are a number of operations you can perform to edit a Bezier curve:

- **Move an anchor point:** Click and drag the anchor point to move it and stretch the associated curves.
- **Move a control point:** Click and drag it. If an anchor point has two control points, this move both.
- **Move only one of two control points associated with an anchor point:** Click the control point, then press Option (*Macintosh*) or Alt (*Windows*), and drag the control point.
- **Move a control point that is directly above an anchor point:** Press Command (*Macintosh*) or Ctrl (*Windows*), click the control point (and anchor), then drag the control point.
- **Create a new anchor point:** Click the curve between anchor points.
- **Delete an anchor point:** Press Option (*Macintosh*) or Alt (*Windows*) and then click the anchor point.
- **Modify an anchor point's control points:** Control-click (*Macintosh* only) or right-click an anchor to display a contextual menu that sets the lengths and angles of the control points on each side of the anchor.