

## 57391\_VektorTool2.tiff ↗ Mouse Functions and Keyboard Combinations

It is essential for working with OneVision-Art to understand the different mouse functions. These functions are additional work modes to <sup>a</sup>Edit Element<sup>o</sup> and <sup>a</sup>Select Element<sup>o</sup> mode.

You can choose between the *Arrow* function and the *Pencil* function. The mouse cursor will change its shape accordingly.

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*Figure: The portion of the Path Editor showing the mouse functions in OneVision-Art*

Both mouse functions are only available in <sup>a</sup>Edit Element<sup>o</sup> mode of the Path Editor in OneVision-Art. Otherwise clicking on the command buttons only switches between <sup>a</sup>Select Element<sup>o</sup> and <sup>a</sup>Edit Element<sup>o</sup> mode.

If you are in <sup>a</sup>Edit Element<sup>o</sup> mode, clicking the right mouse button while holding down the *Command* key switches between the *Arrow* and the *Pencil*. The default selection is the arrow.

## 118930\_paste.tiff ↗ The Pencil

The pencil-shaped cursor indicates OneVision-Art's drawing mode. If you are not already in <sup>a</sup>Edit Element<sup>o</sup> mode, the first mouse click changes to this mode. If you are already in <sup>a</sup>Edit Element<sup>o</sup> mode a mouse click draws a new segment in an existing OneVision-Art element. There are two different ways of drawing paths: by defining specific points (<sup>a</sup>connect the dots<sup>o</sup>), or freehand, as you would with a traditional pencil.

To create a shape using specific points, first position the cursor at the starting point of a line and click the left mouse button. This creates a selected point. Then move the cursor to a different spot on the page and click again. A second point will be created and a line appears between the two points. The first point becomes deselected and the second point will be the selected one. Successive clicks of the mouse will extend the path segment by segment.

If you want to create curved lines using the point-by-point technique, hold down the *Alternate* key while drawing. The line segments you create will have additional control points between the anchor points. As long as you don't release the mouse button when

setting an anchor point for a curve, you can change the position of the control point by dragging it. Dragging a control point will modify the shape of the path line between the anchor points.

To draw a freehand line, keep the left mouse button pressed while drawing the path of your graphic. A line will automatically be drawn following the movements of the mouse. Anchor points will be inserted automatically into the path wherever they are necessary to create the proper lines or curves. This method usually creates many anchor points. You can use the Path Optimizer (;VektorTool3.rtf;,-) to reduce their number and to smooth lines.

Note: When working with this mouse function only selected points are displayed.

If no point is selected when setting a new anchor point, the starting point of a new subpath is created (;mouse-function.rtf;Teilpfad;-).

You may distinguish the different kinds of points by their shapes.

Anchor points of straight lines are shown as quadrates:

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Anchor point of curves are displayed as circles:

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Control points have the shape of a rhombus:

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The first point of a subpath (;PathBasics.rtf;Teilpfad;-) is displayed reduced in size, selected points are enlarged. The figure below shows all the different parts of a path.

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*Figure: A path showing the starting point, a selected point, an anchor point for a straight line, two control points and their tangents, an anchor point for a curve.*

You can set different colors for individual parts of a point in the OneVision-Art preferences (;Preferences.rtf;,-).

### **843832\_paste.tiff ↵ The Arrow**

Using the *Arrow* function, you can select individual or multiple points in order to move or delete them to reshape an element.

To move a point, position the arrow-shaped mouse cursor over it. Each point within the snap radius will be shown by the preselection - its handle is enlarged as long as the cursor is close enough. At the same time, the path line to the previous point in the path is highlighted. Clicking the left mouse button selects the point. Selected points can be recognized by their enlarged handles.

Clicking on a selected point and keeping the mouse button pressed lets you move the point. This affects the shape of the path, but does not affect the location of any unselected points on the path.

You can select multiple points either by dragging a frame over them or by clicking these points while holding down the *Shift* key. If you now move one point, all selected points will also move.

Each of the two control points and the anchor point can be moved individually by dragging it. Clicking the anchor point of a curve segment while holding down the *Alternate* key selects not only the anchor point but also the control points. So you can move the anchor point together with the control points, otherwise the control points would remain fixed when the anchor point is moved.

All selected points will be deselected when you select another one (if you are not holding down the *Shift* key). If you click on a selected point while holding down the *Shift* key, it will be deselected without deselecting any other selected points.

If you select a point while you hold down the *Ctrl* key, all points belonging to the subpath (`;mouse-function.rtfid;Teilpfad;->`) of this point will be selected. Selected points that don't belong to this subpath become deselected. Holding down the *Ctrl* and the *Shift* key inverts the selection only within the subpath.

All selected points become deselected, if you click without hitting any point.

Double-clicking a point opens the *Coordinate Inspector* (`;selectedpoint.rtfid;;->`). In that panel you can numerically change the position of the selected point. If only one point is selected, this panel can also be opened for that point by pressing the *Return* key.

Note: If more points are selected and one of them is moved by changing its position in the *Coordinate Inspector* panel, all other points are moved by the respective horizontal and vertical distances.

Hint: Clicking the right mouse button during a drag operation restores the path to the shape it had before you started dragging.

## **Constructing Paths**

How a new point is added to an existing path depends on what points are selected during the creation. The following cases have to be distinguished:

- the last point of a path is selected: a line is drawn to the new point and the new point becomes selected
- a random point within the path is selected: the new point is inserted into the path; to do so, the connection of the selected point to its successor is removed, a new line is drawn to the new point, and the new point becomes the predecessor of the previous successor of the selected point; finally the new point becomes selected
- several points are selected: the new point is inserted after the first selected point viewed from the beginning of the path
- no point is selected: a new subpath (;PathBasics.rtf;Teilpfade;-) is created, i.e., the new point becomes the successor of the last point of the path, but no line is drawn between them; the connection is shown when preselecting the point, though

## Modifying Paths

You can modify the shape of a path by moving one or more points to different locations. If you move a selected point, all other points that are selected are moved accordingly.

For moving points of curves, some special dragging modes are available. The *Arrow* cursor's color changes to blue when using one of the following features.

### *Modify Tangentially*

Dragging a control point only changes the path line to which the control point is attached. Holding down the *Alternate* key while dragging repositions the control point's twin on the opposite side of the anchor point so that both tangents always built one single tangent to their common anchor point.

### *Modify Proportionally*

When modifying the path line tangentially, as described above, the distance of the second control point to its anchor point remains constant. Holding down the *Shift* and *Alternate* keys while dragging a control point proportionally modifies the position of the second control point, i.e., the second control point's distance from its anchor point will change in accordance with that of the one you move.

**Note:** These two path line modifications only work if they are applied to anchor points that are not at the end of a path.

**Hint:** If some control points behave unexpectedly, check to see if there are actually several points so close together that you might have selected the wrong one. Use the magnifying glass in the Page

Director for examining the points in detail (see <Mode <sup>a</sup>Zoom<sup>o</sup>> (;../OneVision/WorkingIntro/Cursorform.rtf;Zoomen;↵) in the chapter <Work Modes and Cursor Shapes>).

### **Cut Lines**

When working with the *Arrow* function, you can draw a cut line with the mouse cursor, if you hold down the *Alternate* key. After releasing the left mouse button, a new anchor point is inserted at every position at which the cut line crosses the path. If the cut line crosses a straight line, a normal anchor point is created, otherwise an anchor point for a curve is created. You can also add new anchor point using the icon command <*Insert Anchor Point*> (;commands.rtf;neuerPunkt;↵).

If you hold down both the *Alternate* and the *Shift* key, the path will be cut by creating two new points that lay exactly on top of each other at each position where the cut line crosses the path. The two points are not connected by a line, dividing the path to subpaths (;PathBasics.rtf;Teilpfade;↵). This division can also be achieved with the icon command <*Scissors*> (;commands.rtf;Schere;↵) for a single point.

### **Removing Points**

Pressing the *Backspace* key removes all selected points in a path reconnecting the remaining segments. Selected points can also be removed using the icon command <*Pincer*> (;commands.rtf;Zange;↵).

Moreover, you can automatically remove superfluous points with the Path Optimizer (;VektorTool3.rtf;;↵).

Next:       ;selectedpoint.rtf;;↵   Coordinate Inspector  
             ;commands.rtf;;↵    Commands for Processing Paths  
             ;PathBasics.rtf;;↵   Basics about Paths