

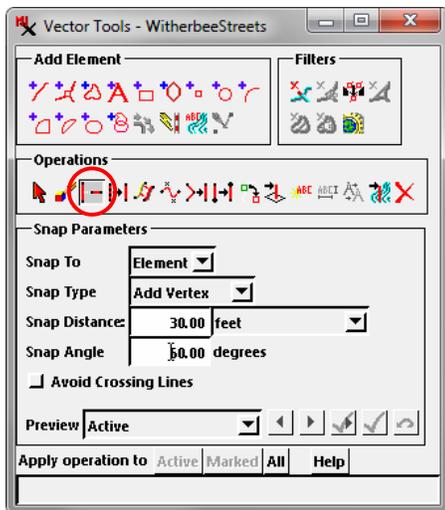
Snap Lines with Step-through Preview

Vector objects that you create or import may have unwanted gaps between line elements that should intersect. You can use the Snap operation in the Editor's Vector Tools to close these gaps. In this operation you can set distance and angle limits, set the snap type, and apply the operation to all lines or only to active or marked lines or nodes. You can also preview the snap result and step through the gaps to decide on the appropriate action for each case.

Snap Parameters

The Snap Parameters panel appears when you activate the Snap operation in the Vector Tools window (see illustration below).

The *Snap To* menu lets you choose to snap to the closest Element (any element type), Line, Vertex, Node, or Point (subject to the snap distance and snap angle settings: see definitions in the box at the top right of the page). Use the *Snap Type* menu to choose between Add Vertex, Move Vertex, and Extend vertex; these options are defined and illustrated to the right. Enter limiting values in the Snap Distance and Snap Angle fields. You can use the menu next to the Snap Distance field to set the distance units, with choices of screen pixels, vector object units, or any standard map distance unit. Turn on the *Avoid Crossing Lines* toggle to prevent the snapping line segment from crossing another line element.



You can restrict the snap operation to only lines or nodes that have been selected in the View. After marking the elements, use the *Active* or *Marked* buttons at the bottom of the panel to apply the snap. The *All* button applies the snap to all lines with dangling nodes.

Preview and Step-Through Previews

You can preview the results of the snap using options on the Preview menu. The menu choices All, Active, and Marked create a static preview rendering in the Editor View for all, active, or marked elements, respectively. This rendering shows the added or moved line segments that will result if the snap is applied. Two additional options on the Preview menu (*Step through Marked* and *Step through All*) create an interactive preview mode that allows you to step through the gaps for marked or all elements (respectively) and choose whether or not to apply the snap to the current element.

In the *Step through* previews, an arc-wedge graphic for the current gap shows the current snap distance (radius of the arc) and snap angle (half of the sweep angle of the arc). This graphic is shown in the Definitions and Snap Types illustrations above. You can use the graphic to adjust both settings. Drag the arc toward or away from the center point to change the snap distance. Drag either wedge boundary line to change the snap angle.

Icon buttons to the right of the Preview menu (illustrated to the right) are active in the stepped preview modes. You can use these buttons to apply the snap and automatically step to the next gap; to apply without stepping; to undo the last snap; to skip without snapping; or to step back to the previous gap. Keyboard shortcuts (shown in the illustration in parentheses) are also provided for each of these actions.

Definitions:

Snap Distance: maximum allowed distance for snapping to the target element. Can be set in screen pixels, units of the object's coordinates, or any map unit (meters, feet, etc.)

Snap Angle: angle measured from the direction of the last line segment (on either side) which defines the allowed range of directions of the snap segment.

Snap Types (shown in *Step through All Preview*) (snapping to Element)

Add Vertex
Adds a new line vertex (node) on the target element at the closest location allowed by the snap distance and snap back angle.

Move Vertex
Moves the vertex (node) at the start or end of the line to the target element at the closest location allowed by the snap distance and snap back angle.

Extend Vertex
Moves the vertex (node) at the start or end of the line to the target element by extending in the direction of the last line segment.

NOTE: To snap from only one end of a line with two dangling nodes, mark the desired node (rather than the line) and apply the operation to *Active* or *Marked*.

Step Through Action Buttons

Previous (left arrow) Apply and Step to Next (space)

Skip (right arrow) Apply (return) Undo (backspace)