

Linktool Editing a link

The user enters links in the Edit Window using the mouse. The main options for entering links appear under the "Point" and "Strand" submenus. Operations are performed by selecting the menu item, and *then* selecting the object in the Edit Window to manipulate. After selecting a menu item, the operation can be performed over and over again. (Thus, after selecting "Flip Crossing" the user can flip multiple crossings by repeatedly selecting them.)

Strand submenu

The commands dealing with a strand as a whole can be found here. As soon as the program is run, the option "Begin Strand" is already invoked. This creates a new current strand to work on. (At all times, there is a "current" strand, which is the one subsequent applications of "Add Point" apply to. The current strand is colored white, while the other strands are black.) As soon as it is invoked, the "Add Point" option (discussed below) is invoked so the user can begin clicking segments immediately.

After "End Strand" is selected, the user is prompted to click on a strand. This strand is then closed by joining the two open ends with a straight line. This can also be accomplished by using "Add Point" and clicking on the first point of the strand. (But you must be fairly accurate!)

After "Cut Strand" is selected, the user clicks on a segment of the strand, and that segment will disappear. This will cause closed strands to open, and open strands to break into two strands (unless a segment from the end is cut).

After "Move Strand" is selected, the user can click and drag a segment. Note that crossings are not obeyed, in that a strand can be moved anywhere, and old crossings are removed while new crossings are created.

After "Delete Strand" is selected, the user clicks the strand to delete, and it does.

"Select Strand" allows the user to click a new strand to be the current strand.

"Join Strands" prompts the user to select two open ends of two different strands (be sure they are different strands, or it will not work!) and they will then be connected with a line segment.

After selecting "Flip Crossing" the user clicks on a crossing, and the top and bottom strands switch places. (This can be rather useful, since crossings are created arbitrarily by the program whenever one strand intersects another.)

"Reverse Arrows" prompts the user to click a strand, and then reverses the direction of that strand. This is rarely useful, but is included for endless hours of entertainment.

Point submenu

By far the most frequent command used is "Add Point." This is the default state of the Edit Window; the one in effect as soon as *linktool* is run. The user positions the cursor where he or she wants the next point of the current strand to be, and clicks. If it is the first point of the strand, only the point is drawn. Otherwise, a line segment between it and the previous point of the strand is also drawn.

"Delete Point" and "Move Point" operate the way you'd expect.

In addition to these "building" menus, there are the "File" and "View" menus.

File submenu

"Open" allows the user to open an edit file. This can only be a file previously saved from the "Save" option with "edit" format. It then loads a link into the Edit Window for further editing.

"Save" allows the user to save the link in the Edit Window into either "edit" format, which has the .lnkp suffix, or "matrix" format, which has the .mat suffix and which can be later loaded into *linktool* with the "Load Files" menu option (see "Display") and displayed in the Display Window.

"Erase Edit Window" clears all work done in the Edit Window, and resets it.

View submenu

This menu contains items to keep you from getting bored during the arduous task of entering links. "Translate View" prompts you to position the mouse and click the button. While holding the button, drag the mouse. A black line appears, connecting the present location of the mouse to where you clicked it a moment ago. When the line points in the direction you want the view translated (direction being implied by "from" where you originally clicked the mouse "to" where it is right now), release the button, and kerbloof! Instant translation!

After selecting "Zoom View," click the mouse and hold the button. A square appears. Now, while holding the button, drag the mouse, and you will see another square appear, with the same center, but a varying size, depending on how far to the left or right you are moving the mouse. When you release the button, the view is zoomed so that the contents of the original square are resized to fit the new square.

"Center View" adjusts the view (via translating and zooming) so that all pieces of the link entered appear in the center.

"Hide Strand," a feature useful for those links with more than eight strands, prompts you to click on a strand, and will then hide that strand by making it invisible. Never fear, though. Simply selecting "Unhide All" will make every strand reappear before your very eyes.

Settings panel

As if all this weren't enough, you can also toggle four settings options. This is done from the settings panel, which can be brought on-screen from the "Settings..." option under the "Edit" menu. The buttons control which aspects of the edited link are to be drawn. For example, clicking "Turn Rulers On" will cause rulers to be drawn. The button then changes to read, "Turn Rulers Off," and can then be used to do

just that.