Creating the Topology

The baseline network topology is created from information contained in a network's router configuration files.

Building the Topology

For each active interface described in the router configuration files (via the **interface** command) and supported by the Connectivity Tools, the following information is extracted in order to build the topology:

- Interface types supported: `ethernet, tokenring, fddi, serial, hssi,` or `bri`
- Primary (and secondary, if any) IP addresses and subnet masks

For each interface IP address, the subnet mask is applied to the subnet address. A subnet node is created for each unique subnet address. The subnet type is set to the type of interface. A node containing the IP address of the interface (an interface has one primary IP address and zero or more secondary addresses) is also created and attached to the subnet node.

For each subnet node of type serial, HSSI (High-Speed Serial Interface), BRI (Basic Rate Interface), or Frame Relay in the subnet list, WAN links are created. Otherwise, LAN links are created.

LAN Links

A LAN link is created for each interface address on the subnet. A LAN link contains a link name and information about the interface and the subnet that the interface is connected to. A unique link name is generated by concatenating the router hostname and interface name, for example `Ethernet1`. If an interface has secondary IP addresses, the link name also contains a link number to ensure uniqueness.

WAN Links

A WAN link is created for each subnet node. A WAN link contains a link name and information about the interface and the subnet that the interface is connected to. A unique link name is generated by concatenating the router hostname, interface name, and a `.lnk` suffix, for example `netsys1.ser2/3.0.lnk`. If an interface has secondary IP addresses, the link name also contains a link number to ensure uniqueness.

WAN links you create between two routers via the **Add Serial Link** option have `user_asserted` added as a prefix to the link's symbolic name. See "Add Serial Link" for detailed information about the **Add Serial Link** option.

If only two serial router interfaces are connected to the same subnet, a serial link is created between them. If more than two serial router interfaces are connected to the same subnet, a heuristic used by Cisco of assigning consecutive pairs of IP addresses to both ends of a serial link is used. However, there is no guarantee others will follow this convention. Serial links that do not follow this convention appear unconnected (dangling) in the topology. They can be manually connected by modifying the appropriate configuration files used to create the baseline (and hence appear unconnected in the topology.) Links between serial interfaces with `ip unnumbered` addresses can be created using the Connectivity Tools drawing capabilities. However, if additional protocol information is available for these `ip unnumbered` interfaces, it is used to try to resolve links. Protocol information currently being looked at by the Connectivity Tools is:

- AppleTalk - a link is created if another interface with the exact cable-range is found
- IPX - a link is created if another interface with the same network number is found.

For each pair of end point candidates, if they are the same type (`serial` and `serial`, `bri` and `bri`, `hssi` and `hssi`) a link is created between them. Otherwise, the following table lists how link creation is determined:

Table 4-1   WAN Link Creation Conventions

End Point 1	End Point 2	Link Created
serial	bri	Yes
		No - if either end has frame-relay encapsulation
serial	hssi	Yes
bri	serial	Yes
		No - if either end has frame-relay encapsulation
bri	hssi	No
hssi	serial	Yes
hssi	bri	No

Serial WAN Links

If only two router interfaces are connected to the same subnet, a serial WAN link is created between them. Serial WAN links have `ser.` added to the link's symbolic name. For example, `netsys1.ser2/3.0.lnk` specifies a serial WAN link

HSSI WAN Links

All HSSI WAN links have `hssi.` added to the link's symbolic name. For example, `netsys1.hssi1/0.0.lnk` specifies an HSSI WAN link.

Frame Relay WAN Links

Frame Relay WAN links are created in the topology via the **frame-relay map** command if it exists. Otherwise, links are created to connect all other Frame Relay interfaces on the same subnets (fully meshed). You can use the Connectivity Tools drawing capabilities to delete unwanted data link connection identifiers (DLCI). All Frame Relay WAN links have `fr.` added to the link's symbolic name. For example, `netsys1.fr2/3.0.lnk` specifies a Frame Relay WAN link.

BRI WAN Links

All BRI WAN links have `bri.` added to the link's symbolic name. For example, `netsys1.bri2/3.0.lnk` specifies a BRI WAN link.

Topology Window

To display a scenario's topology, select a scenario from the **Scenarios** List in the Connectivity Tools window, then click on the **Topology** button. The topology can be displayed in a Campus view (the default) or in a Flat view. Figure 4-1 is the topology of the *tutorial_baseline* scenario displayed in a Campus, IP view. Figure 4-3 is the *tutorial_baseline* scenario topology displayed in a Flat, IP view.

Using features provided in the Connectivity Baseliner, network elements (routers, LANs, and links) can be highlighted and their configuration attributes can be viewed. Using features provided in the Connectivity Solver, connectivity requirements can be viewed, modified, and analyzed, round trip paths can be displayed in the topology, and network element configuration attributes can be modified. See Chapter 3 in the *Enterprise/Solver Connectivity Tools User's Guide* for a tutorial describing the use of the topology features. See Chapter 4 in the *Enterprise/Solver Connectivity Tools User's Guide* for a tutorial describing the use of the topology drawing capabilities.

The icon shapes representing devices (routers), LAN segments (Token Ring, FDDI, LAN), and WAN links (Serial, HSSI, BRI, and Frame Relay) are as follows:

- router - rectangle
- Token Ring - ellipse
- FDDI - ellipse within an ellipse
- LAN - thin horizontal line. The default color is black.
- implicit link - thin line. The default color is blue.
- WAN link - thick line. The thickness of the line drawn is proportional to the bandwidth of the WAN link. The thicker the line, the greater the bandwidth. The default color is black.

Note   When you are using the Connectivity Solver and you make a device or network element inoperative in a "what-if" scenario, the corresponding device or network element icon in the Topology window turns red. Making the device or network element operative again returns the corresponding icon to its original color. A device or network element is made inoperative by clicking on the **Failed** button in the **Operational Status** section of the Router/LAN/Link/End System Configuration windows. A device or network element is made operational by clicking on the **Operational** button in the **Operational Status** section of the same windows.
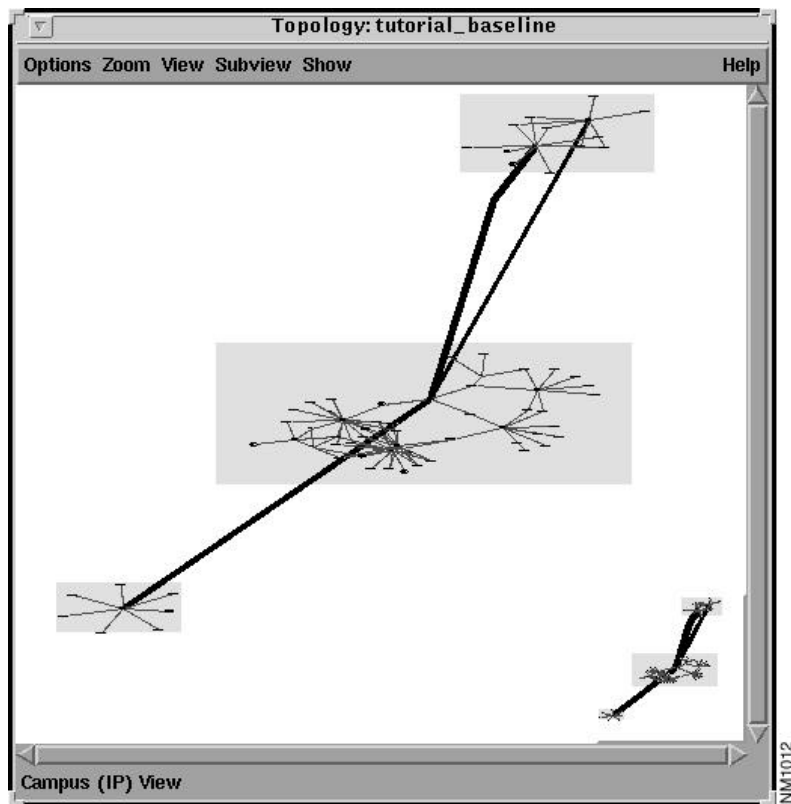
Figure 4-1   **Topology Window:** *tutorial_baseline* **Campus IP View**

Provided you have access to a Mosaic™ or Netscape™ HTML browser, clicking on the **Help** button displays documentation about the Topology window. The HTML browser specified by the ECSP_HELPVIEWER environment variable is used for this purpose. The other Topology window components are described below.

Options Menu

The Options menu provides options to save the current topology layout, recalculate the current topology layout, save or clear WAN changes, specify the fonts and colors used within the topology window, print the topology to a file or device, and to dismiss the Topology window.

Save Layout

Select this option to save the current topology layout. This is useful if you have renamed campuses and/or resized or moved network element icons or campus areas to new locations within the Topology window and you want the changes to be in effect when the Topology window is subsequently displayed or reopened.

If you have not renamed campuses or moved or resized objects in the topology layout, this option is deactivated.

Recalculate Layout

Select this option to discard the saved changes to the current topology layout and to display the initial baseline topology layout.

Save WAN Topology Changes

Select this option to save the topology changes related to creating and deleting WAN links.

Clear WAN Topology Changes

Select this option to discard the topology changes related to creating WAN links and to display the initial baseline topology. Deleted WAN links are not restored.

Preferences

Select this option to display the Topology window's Preferences window. You can customize and save various Topology window component colors and font settings using this window. When selecting or changing a color or font, you must position the cursor at the end of the appropriate color or font text, click the left mouse button, and then back-space to delete the existing text prior to specifying a new color or font. Colors can be specified by name (e.g. blue, black, yellow) or X-resource color value (e.g. `#7799ff`.) Upon making a modification, press **Return** to apply the change. If you want to save the changes you have made for subsequent Topology window displays, click on the **Save** button. If you want to return to the system default values, click on the **Restore system defaults** button.

Print

Select this option to display the Print Options window. A snapshot of the topology can be sent to a printer and/or file. The Print Options windows for Campus and Flat views are identical except for the Campus view's list of symbolic LAN component group names. The Campus Print Options window is shown in Figure 4-2. To print the entire campus topology layout, select the **All Campuses and Objects** entry. To print a specific campus layout, select the specific campus name entry. For both Campus and Flat views, specify an appropriate UNIX print command in the **To Device** field. To specify a file to save the topology to, click on the **To File** button, then specify the name of the file or use the default file displayed in the **To File** field. A more detailed copy of the topology can be printed in coordinated, labeled pages by adjusting the sliders in the **Number of Pages** pane to the desired number of pages. Click on the **OK** button to invoke the specified print options.

This option requires printing to a PostScript printer and produces a PostScript file which can be viewed on-line using a PostScript viewer, such as *pageview*.
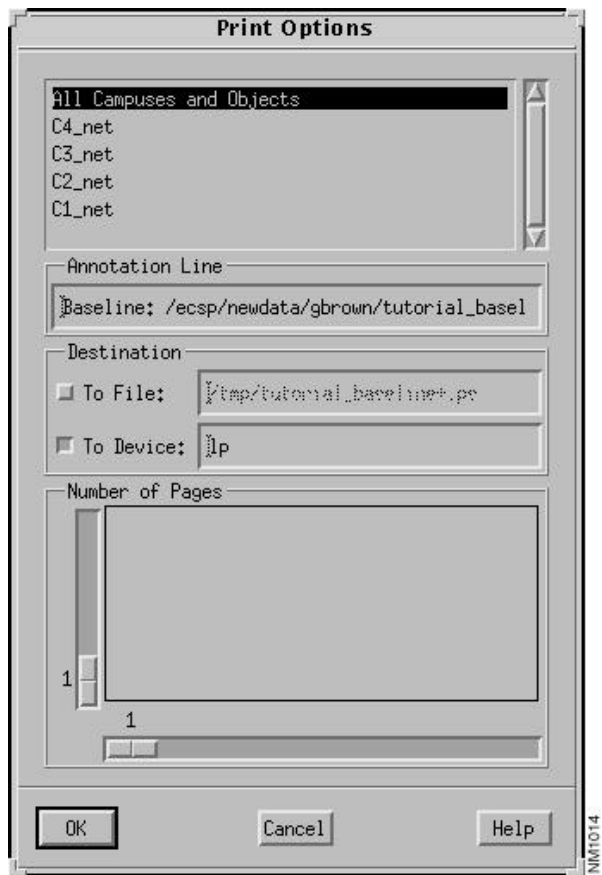
Print Options

All Campuses and Objects
C4_net
C3_net
C2_net
C1_net

Annotation Line

Baseline: /ecsp/newdata/gbrown/tutorial_basel

Destination

☐ To File: /tmp/tutorial_baselinet.ps

☐ To Device: lp

Number of Pages

1

1

OK   Cancel   Help

NM1014

Figure 4-2   Topology Print Options Window: Campus View

Close

Select this option to dismiss the Topology window.

Zoom Menu

The Zoom menu provides options to change the way the topology is displayed. The options are as follows:

All to Fit

Select this option to scale the entire topology to fit entirely within the Topology window.

Path to Fit

When an entry in the Requirements Analysis window is selected, its round trip path is highlighted in the Topology window. Select this option to zoom in on (display in a larger scale) that path. See "Requirements Analysis Window" for detailed information about the Requirements Analysis window.

Note This option is not available with the Connectivity Baseliner.

In

Select this option to display the topology in a larger scale.

Out

Select this option to display the topology in a smaller scale.

Normalize

Select this option to redraw the displayed topology enabling the devices and their associated text to be more easily read. This is especially useful when the displayed topology becomes somewhat skewed when using the **Zoom>In** option and mouse buttons (described below) to alter the topology display.

View Menu

The View menu provides options allowing you to select how the network components are displayed in the Topology window. Depending on the option you select from this menu, the Subview menu options available change accordingly. The View menu options available are:

Campus

Select this option to present a rough approximation of the *physical* network, with Campus boundaries determined by WAN links. Campus names are derived from the names of the routers they contain; the most common first three letters in the router's names are used to name the Campuses. The WAN link connections (thick lines) can be displayed in the foreground (default) or background by toggling the **Show>Inter-campus Links** option. The thickness of the WAN link line indicates its bandwidth. Thicker lines represent higher bandwidth WAN links. Not displaying labels (router names, symbolic names, and LAN segment addresses) is the default mode. Displaying the summary map is the default. Not displaying Campus labels is the default. Displaying IP (default), IPX, or AppleTalk views is accomplished via the **Subview>IP/IPX/AppleTalk** menu options. Figure 4-1 is an example of the *tutorial_baseline* scenario's topology displayed in a Campus, IP view without labels. This is the default view.

Flat

Select this option to display the topology in a Flat view (the subnetworks are not grouped.) In this view, networks and devices are distributed to best display all interconnections. This view is very effective for seeing round trip paths, and is also very good for viewing smaller networks (seventy five or fewer routers.)

The WAN line connections (thick lines) can be displayed (default) or not displayed by selecting the **Show>Inter-campus Links** option. Not displaying labels (router names, symbolic names, and LAN segment addresses) is the default mode. Displaying the summary map is the default. Displaying the IP, IPX, or AppleTalk views is accomplished via the **Subview>IP/IPX/AppleTalk** menu options. Figure 4-3 is an example of the *tutorial_baseline* scenario's topology displayed in a Flat view with IP routes shown.
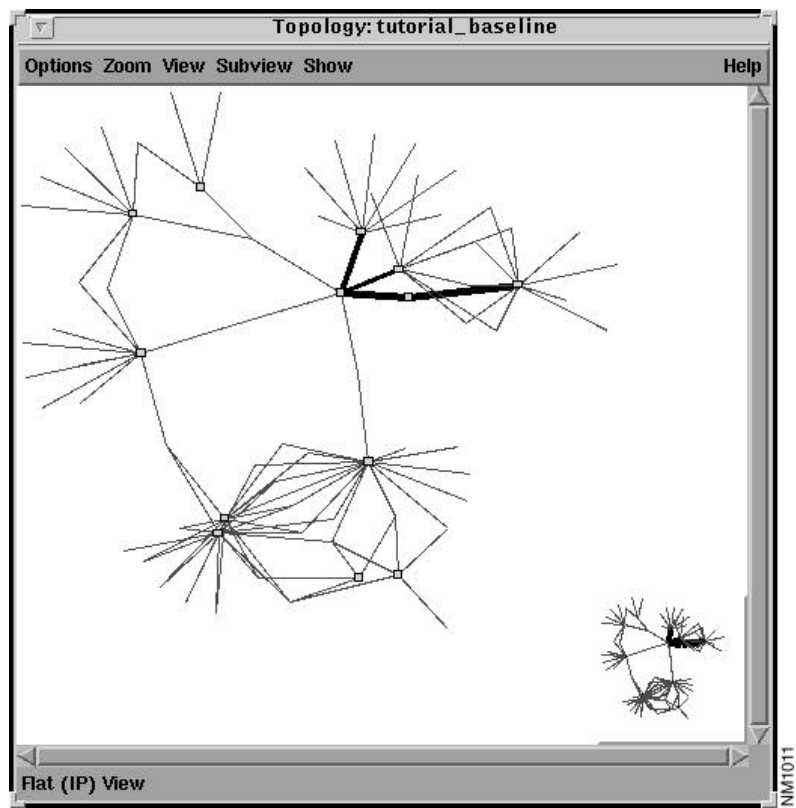
Figure 4-3   **Topology Window:** *tutorial_baseline* **Flat IP View**

RSRB

Select this option to display the Remote-Source Route Bridge components comprising ring group(s) in the Topology window. Figure 4-4 is an example of the `1857` ring group displayed in the Topology window with all network element labels, inter-campus links, and terminal LANs displayed.
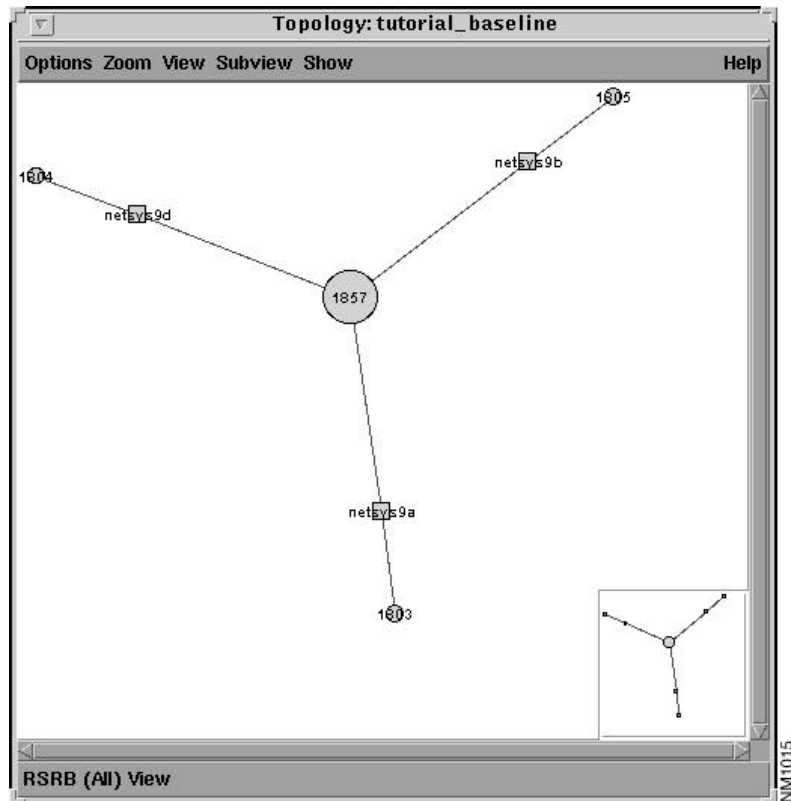

Figure 4-4   Topology Window: *tutorial_baseline* **RSRB View of Ring Group 1857**
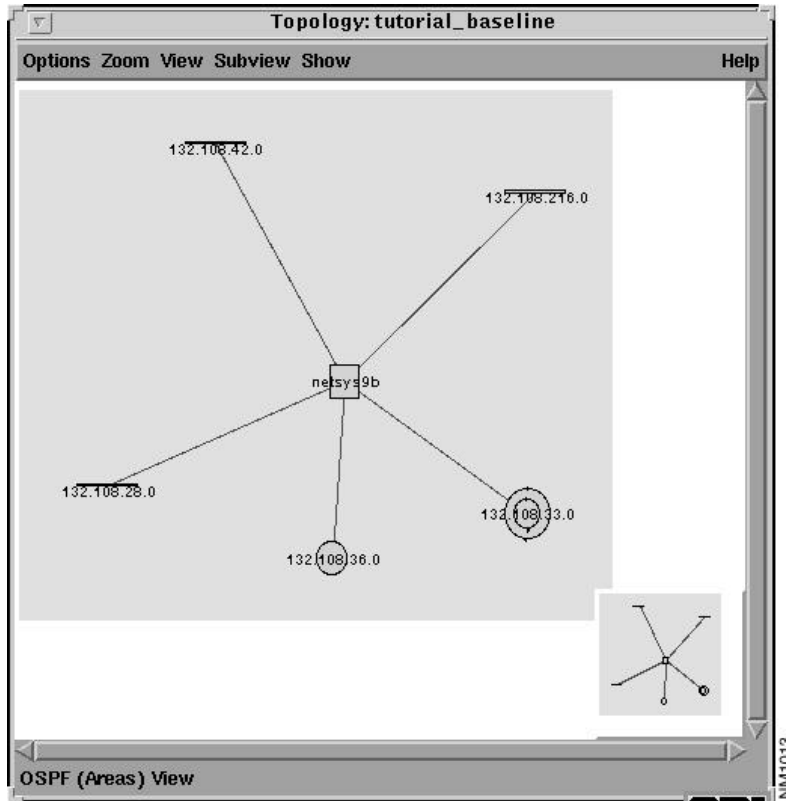
OSPF

Select this option to group the routers supporting the OSPF (Open Shortest Path First) routing protocol together into campuses in the Topology window. Each campus contains routers belonging to the same OSPF area that use the same autonomous system number. The campus names have a format of `101_0.0.0.0`, where `101` is an autonomous system number and `0.0.0.0` is an OSPF area. Figure 4-4 is an example of a *tutorial_baseline* OSPF view. **All** is the only Subview menu option available when the **View>OSPF** option is selected.

An area border router is a router existing in multiple OSPF areas. The symbolic names assigned to area border routers follow the format **abr**_*router_id*, where *router_id* is computed as follows:

- if a `loopback` interface exists, the IP address of the lowest `loopback` interface is used. For example, if `loopback0` and `loopback1` interfaces exist, the IP address of the `loopback0` interface is used.

- otherwise, the highest IP address on any interface is used.

> **Note**   If a topology has only one autonomous system, the OSPF and OSPF-Area views create the same layout. The only difference is the default campus names assigned to the campuses in each view.

Figure 4-5   **Topology Window:** *tutorial_baseline* **OSPF View**

OSPF-Areas

Select this option to group the routers supporting the OSPF routing protocol into campuses in the Topology window. Each campus contains routers belonging to the same OSPF area regardless of the autonomous system ID of the OSPF algorithm. The campus names are assigned with a format of 0.0.0.0. **All** is the only Subview menu option available when the **View>OSPF-Areas** option is selected.

An area border router is a router existing in multiple OSPF areas. The symbolic names assigned to area border routers follow the format **abr_***router_id,* where *router_id* is computed as follows:

- if a loopback interface exists, the IP address of the lowest loopback interface is used. For example, if loopback0 and loopback1 interfaces exist, the IP address of the loopback0 interface is used.

- otherwise, the highest IP address on any interface is used.

By-Name

Select this option to display within a campus groups, routers with names containing the same first two letters. For example, if your network contains routers whose names start with `ne`, `ci`, and `s1`, three campus groups are created in the Topology window. The routers whose names start with `ne` are grouped in one campus, the routers whose names start with `ci` are grouped in a separate campus group, and the routers whose names start with `s1` are grouped in a third campus group.

Subview Menu

The Subview menu provides the opportunity to display the network elements based upon the protocol type you select from this menu's options. Depending on the View menu option you select, the available Subview menu options change accordingly. Selecting the **View>Campus**, **View>Flat**, and **View>By-Name** menu options provides **IP, IPX**, and **AppleTalk** Subview menu options (IP is the default.) Selecting the **View>RSRB** menu option provides the **All Subview** menu option. Selecting the **View>OSPF** and **View>OSPF-Areas** menu options provides the **Areas Subview** menu option.

When the **Show>Status Bar** option is in effect, the Subview option selected (**IP, IPX**, **AppleTalk**, **Areas**, or **All**) and currently being displayed in the Topology window is shown in the Topology window's Status Bar.

Show Menu

The following menu options are used to turn on/off various topology display attributes.

All Object Labels

Select this option to display device names and network addresses whenever the scale of the topology being displayed enables the values to be easily read. Not displaying object labels is the default.

Router Labels

Select this option to display router names whenever the scale of the topology being displayed enables the values to be easily read. Not displaying router labels is the default.

Campus Labels

Select this option to display the names associated with grouped LAN components above the LAN group in the Topology window. Deselect this option to *not* display the names. Not displaying LAN group names is the default. This option is activated when viewing the topology in a Campus or By-Name view.

Inter-campus Links

Select this option to display WAN links as thick, black (default color) lines in the foreground in the Topology window. Deselect this option to not display the WAN links when in a Flat view and to display WAN links in the background, when in a Campus view. Displaying WAN links is the default.

Serial WAN links have `ser.` added to the link's symbolic name (e.g. `netsys1.ser2/3.0.lnk`). Frame Relay WAN links have `fr.` added to the link's symbolic name (e.g. `netsys1.fr2/3.0.lnk`). HSSI WAN links have `hssi.` added to the link's symbolic name (e.g. `netsys9a.hssi1/0.0.lnk`). BRI WAN links have `bri.` added to the link's symbolic name (e.g. `netsys9b.bri1/0.0.lnk`).

> **Note**   You can change the color assigned to the WAN links displayed in foreground and background modes via the **Options>Preferences>Serial Links** and **Options>Preferences>Campus Links** menu options.

Terminal LANs

Select this option to display LAN segments that are only connected to a single router. In effect, turning off this option keeps links from secondary addresses from being displayed. This feature is used to declutter the topology layout. Displaying terminal LAN segments is the default.

Summary Map

Select this option to display a summary map in the lower right corner of the Topology window. The summary map provides a constant view of the entire topology. As the cursor is moved within the Topology window, the current location of the cursor in relation to the entire topology is tracked within the summary map. Deselect this option to not display the summary map. Displaying the summary map is the default.

When you click in the summary map, the corresponding area within the network is centered within the displayed topology.

Status Bar

Select this option to display a status bar at the bottom of the Topology window. The protocol subview (IP, IPX, AppleTalk, Areas, or All) and view type (Campus, Flat, RSRB, OSPF, OSPF-Areas, or By-Name) displayed in the topology is listed in the left portion of the status bar. A device or element's name and address are displayed in the right portion of the status bar when the cursor is over the corresponding icon in the topology (e.g. `ROUTER:netsys9a`, `SERIAL_LINK:netsys9a.hssi1/0.0.lnk`, `TOKEN_RING:199.35.38.128`, `FDDI_RING:199.35.15.96`). Deselect this option to not display the status bar. Displaying the status bar is the default.

Mouse Help

Select this option to graphically display information about the functionality provided by the mouse buttons. The numbers next to the graphic representing the **MENU** button refer to clicking on the **MENU** button once or twice. Deselect this option to not display the mouse buttons graphically (the default.) See "Mouse Controls" for detailed information. Not displaying the mouse button information is the default.

Mouse Controls

An alternative method for altering the display characteristics of the Topology window is through the use of the mouse buttons (**SELECT**, **ADJUST**, and **MENU**) described in the following sections. To graphically display (in the upper right portion of the window) information about the functionality provided by the mouse buttons, select the **Show>Mouse Help** menu option. The mouse button graphics are then displayed in the Topology window as shown in Figure 4-6.

The mouse buttons are also used to provide a mechanism for customizing your topology layout through the Connectivity Tools drawing capabilities. See Chapter 4 in the *Enterprise/Solver Connectivity Tools User's Guide* for a tutorial describing the use of the topology drawing capabilities.
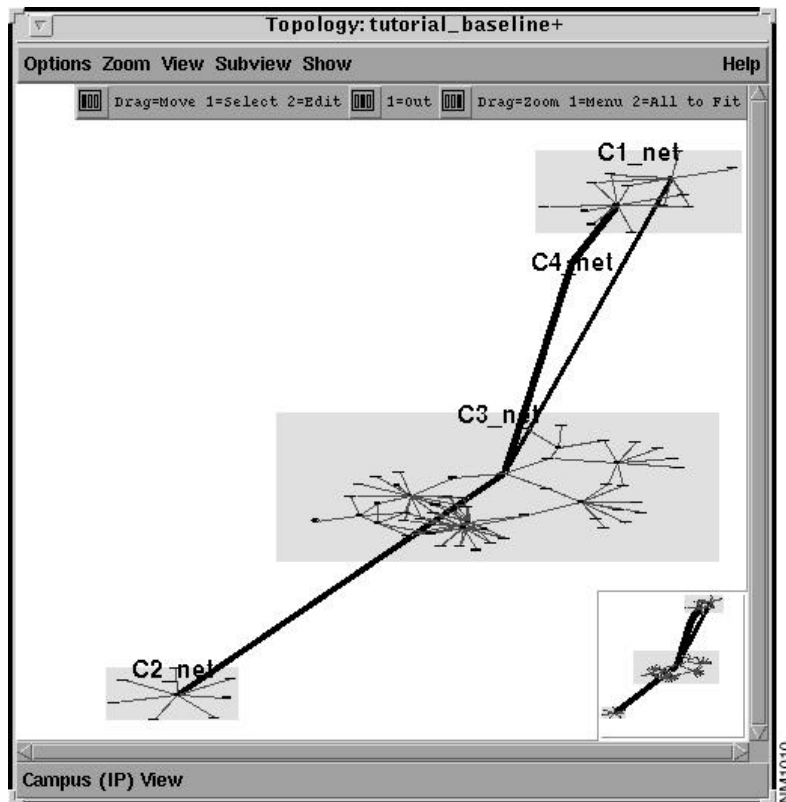
Figure 4-6   **Topology Window: Mouse Button Representations Displayed (Campus View)**

SELECT

The left mouse button (**SELECT**) is used to display a router's symbolic interface names, to display network element configuration windows, and to enable drag and drop capabilities.

- Clicking on the **SELECT** Mouse Button

  Click **SELECT** over a network element icon to display the symbolic interface names of its attached connection end points. For example, if a router has an interface called `TokenRing0` and another called `Ethernet2`, `T0/0` is displayed above the corresponding LAN TokenRing icon and `E2/0` is displayed over its corresponding LAN Ethernet icon. The first letter in the abbreviated format pertains to the interface type (Tokenring, Ethernet, FDDI, HSSI, BRI.) The numbers pertain to the interface/port and card number. When you click **SELECT** over a WAN link, the router's symbolic interface names the WAN link is connected to are displayed.

  Click **SELECT** in the background of the Topology window to remove the interface labels.

- Double-clicking on the **SELECT** Mouse Button

  Double-click **SELECT** on a router, LAN, or link icon to display the associated Router, LAN Segment, or Link Segment configuration window. The attributes of the corresponding network element are displayed in the configuration windows.

  See "Router Configuration Windows" for detailed information about the Router window components.

See "LAN Segment Windows" for detailed information about the LAN Segment window components.

See "Link Segment Window" for detailed information about the Link Segment window components.

Double-click **SELECT** in the background of the Topology window to remove the highlighted, current round trip path.

- Pressing on the **SELECT** Mouse Button

Press **SELECT** to enable drag and drop capabilities. When the cursor is located over a network element icon (other than a link) or within an area denoting a campus within a campus view, pressing **SELECT** enables you to drag the icon or campus area to a new location within the Topology window. Release the **SELECT** button when the icon or campus area is in the desired location.

ADJUST

Click on the middle mouse button (**ADJUST**) to display the topology in a smaller scale (zoomed out) within the Topology window.

You are able to permanently display the **Options**, **Zoom**, **View**, **Subview**, and **Show** menu options by pressing **ADJUST** over a menu and then dragging and dropping the menu to the location on the screen you desire. You then have easy access to the menu's options. To dismiss the menu, click **SELECT** on the menu.

MENU

The right mouse button (**MENU**) can be used within the Topology window to accomplish many tasks. The location of the cursor within the window when this mouse button is selected determines the action that is initiated.

- Clicking on the **MENU** Mouse Button

When you click **MENU** with the cursor located within a highlighted campus or over a network element's icon, an Options menu is displayed. When the cursor is displayed within a highlighted campus but not over a network element icon, the Options menu allows you to rename the campus by selecting the **Rename** option.

When the cursor is over a LAN segment icon, the Options menu allows you to initiate the following actions:

- Display the LAN segment's configuration window by selecting the **Display Parameters** option. See "LAN Segment Windows" for detailed information about the LAN Segment window.

- Permanently display the LAN segment's address.

When the cursor is over a Link segment icon, the Options menu allows you to initiate the following actions:

— Display the Link segment's configuration window by selecting the **Display Parameters** option. See "Link Segment Window" for detailed information about the Link Segment window.

— Remove the link by selecting the **Remove Link** menu option.

— Permanently display the link's symbolic name.

— When the cursor is over a router icon, the Options menu allows you to initiate the following actions:

— Display the router's configuration window by selecting the **Display Parameters** option. See "Router Configuration Windows" for detailed information about the Router Configuration window.

— Display the router's Configuration Text window by selecting the **Display Config Text** option. See "Configuration Text Window" for detailed information about the Configuration Text window.

— Edit the router's configuration file by selecting the **Edit Config File** option

— Add a serial link connecting the router to another router by selecting the **Add Serial Link** option. See "Add Serial Link" for a description of this feature.

— Permanently display the router's name.

• Double-clicking on the Menu Mouse Button

Double-click **MENU** to display the entire topology within the Topology window. This is equivalent to selecting the **Zoom>All to Fit** menu option.

• Pressing on the Menu Mouse Button

Press **MENU** to draw a bounding box around an area within the Topology window. Once you have framed an area, release this button. The bounding box is no longer displayed and the area within the bounding box is zoomed in on.

Add Serial Link

You are able to add a serial link between two routers by selecting the **Add Serial Link** option from a router's Options menu. The router's Options menu is displayed when you click on the **MENU** mouse button with the cursor located over a router icon. If one or more serial link connections are available on the router, the Add Serial Link window, shown in Figure 4-7, is displayed with one or more entries listed in the window's Source and Destination Endpoint panes. Initially, the first entry in each pane is selected and a thick green line representing the serial link between the two selected end points is displayed in the Topology window. Upon selecting the desired serial link, click on the **OK** button. To save this newly created serial link so that it will be displayed when the Topology window is subsequently opened, select the **Options>Save WAN Topology Changes** menu option.

Serial links you create are assigned symbolic names prefixed with `user_asserted.` to differentiate them from other serial links. For example, a serial link you created from the `netsys1` router would have a symbolic name assigned to it with a format of: `user_asserted.netsys1.Serial2/3.1`.

Figure 4-7   Add Serial Link Window

Add Serial Link Window Components

The Add Serial Link window's components are described in the following sections.

Source Endpoint

A list of the router's currently existing symbolic, unconnected, serial interface and Frame Relay interface names and their associated IP addresses are displayed in this pane. Select an entry from this list to designate it as the source endpoint's interface to be used on the serial link you are creating. If this list is long, you can use the Source Endpoint **Filter** field to specify a symbolic serial interface name or device address to search for within the list of available source endpoint interfaces. Pressing **Return** or clicking on the Source Endpoint **Search** button initiates the search using the filter you have specified. The resulting matches of the search are then displayed in this pane. You can then select the interface entry you desire from the resulting list.

Source Endpoint - Filter

If the list of available serial interfaces on this router is long, you can use this **Filter** field to specify a symbolic interface name or an IP/IPX address to look for within the list of Source Endpoint entries. Pressing **Return** or clicking on the Source Endpoint **Search** button initiates the search using the filter you have specified. The resulting matches are then displayed in the Source Endpoint pane. You then select an interface entry from this list to designate it as the router's serial link interface.

Source Endpoint - Search Button

Click on this button to initiate the search using the filter you have specified in the Source Endpoint **Filter** field. The number of entries matching the specified filter and a total of all available interfaces on the source router are displayed within parentheses next to the Source Endpoint **Search** button.

Destination Endpoint

A list of the destination endpoint router(s) and their serial interface(s) and addresses that are available for the serial link you are creating are displayed in this pane. Select an entry from this list to designate it as the destination end point for the serial link you are creating. If this list is long, you can use the Destination Endpoint **Filter** field to specify a router, router interface, or device address to search for within the list of available destination endpoints. Pressing **Return** or clicking on the Destination Endpoint **Search** button initiates the search using the filter you have specified. The resulting matches of the search are then displayed in this pane. You can then select the entry you desire from the resulting list.

Destination Endpoint - Filter

If the list of available destination routers with serial interfaces is long, you can use this **Filter** field to specify a router name, symbolic interface name, or an IP/IPX address to look for within the list of Destination Endpoint entries. Pressing **Return** or clicking on the Destination Endpoint **Search** button initiates the search using the filter you have specified. The resulting matches are then displayed in the Destination Endpoint pane. You then select an entry from this list to designate it as the destination endpoint of the serial link you are creating.

Destination Endpoint - Search Button

Click on this button to initiate the search using the filter you have specified in the Destination Endpoint **Filter** field. The number of entries matching the specified filter and a total of all available destination endpoints are displayed within parentheses next to the Destination Endpoint **Search** button.

OK Button

Click on the **OK** button to add the serial link between the two routers to the baseline's topology and then dismiss the Add Serial Link window. The green line depicting the serial link in the Topology window is changed from green to black or the color you have chosen to represent serial links via the Topology window's **Options>Preferences** menu option.

Cancel Button

Click on the **Cancel** button to dismiss this window and cancel the actions that have taken place since the window was displayed or the **OK** button was clicked.

Help Button

Provided you have access to a Mosaic™ or Netscape™ HTML browser, clicking on the **Help** button displays documentation about the Add Serial Link window. The HTML browser specified by the ECSP_HELPVIEWER environment variable is used for this purpose.