



6 NETWORK DIAGRAM

View Network Diagram displays an interactive scaled plan view of the network, showing all network nodes and observations.

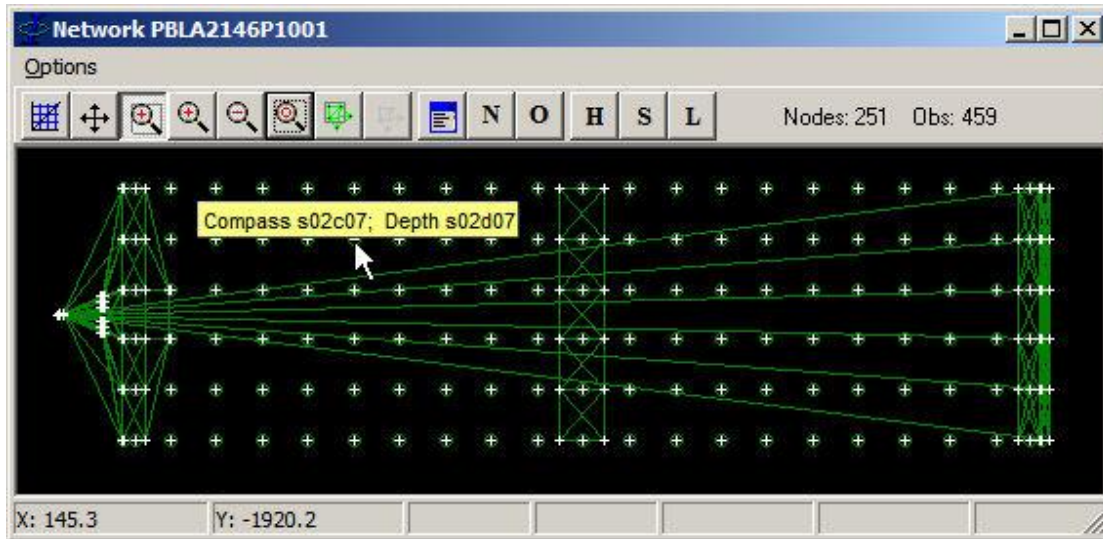


Figure 6-1

From the main menu select *View | Network Diagram*, then select the line from the line list.

The Network Diagram automatically appears when the Network Adjustment module is started. During adjustment the network updates node positions and error ellipses and streamer compasses are optionally displayed.



6.1 Toolbar



When down, the scale is the same along both axes.



When down, use the left mouse button to pan the display. With the <Shift> key and left mouse button down move the mouse up and down to zoom in and out respectively.



When down, use the left mouse button to zoom in to a rectangle.



Hold down to zoom in



Hold down to zoom out.



Zoom extents.



When down, use the left mouse button to select network nodes. The node list appears with the selected nodes highlighted.



Only available in Precondition. When down, scrolls to and highlights the clicked observation's time series plot.



Display the node list. The node list can be used to include and exclude nodes from the current configuration.



Display the Edit Node dialog.



Display the Edit Observation dialog.



When down, plots node heights along the vertical axis.



Plots nodes of type STATION (e.g. radio-navigation or DGPS reference stations).



When down, node labels are plotted. Repeated click scroll the position of each node label through four positions around the node.



Scroll through individual vessel networks in a multi-vessel configuration.



6.2 Menu

Options:

Save:

Preview: Prompts for title and displays the network with axes and a white background replacing a black background. All toolbar and mouse functions remain enabled. Enables the save option.

Save: Enabled only when in Save Preview. Opens the Save dialogue to save the image to a bitmap file (.bmp).

Print:

Preview: Prompts for title and displays the network with axes and a white background replacing a black background. The image appears as it would on the selected printer using the current printer settings. The aspect ratio is preserved. Preview must be closed before any further action can be taken.

Print: Prints the image as it appeared in the print preview.

Printer Setup: Opens the Windows printer setup dialogue.

Colours:

Background: Set the background colour.

Font: Set the colour of text displayed on diagram.

Nodes: Set the node colour.

Good Obs: Set the colour for good observations (available in Precondition module only).

Interp Obs: Set the colour for interpolated observations (available in Precondition module only).

Bad Obs: Set colour for bad observations (available in Precondition module only).

Monochrome: Display in monochrome.

Labels: Select node types for which labels are shown when *Plot Labels* button is clicked.

Load Network: Loads a previously saved network configuration.

Save Network: Saves the current network configuration. The saved configuration can be used in the *Network Adjustment* module.

Show Toolbar: Hide/show the toolbar.

Exit: Exit network diagram.



6.3 Functions

6.3.1 Coordinate system

The coordinate system is in metres. The origin of the coordinate system is the vessel reference point. The X-axis is the vertical axis, positive upwards corresponding to starboard. The Y-axis is the horizontal axis, positive towards the right corresponding to aft. When the elevation view (*H* button) is shown, the X-axis changes to the Z-axis, positive upwards corresponding to height above the vessel reference point.

The horizontal and vertical axes are scaled independently and depend on the degree of magnification according to the use of zooming.

6.3.2 Mouse Functions

The coordinates of the mouse cursor, in terms of the coordinate frame described above, are always shown on the left of the status bar below the diagram. The number of network nodes and observations, excluding streamer depth sensors, is always displayed above the diagram, and responds to zooming.

Positioning the mouse cursor over a node will display a label showing the names of all the nodes with three pixels of the mouse cursor.

Moving the mouse whilst holding down the left mouse button draws a rectangle to which to zoom to.

Moving the mouse whilst holding down the right mouse button draws a line whose equivalent length, difference in X and Y, and angle clockwise from the vertical are shown in the status bar below the diagram. This can therefore be used to make accurate measurements on the defined network.

Depressing the left mouse button whilst positioned over nodes displays the following node attributes:

Number
Name
Type
Relation
Reference node
Offsets from the reference node.

If several nodes are grouped closely together repeated clicks of the left mouse button, keeping it depressed, will scroll through this information for each node.

If the *Edit Node* dialogue is showing it will automatically display the current. If the *Node List* is showing it will automatically highlight the current node.

6.3.3 Zooming

In addition to the toolbar zoom functions, the mouse wheel may also be used to zoom in and out.



To zoom in on the location of the mouse cursor scroll the mouse wheel up.

To zoom out on the location of the mouse cursor scroll the mouse wheel down.



6.3.4 Edit Node

Click on the *Edit Node* button to display an abbreviated dialogue of node attributes, shown in Figure 6-2, which can be edited. Pressing the *Enter* key or clicking on the *Save* button saves changes to the database, and the network diagram is updated immediately. Saving is disabled during network adjustment if the Network Diagram has been invoked from the Network Adjustment module.

Network Adjustment AWG98-6832A-...

Number: 476

ID: 160

Name: G6T1-S8T2

Type: CHANGE

At Node: 406 G6T1.504

To Node: 421 S8T2.582

Target Node: 421 S8T2.582

Units: MILLISECONDS

Speed: 1533

Scale: 1

Fixed C-D: 0

SD (m): 0.980000019073486

Nominal: 360.455322265625

Source: RECORDED

Use: Used

Save Close

Figure 6-2

The current node in the dialogue is selected by selecting the node from the dropdown list of node names, clicking on a node in the network diagram or highlighting a node in the node list.

Note: the grid coordinates are displayed in metres, regardless of the projection metric conversion factor defined.



6.3.5 Edit Observation

Click on the *Edit Observation* button to display an abbreviated dialogue of observation attributes, shown in Figure 6-3, which can be edited. Pressing the *Enter* key or clicking on the *Save* button saves changes to the database, and the network diagram is updated immediately. Saving is disabled during network adjustment if the Network Diagram has been invoked from the Network Adjustment module.

Observation

Number: 467

ID: 151

Name: G4T1-S1T1

Type: RANGE

At Node: 401 G4T1.503

To Node: 414 S1T1.511

Target Node: 414 S1T1.511

Units: MILLISECONDS

Speed: 1533

Scale: 1

Fixed C-O: 0

SD (m): 0.980000019073486

Nominal: 321.374755859375

Source: RECORDED

Use: Rejected

Save Close

Figure 6-3



6.3.6 Node List

Click on the *Node List* button to display the node list. The node list is also displayed when selecting nodes using the mouse (see Toolbar).

The node list is divided into two lists: *Nodes Available* and *Nodes Used*. The nodes used are those which are currently contained in the Network Diagram. The remaining nodes defined are in the Nodes Available list. (See Figure 6-4).

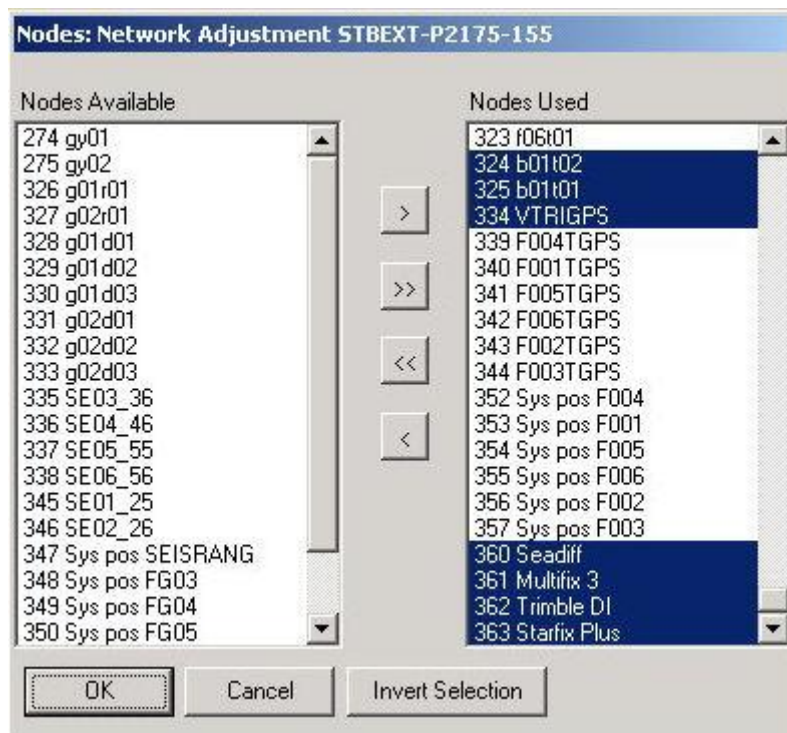


Figure 6-4

Click on the appropriate arrow buttons to move nodes between the two lists. This action automatically updates the Network Diagram.

Highlighting a node with the left mouse button updates the Edit Node dialogue with the highlighted node, if displayed. The highlighted node can also be changed by clicking on a node in the Network Diagram or changing the current node in the Edit Node dialogue.

Figure 6-4 shows a selection of nodes which has been made by drawing a rectangle in the Network Diagram with the *Select Nodes* button down.

By clicking the *Invert Selection* button followed by the left arrow button (<) the selected nodes may be included in the network and all other nodes excluded.