

## JNW2 Graphic Network Builder User Manual

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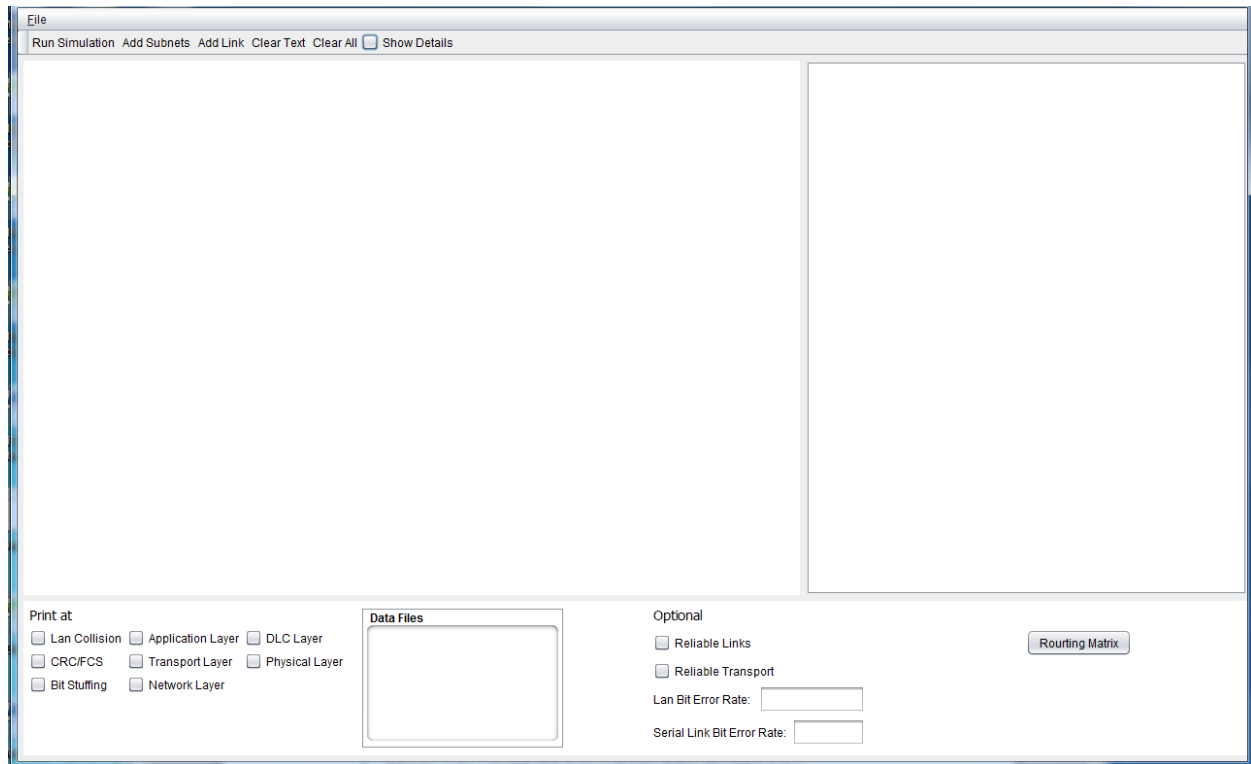


Figure 1: JNW2 Graphic Network Builder - Graph Window on left. Text Window on the right.

At the start of the application, a user can either start with a blank configuration, or the user can load a configuration file.

1. Load the configuration file.
  - a. Select “Load Config. File” from the File menu.
  - b. The user can browse the file system to load the file. The default will be the config path within the application. The user can browse to a different file path if necessary.
  - c. The network graph will be added to the graphics window. If the graph was modified and saved before the same graph will be displayed. The XY location will be saved within the <subnetXY> tag.
  - d. Other information from the configuration file will be loaded.
  - e. User will be able to see all other information from the configuration file.
2. Draw or modify the network graph.
  - a. Add subnets to the graph by selecting an “Add Subnets” button and then selecting a location on the graph window.
    - i. A dialog form will display to add information about the subnet.
    - ii. When the user is done a node will display.
    - iii. Collision with nodes and with links will not be allowed.

- iv. The user can continue to add nodes while the “Add Subnets” button is in focus. It will lose focus when some other operations are performed.
    - b. Add Links
      - i. Select two nodes by clicking but not moving the nodes. The node will change colors if it is selected.
      - ii. Select the “Add Link” button.
      - iii. A dialog form will display to add the Data Rate of this link.
      - iv. Most collision will not be allowed.
    - c. Right click the nodes and links to add change information and delete. Deleting a node will delete all links associated with the node.
    - d. Drag the nodes around the graph. Links will drag with the nodes.
  3. Show Details
    - a. Select “Show Details” and the graph will be a lighter color and subnet and link details will be shown. Some of the information will be shown in the text area.
    - b. The information in the text area will not change as new subnets and links are added. The user can unselect and reselect “Show Details” to get updated information.
    - c. Hosts & Data rate will change as the user changes those values.
  4. Data Files
    - a. Select “Add Data Files” from the File menu.
    - b. The user can browse the file system to load the file. The default will be the data path within the application. The user can browse to a different file path if necessary. In this case the absolute path is saved.
    - c. The user can select more than one file.
    - d. The files selected are added to the current list. Duplicates are not added.
    - e. The Data Files are shown in the “Data Files” area.
    - f. Clear all will unselect the files.
  5. Routing Matrix
    - a. If a routing matrix was loaded from the configuration file, the routing matrix needs to be maintained. If a user adds and deletes subnets the routing matrix will not change to reflect the changes.
    - b. A user can also add a routing matrix at any time.
    - c. Select the “Routing Matrix” button. Warnings will be shown if there are no nodes or nodes without links.
    - d. The Routing Matrix will be displayed to be edited. If a routing matrix was provided, some values will be initialized. Values assigned with 0, need to be assigned with the appropriate node. Others can be changed. The diagonal will be filled in with the row and column value.
    - e. Change a value with dropdown edit.
    - f. A warning displays specifying that the user must exit a field in order for the modification to take effect.
    - g. There are three buttons.
      - i. Cancel – Cancels and closes the window without a warning.

- ii. OK – Checks that it is all filled; warns the user about leaving their last field; and then saves the routing matrix.
    - iii. Clear – Clears the Routing Matrix. The routing matrix will no longer be required. There is a warning before clearing.
6. Other input fields should be self-explanatory.
7. Clear All - will clear everything so that the user may start over. There will be a warning dialog.
8. Save the configuration file.
  - a. Select “Save Config. File” from the File menu.
  - b. A warning will be shown if there are no nodes, nodes without links, or the routing matrix is not complete if started (Routing Matrix can be cleared). User will not be able to save.
  - c. The user can browse the file system to save the file.
  - d. The default location is the location where the configuration file was loaded or the config path within the application if no file was loaded.
  - e. The default name is the same as the loaded configuration file.
  - f. The configuration information should be saved similar to the current configuration files (See configFile.xlsx spreadsheet for more information).
  - g. The saved configuration file can be loaded to produce the same graph and information.
9. Run Simulation
  - a. Select “Run Simulation”.
  - b. A warning will be shown if there are no nodes, nodes without links, or the routing matrix is not complete if started (Routing Matrix can be cleared). The user will not be able to run the simulation.
  - c. The simulation will run and statistics will be shown in the text window.
10. Errors
  - a. An error window will pop up whenever there is an error.
  - b. If it is a fatal error the application will exit.
  - c. If it is a correctable error the application will continue to run.