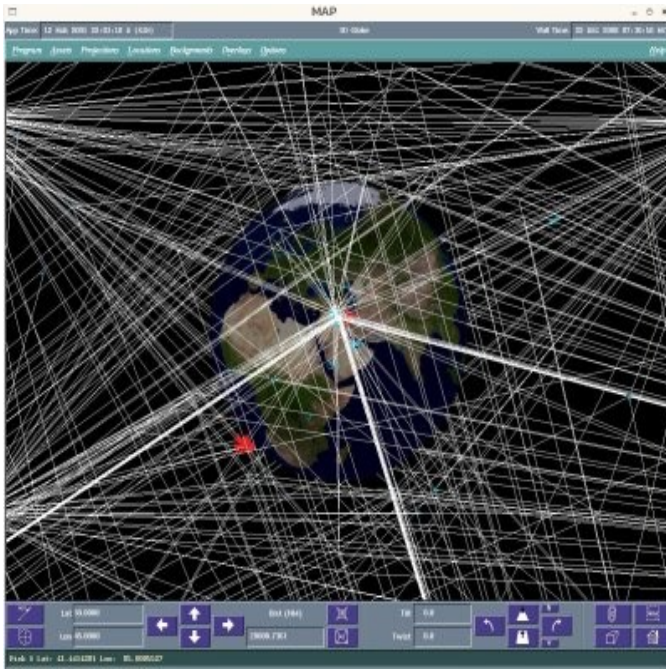


Runtime Communications Filters



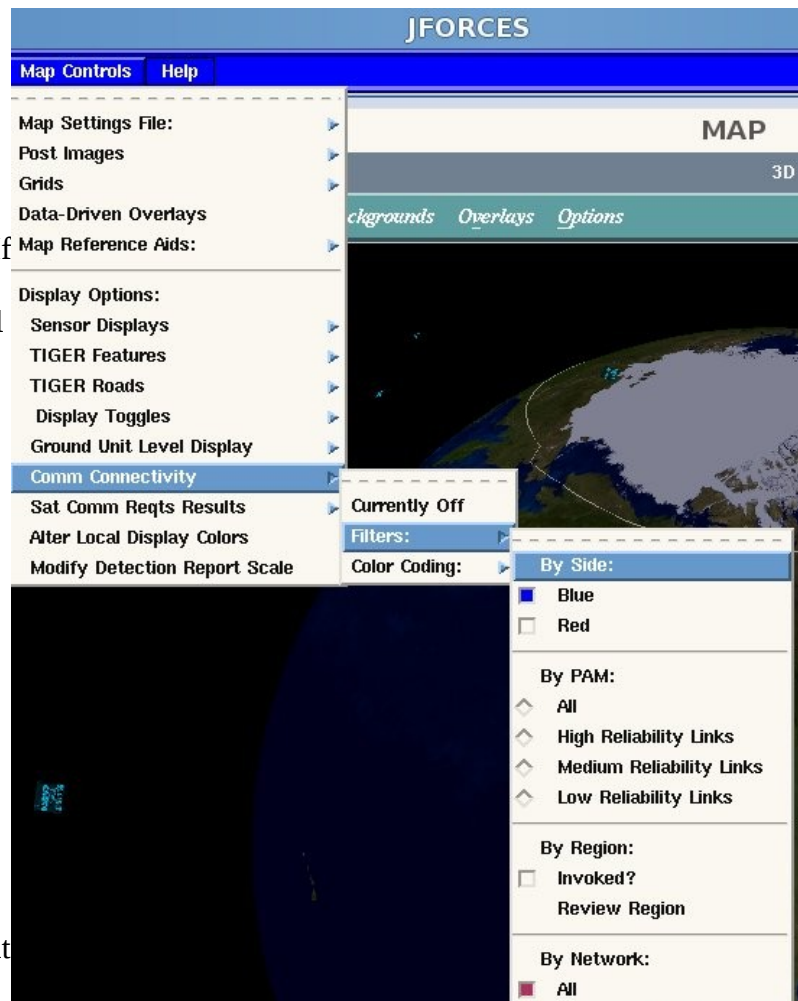
Filters are provided to limit the displayed communications links during runtime. As shown in the first figure there can easily be so many links shown that it's impossible to distinguish critical information.

While it's impossible to show this in a static picture, the larger problem is the overhead associated with maintaining this display swamps the graphics and can readily result very poor GUI performance. For this reason it is recommended that the filters are selected before attempting to turn on the link displays.

As indicated in the second screen shot, when a scenario is being run the filters can be found under “Map Controls->Comm Connectivity”. The only active control on the first cascading menu is the label currently entitled “Currently On”. If selected this caption will change to “Currently Off” and the link displays will be eliminated. In large scenarios it's recommended to select the filters first. NOTE - If there's any question about the system being able to maintain graphics performance try pausing the scenario before turning the communications links on.

The second cascading interface has the filters which are applied cumulatively, that is the only the links that match all selected criteria will be displayed. The following filter options are available:

By Side: This permits the user to display either links that only terminate on a blue node, or a red node, or either. The default is to show only those that have at least one terminus at a blue node. Note that it's

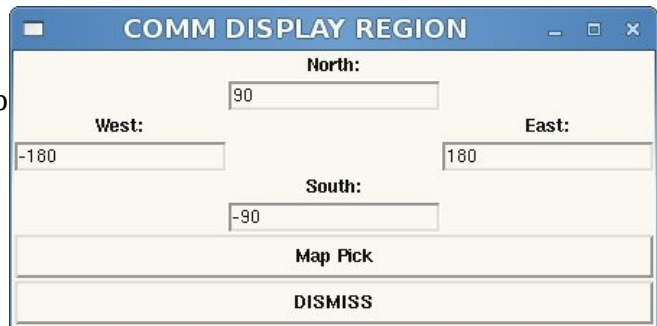


possible to build links between Blue and Red nodes, in which case the link will be displayed if either is selected.

By PAM: PAM is short for Probability of Acceptable Message reception. So these filters relate to displaying links by reliability. As seen the display can be filtered by high, medium or low reliability. The associated numeric thresholds are:

- High – PAM above 95%
- Medium – PAM between 95% and 75%
- Low – PAM below 75%

By Region: When this option is selected this interface is displayed. The selected regional filter is updated whenever the user either picks from the map or types in a boundary and hits the “Enter” key. Only links terminating or originating in the selected region will be displayed.



If this option is not invoked all links matching any other selected filters will be displayed regardless of region.

By Network: Generally this will include a list of all networks defined during scenario generation with on/off selections for each network. These are the networks definable within the Scenario Designer under “Scenario Design → Networks → Detailed Networks”.

Color Coding: In addition to the above filters the first cascade permits the user to select color coding to review link states. Selections here will not limit the displayed links, but instead can alter their colors. Options are:

Connectivity: This is the default. All comm links with non-zero PAM are drawn in white. Note that links with PAM of zero (e.g. blocked line of sight the LOS is required) are NEVER drawn.

Maximum Theoretical Throughput: This uses the following colors:

- Green for links with data rates > 56K
- Yellow for links with data rates between 2K and 56K.
- Red for links with data rates below 2K.



Media Type: This uses the following color coding base on transmission type:

- White for Radio
- Yellow for Laser
- Cyan for all others (including land lines)

% Reduction: This provides a quick review of jammed comm links. The thresholds are:

- Green for >90%
- Yellow for resulting PAM between 50% and 90%
- Red for PAM < 50%

By Network: This will display the network associated links in the colors selected by the analyst for each network in the scenario designer under “Scenario Design → Networks → Detailed Networks”.