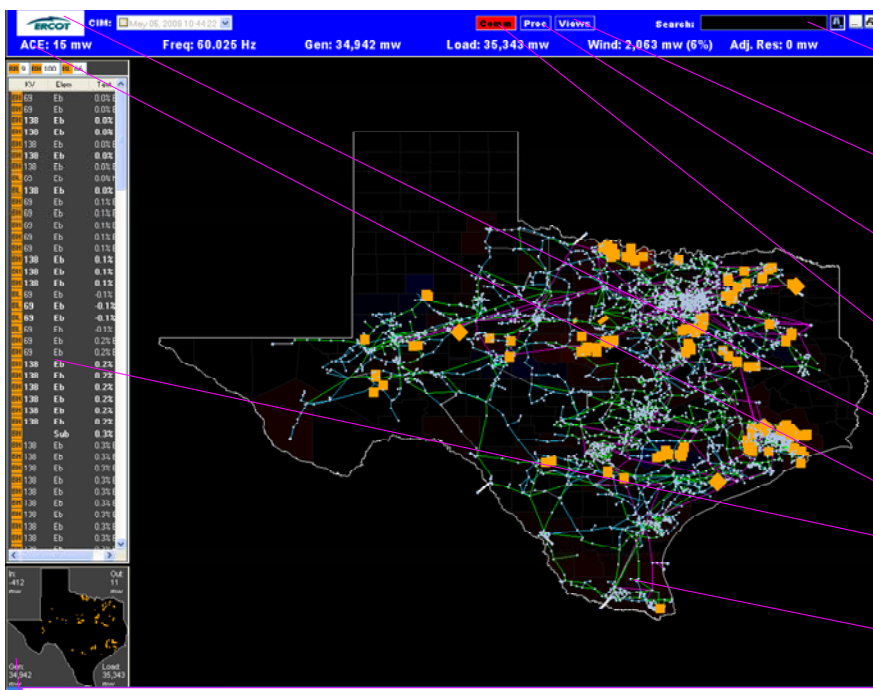


Macomber Map "Cheat Sheet"

Overview



Search for elements in the network model by keyword. Long & short substation names are acceptable. Keywords * and ? can be used, and certain element states such as open/closed (for capacitors and reactors), online/offline (for units and loads) can be used as well.

Right-click to select the intended view, open a secondary map window, or select an existing window.

Click to see process details. Processes past time limits will turn yellow/red.

Click to see communications details. The communications window has three components, each red/yellow/green: MM to core systems, ICCP/ISD Links, MM Queries

Right-click on the ERCOT logo for savecase creation, display properties, about dialog & exiting

High-level key indicators. Click for more details

Violation Viewer - Lists of violations that can be sorted & grouped

Network Map – Allows viewing the components of the network and their associated status (including violations if applicable). Counties are shaded by the weighted bus pU. MVA flow arrows are sized & move by (MVA/Normal Limit)

Mini-Map – a high-level map showing the current position within the network, any applicable violations, and high-level information (including flows in/out and generation within). On the main display, in/out corresponds to DC Ties in/out.

Colors

345 KV Lines - Purple High pU
138 KV Lines - Green Low pU
69 KV Lines - Blue
Other KV Lines - Pink
DC Ties - White & thick
Basecase Violated - Orange
Contingency Violated - Yellow

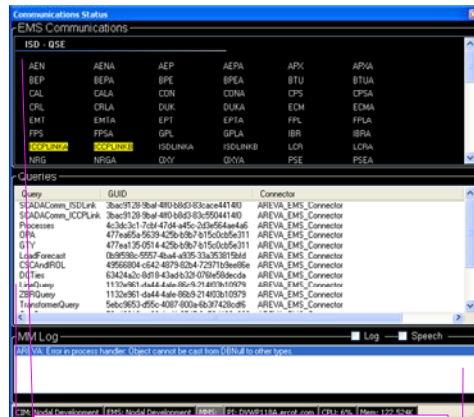
Network Map Interactions

- Click & drag w/ left mouse button to pan the map
- Use the mouse wheel to zoom in (scroll up) and out (scroll down)
- Click and drag the mouse wheel for continued panning
- Right-click on an element (county, substation, line) to see more information on it
- Right-click and drag the mouse to draw a lasso
- Keyboard: (R)eset the map, (+) Zoom in, (-) Zoom Out
- Create a viewport called "MMConsole" in AREVA to interact with WebFG**
- Choose a set of display parameters under the 'views' menu, or edit details in the display options (right click on the ERCOT logo -> display options)

Violation Viewer

- Items can be categorized by violation type, violation type & KV Level, violation type & element type.
- Items can be grouped by substation, voltage, element type, hour of violation, violation type, owner & operator

Violations



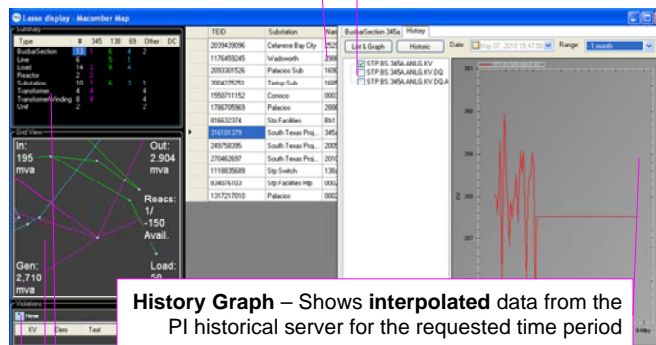
Collection of ICCP/ISD Links. Black background is online, yellow is unknown, and red offline.

Queries between Macomber Map and EMS. White are normal (refreshed within the appropriate timeframe), green are currently refreshing, and red are overdue for a refresh. Double-click on the name of the query to manually refresh it. Note – occasionally a query will run red for a second or two, but should disappear quickly.

Lasso display

Property Page – Displays all in-memory information on the selected object, and allows for viewing of historical data for the selected element.

History Tags – Allows the user to select multiple data points (PI tags) for the selected element(s).



History Graph – Shows interpolated data from the PI historical server for the requested time period

Summary Table – List of all elements within region, total and by KV. Click on a number to show only those elements within that category

Mini-Map – in Detailed mode. Additionally shows (when present) available Capacitors and Reactors and their corresponding nominal MVARs

Violation View – showing only violations within the lasso region

KV	Elem	Test
69	Eb	-2.8% NORM
69	Eb	-2.8% NORM
69	Eb	-2.9% NORM
69	Eb	20.1% EMER
69	Ln	202.1% EMER
69	Eb	3.0% EMER
69	Eb	3.0% EMER
69	Eb	-3.0% NORM
69	Eb	-3.0% NORM
69	Eb	-3.3% EMER
69	Eb	-3.3% EMER
69	Eb	-3.4% NORM
69	Eb	-3.5% NORM
69	Eb	-3.5% NORM
69	Eb	3.6% EMER
69	Eb	3.7% EMER

Violations – Each violation is shown by KV Level, Element Type and violation details. Right-click on an item to see further information

Categories – Allows for visibility changes across categories. (B)asecase or (C)ontingency, (B)ranch, (H)igh Voltage and (L)ow Voltage

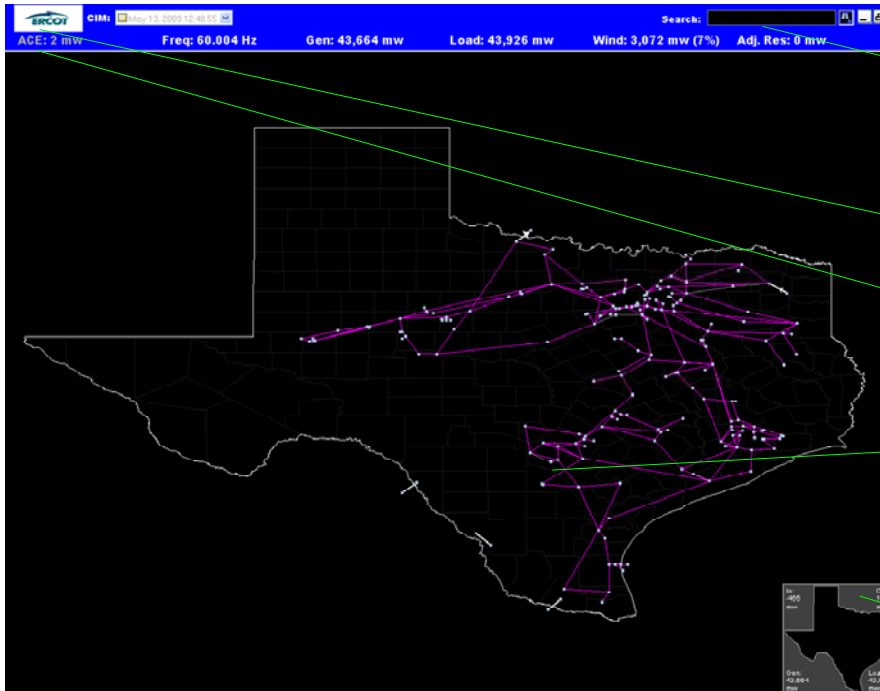
Contact information

Michael E. Legatt
mlegatt@ercot.com
(512) 248-4232

View the recent log, toggle logging to a file and speech of critical events

Macomber Map “Cheat Sheet”

Overview



Search for elements in the network model by keyword (e.g., “Okla substation” or “Line Travis 138”). Long & short substation names are acceptable. Keywords * and ? can be used, and certain element states such as open/closed (for capacitors and reactors), online/offline (for units and loads) can be used as well.

Right-click on the ERCOT logo to see the development information (About) and exit the application.

High-level key indicators. Click on indicators for more details.

Network Map – Allows viewing the components of the network and their associated status (including violations if applicable). Counties are shaded by the weighted bus pU. MVA flow arrows are sized & move by (MVA/Normal Limit)

Mini-Map – a high-level map showing the current position within the network, any applicable violations, and high-level information (including flows in/out and generation within). On the main display, in/out corresponds to DC Ties in/out.

Colors

345 KV Lines - Purple High pU
DC Ties – White & thick Low pU

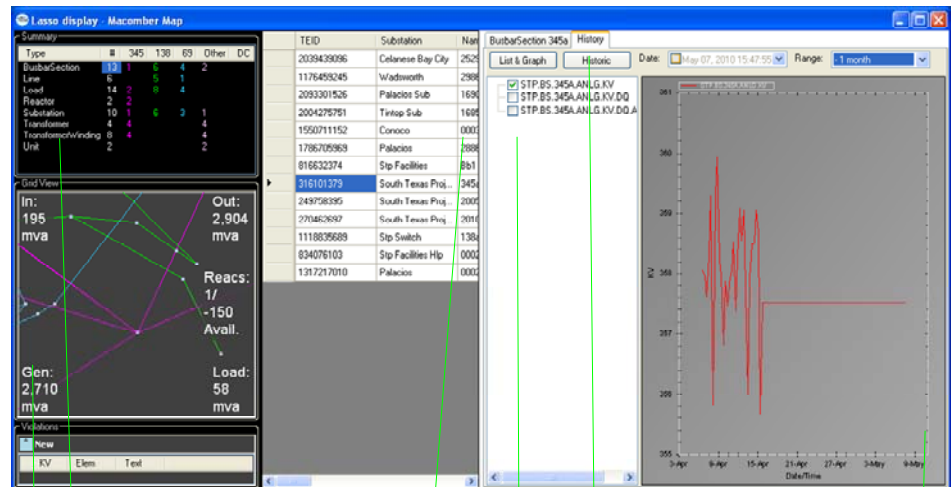
Network Map Interactions

- Click & drag w/ left mouse button to pan the map
- Use the mouse wheel to zoom in (scroll up) and out (scroll down)
- Click and drag the mouse wheel for continued panning
- Right-click on an element (county, substation, line) to see more information on it
- Right-click and drag the mouse to draw a lasso
- Keyboard: (R)eset the map, (+) Zoom in, (-) Zoom Out

Global Interactions

- Right-click on an item to see more information and possible actions off it

Lasso display



Summary Table – List of all elements within region, total and by KV. Click on a number to show only those elements within that category

Mini-Map – in Detailed mode. Additionally shows (when present) available Capacitors and Reactors and their corresponding nominal MVARs

Element Summary – A display of elements of the selected type (and optionally, KV level)

Property Page – Displays all in-memory information on the selected object, and allows for viewing of historical data for the selected element.

History Tags – Allows the user to select multiple data points (PI tags) for the selected element(s).

History Graph – Shows interpolated data from the PI historical server for the requested time period