

SAARC Training Workshop 'Power System Studies for Synchronization of Multiple Systems'

Introduction to PSS/E *Graphical User Interface*

Day-1-G

Kabul, Afghanistan

20-22 October 2014



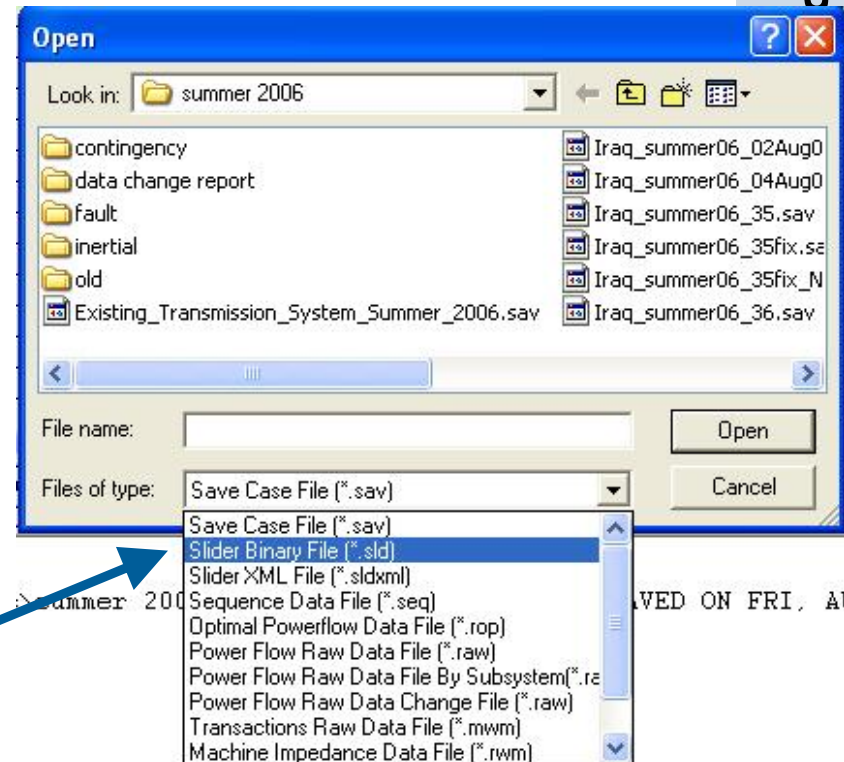
SAARC Energy Centre, Islamabad
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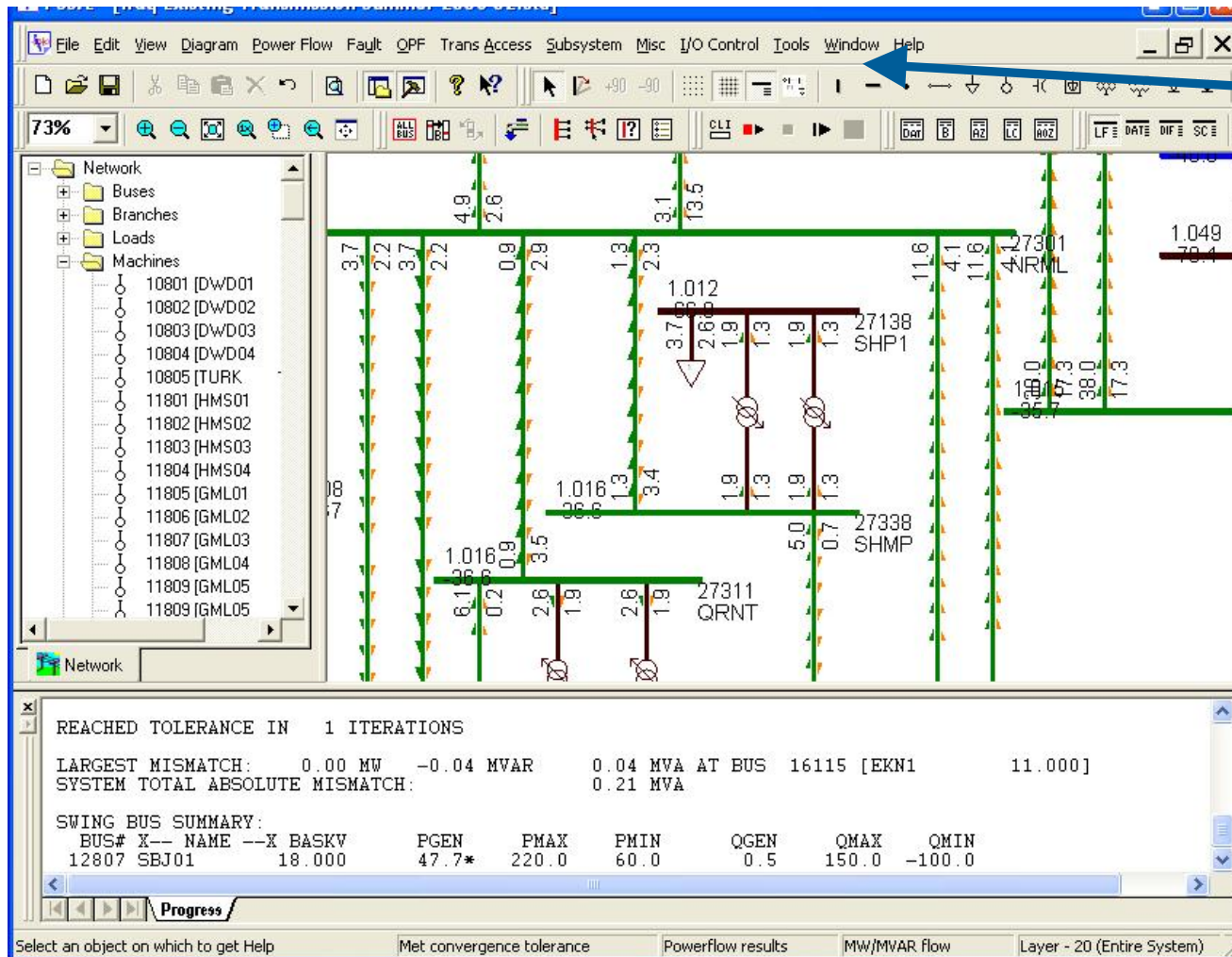
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DRAWING GRAPHICS

- Takes some getting used to !
- To start a new Diagram – click the File Menu, select New and then select Diagram
- To open an existing one - click the File Menu, select Open – then change the file type to Slide Binary File (*.sld)



DRAWING GRAPHICS



Can switch between data and diagram using the window menu

DRAWING GRAPHICS

- Once a diagram is open the File Menu commands operate on the visible window !
- So File > Save does not save the working case – it saves the diagram (no warning)
- Similarly if you edit some data and then do File > Save it saves the working case data and not the diagram.
- Need to save both usually of course.

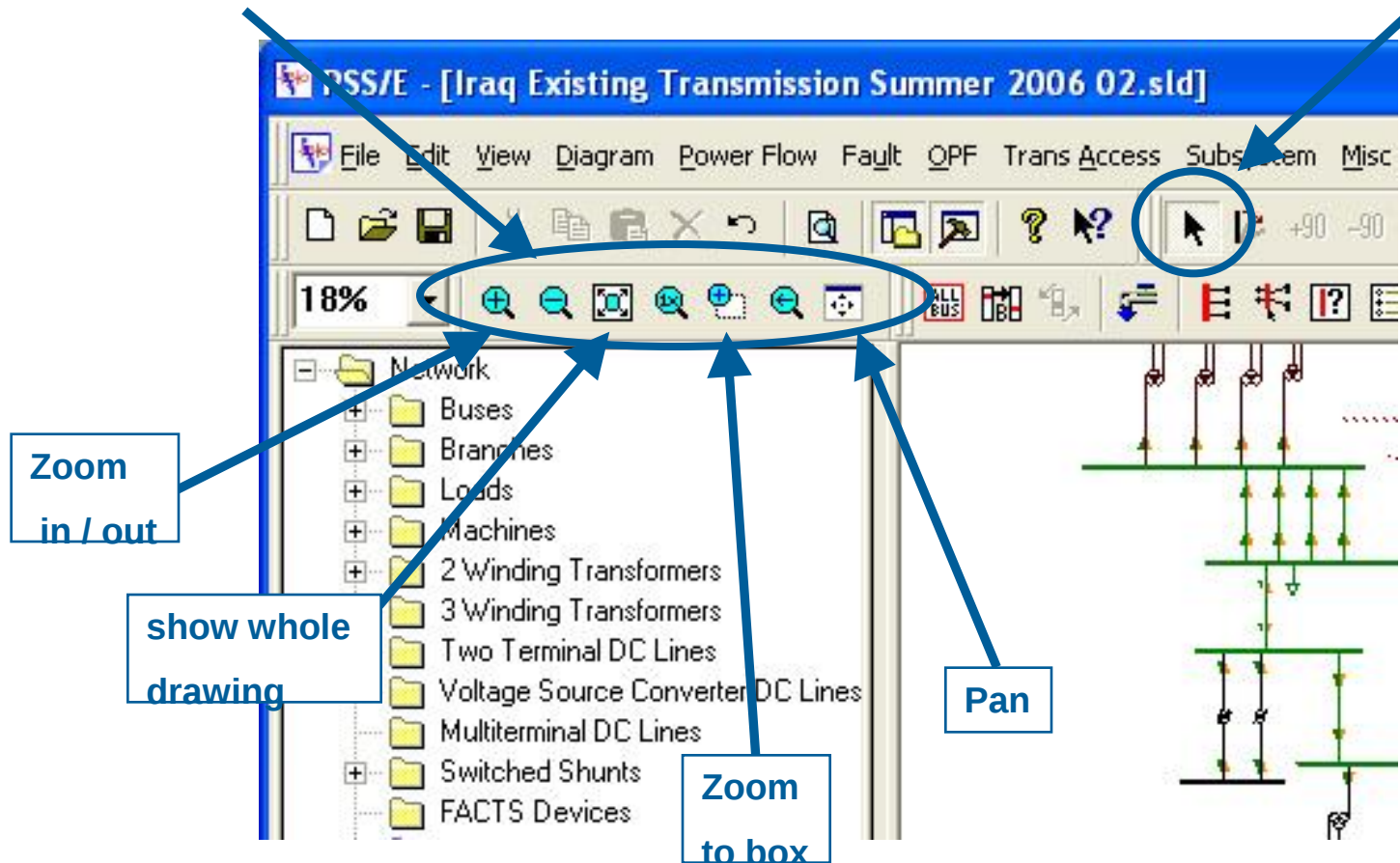
DRAWING GRAPHICS

- The diagram is either in a drawing manipulation mode (pan, zoom, etc) or in a data edit mode – the user needs to change between these two by selecting the icons above the diagram
- The arrow symbol puts it into data edit mode
- The navigation icons put it into manipulation mode
- All labels (e.g busbar names, voltages) can be selected as well as the actual plant items

THE DIAGRAM MODES

Icons to navigate diagram

Select to edit data etc

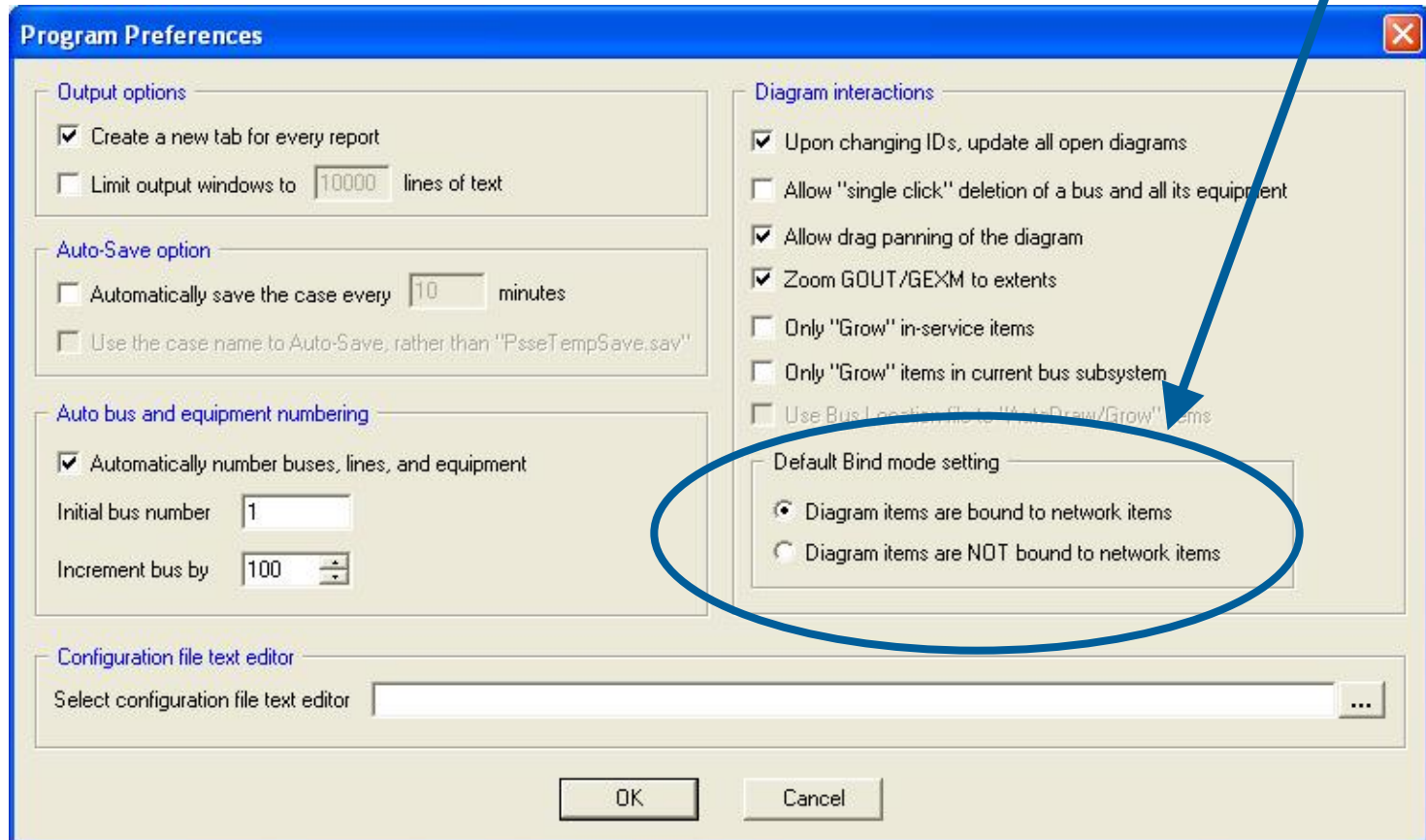


DRAWING GRAPHICS

- Need to choose whether data is 'bound' to the diagram
- If bound – then deleting from the diagram will delete the data (NB : undo feature is limited !)
- If not bound – then the drawing can have items that are not in the data
- Bound setting has a default but can be changed at any time from one state to the other at any time

PREFERENCES

Default BOUND setting



The screenshot shows the 'Program Preferences' dialog box with several sections. A blue arrow points from the text 'Default BOUND setting' to the 'Default Bind mode setting' section, which is circled in blue. The 'Default Bind mode setting' section contains two radio buttons: 'Diagram items are bound to network items' (selected) and 'Diagram items are NOT bound to network items'.

Program Preferences

Output options

- ☒ Create a new tab for every report
- ☐ Limit output windows to lines of text

Auto-Save option

- ☐ Automatically save the case every minutes
- ☐ Use the case name to Auto-Save, rather than "PssTempSave.sav"

Auto bus and equipment numbering

- ☒ Automatically number buses, lines, and equipment
- Initial bus number
- Increment bus by

Diagram interactions

- ☒ Upon changing IDs, update all open diagrams
- ☐ Allow "single click" deletion of a bus and all its equipment
- ☒ Allow drag panning of the diagram
- ☒ Zoom GOUT/GEXM to extents
- ☐ Only "Grow" in-service items
- ☐ Only "Grow" items in current bus subsystem
- ☐ Use Bus Location File to "Auto-Draw/Grow" items

Default Bind mode setting

- ☒ Diagram items are bound to network items
- ☐ Diagram items are NOT bound to network items

Configuration file text editor

Select configuration file text editor

OK Cancel

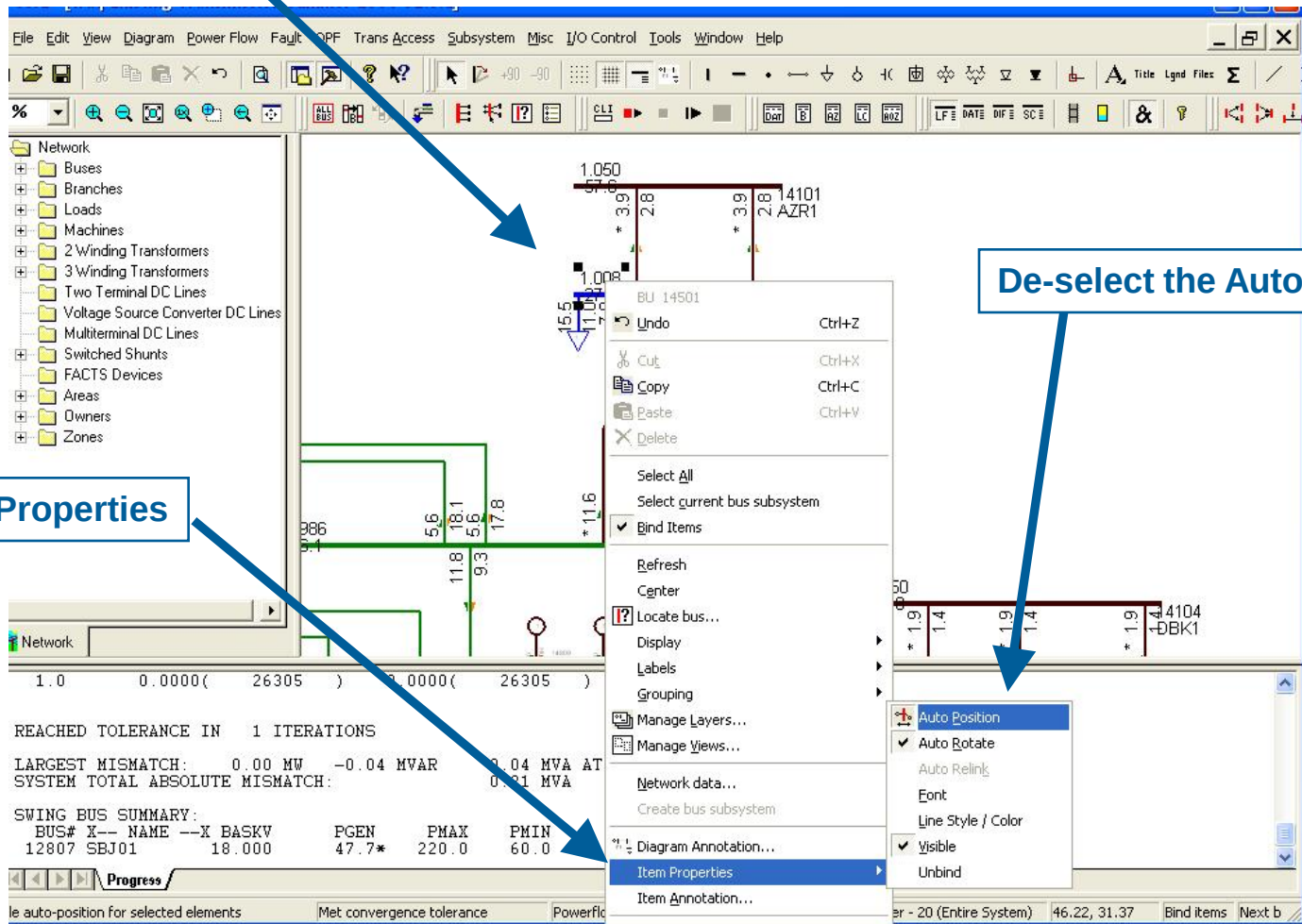
DRAWING GRAPHICS

- Label and Text Positioning
- Usually done automatically – but often overwrites other elements in the drawing
- To move labels – need to turn the auto-positioning feature off
- To rotate – need to turn the auto-position and the auto-rotate features off

Right mouse click on the text label

Select Item Properties

De-select the Auto Position



DRAWING FEATURES

- Diagram annotation – in the Diagram menu - deals with the overloading colours, voltage level colours etc
- Diagram properties – also in the Diagram menu – deals with the background colours – but more usefully the hiding/showing of labels and the settings for the default zoom and pan levels.

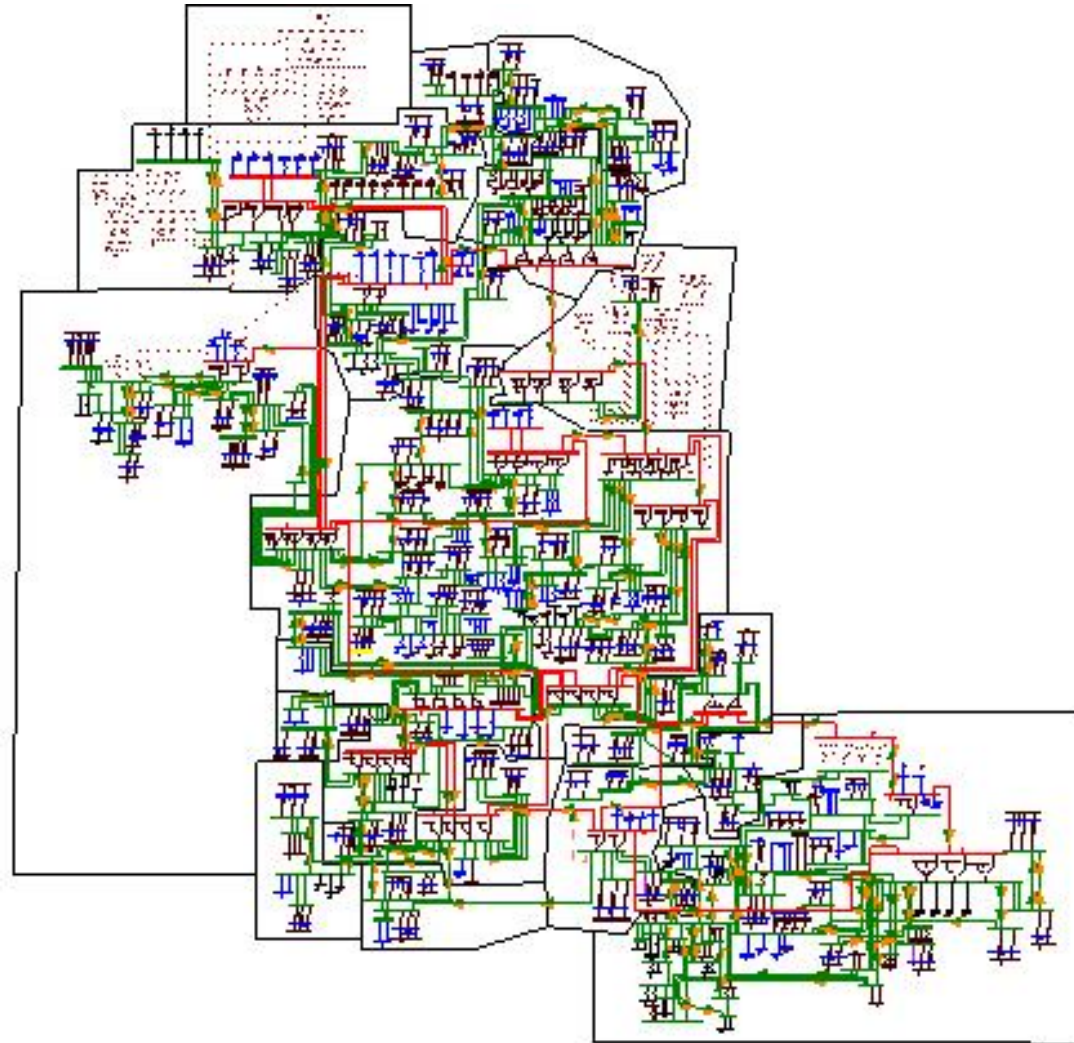
DRAWING FEATURES

- Drawing can have 'layers'
- Useful feature
- Can include a background map behind the PSSE drawing
- Can hide lower voltage networks, out of service equipment, etc

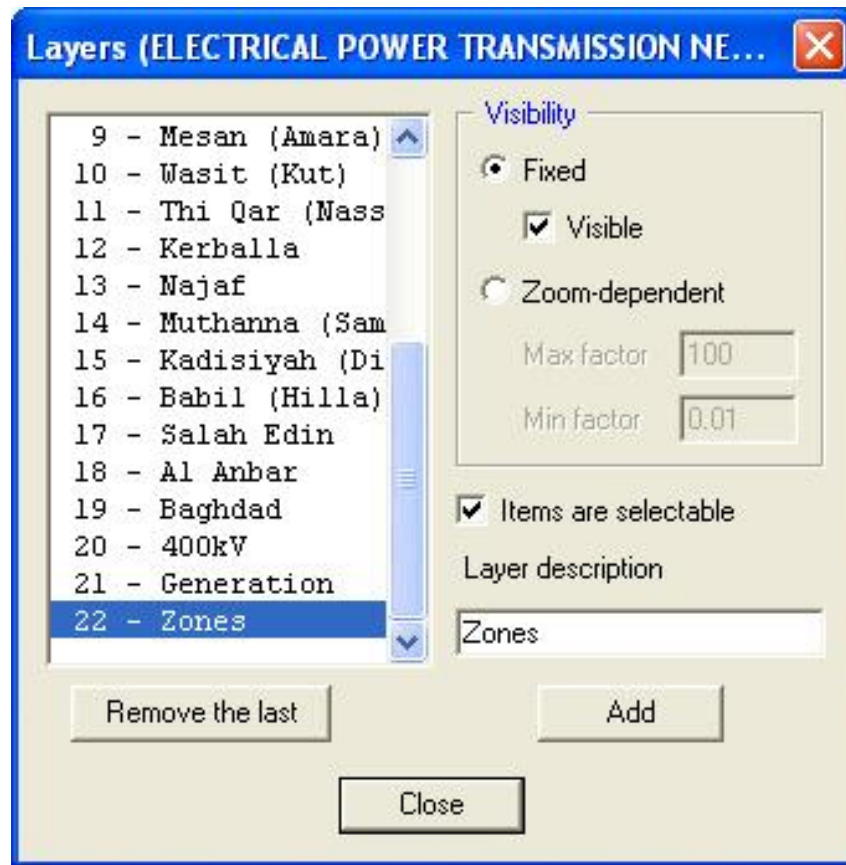
ALL LAYERS

Overall Diagram

- Has all voltage levels
- All regions
- Drawing of boundaries



TO MANAGE LAYERS



In the Diagram Menu
-Select 'Manage Layers'

Can make items visible or not

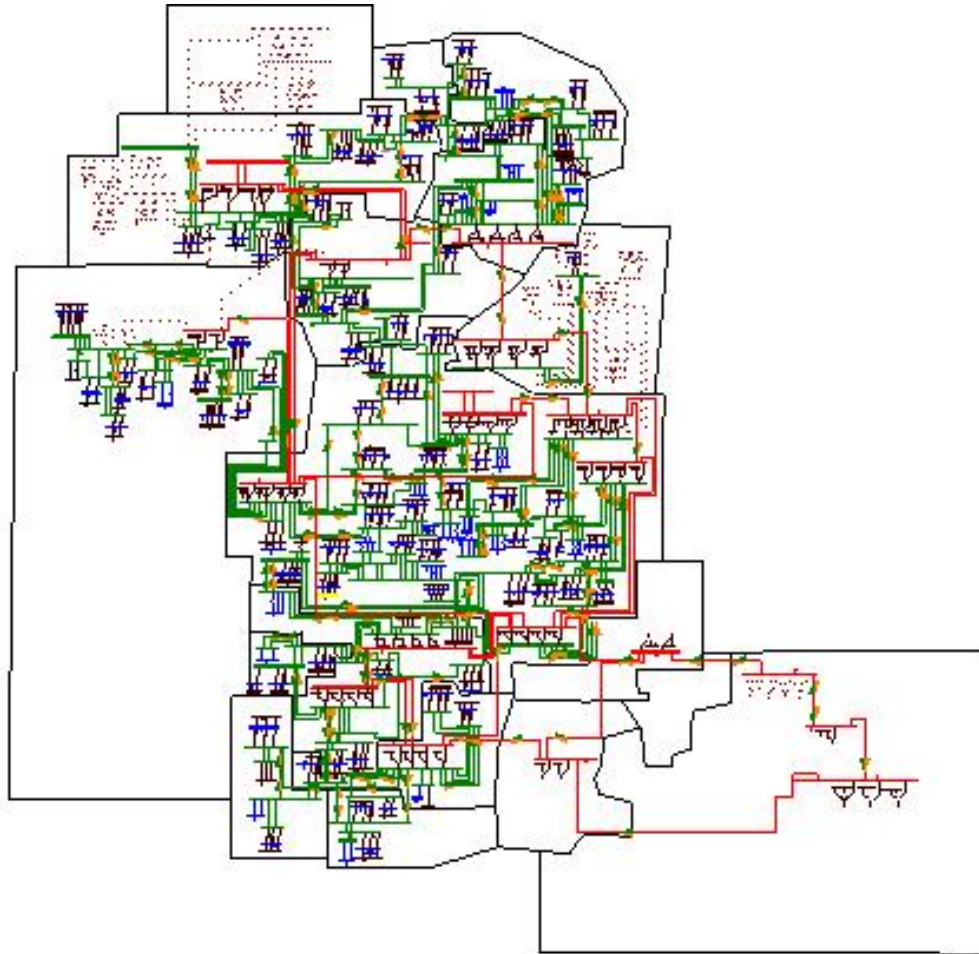
Can make items Zoom-dependent
(useful for labels etc)

Can make items non-selectable
(useful for background)

LIMITED LAYERS

Same diagram as before

Generation layer & South areas are not visible



LAYERS

- Can assign any item to any layer
- Create the Layer first (use the Manage Layers menu)
- Select the item in the diagram – right click on it – select the 'Display' item and choose 'Assign to Layer'
- Can select multiple items in the diagram (hold shift key down and click on items)
- But each item can only be in one layer