SimDSS

Use this component to control the simulation and interact with the model.

Simulation tab

In this tab you can define basic simulation parameters, append DSS commands or files and start the simulation.

1   Simulation mode
    Two modes are available currently.

    1   Snap: Solve a single snapshot power flow for the present conditions.
    2   Faultstudy: Do a full fault study solution, determining the Thevenin equivalents for
        each bus in the active circuit.

2   Base frequency
    The fundamental frequency for harmonic solution and the default base frequency for all impedance
    quantities.
3   Voltage Bases
    Define legal bus voltage bases for this circuit. Enter an array of the legal voltage bases, in
    phase-to-phase voltages.
4   Append DSS commands
    Opens a new dialog where you can define commands to be run before the Solve command is issued,
    and after. Existing .dss files may be directly referenced.
5   Start the simulation
    Converts the Typhoon schematic into a .dss file and then calls OpenDSS.
6   Last simulation status
    Displays if the last simulation attempt (identified by a number) completed successfully in OpenDSS
    or failed.

Show tab

The **Show** commands writes a text file report of the specified quantity for the most recent solution and opens
Notepad to display the file. Select the quantity and click the respective button.

Report tab

Generate an automatic PDF report for the most recent solution. Make sure the selected mode matches the report
type.

Advanced tab

1   Algorithm
    Normal is a fixed point current-injection iteration that is a little quicker (about twice as fast) than the
    Newton iteration. Normal is adequate for most distribution systems. Newton is more robust for circuits
    that are difficult to solve.
2   Load model
    If Power flow is selected, loads do not appear in the System Y matrix. For iterative solution types,
    loads (actually all PC Elements) are current injection sources. If Admittance is selected, all PC elements appear
    in the System Y matrix and the solution mode is set automatically to Direct, because there will be no injection
    currents.
3   Minimum and maximum iterations:
    Minimum and maximum accepted number of iterations for the solution.

4 Command:
  Intended for experienced OpenDSS users. Type in the command you would like to issue to
  OpenDSS and click Run. Example: show voltages