

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

Plotting Stability Study Results (PSSPLT in PSS/E)

Day-3-G

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Plotting Stability Study Results (PSSPLT in PSS/E)

- Define all required channels in *.snp file before running the dynamic simulation
- An output file *.out is also defined where the resulting values of pre-defined variable quantities are recorded during the run of simulation
- The variables to be monitored for the specific study are defined as output channels in the *.snp file such as
 - Bus voltages
 - Bus Frequency
 - Line flows (MW and MVAR)
 - Rotor Angles
 - MW/MVAR output of generators
 - Speed of generators
 - Mechanical power of generator turbines
 - Speed of motor loads
 - Any other variable

Plot File

➤ Main Menu Bar

- **CHNF:** To select and open the *.out file
- **RANG:** To automatically fix the range to be plotted for channels based on their values recorded in *.out file
- **IDNT:** Output device selector
- **TINT:** To select the time range to be plotted
- **SLCT:** To select the channels to be plotted
- **PLOT:** Non-interactive plotting of the selected channels
- **PLOT,IN:** Interactive plotting of the selected channels
- **CLSP:** Close plotting
- **MCHN:** Allows the user to select a maximum of six plot files to be used to plot the same channels or functions from different files.

Plot Area

➤ Menu Bar in the right

- X- CANCL to cancel the activity before going to the other activity
- R-RFRSH to refresh the plot
- COPY: to copy the plotted results to print to Adobe Acrobat to generate pdf file of the plot
- A-Action: toggles between Add, Move and Delete any Note or Pointer
- F-FINDTIM: Find time on the time scale (horizontal scale)
- V-Value: finds value of plotted variable (vertical scale)
- S-Scale: scales portion of the plot
- L-Label: Write a 40 characters label in the lower right corner to identify the plotted case (or Fig. number for the plot)
- N-Note: Write note (text) anywhere on the plot, normally to identify the variable showing by the plotted curve
- P-Point: plots a pointer pointing by an arrow to the plotted curve to identify through Note
- M-Mask: put a mask on the selected portion of the curve to hide or remove that portion from the plot
- D-Done: to finish the activities on a plot
- E-Exit: to exit the program

Using Plot Book

- Open *.out file by Selecting *.out File Format in the file type menu in right bottom corner
- The Channel File is selected from Tree View
- All channels' list appear in Tree View Window
- Plot are is opened in Main Window
- Pick the desired channel from Tree View Window and drop-down in plot area
- The plot of desired channel will be appear in plot area
- New Titles can be written on top of the plot area