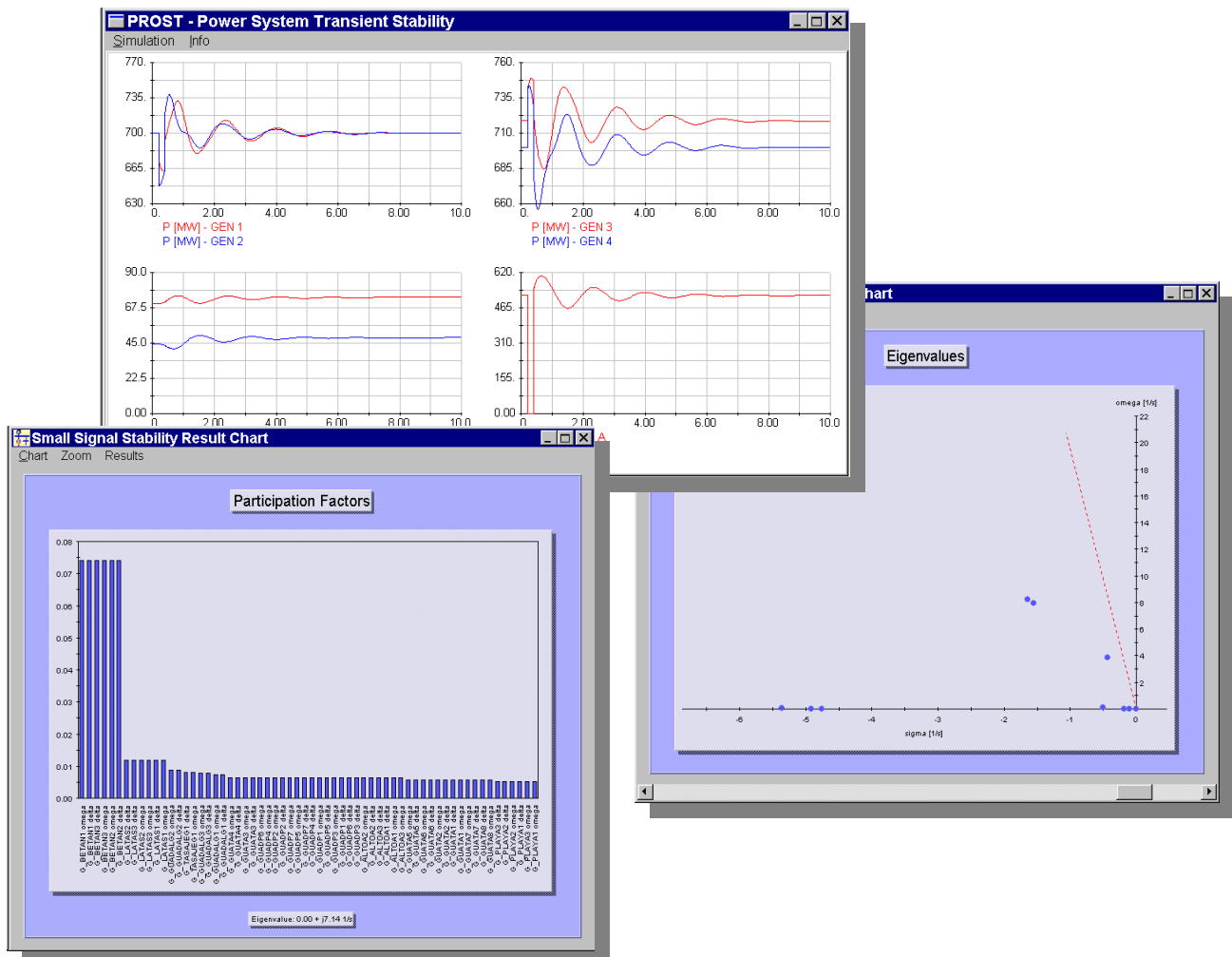


The NEPLAN Small Signal Stability module provides eigenvalue analysis (modal analysis) for electrical power systems. It combines exceptional ease of use with the latest techniques and standards in both electrical power engineering and software design.

## Applications

- Analysis of interarea oscillations
- Analysis of interplant oscillation
- Analysis of subsynchronous oscillations/resonance (SSR)
- Identification of groups and subgroups of machines swinging against each other
- Determination and improvement of power oscillation damping
- Design and placement of control equipment, such as power system stabilizers



## Main Features

- Automatic construction of the linearized state space notation for the complete system, including generators, static loads, control circuits, etc.
- Advanced synchronous machine modeling: choose for every synchronous machine one of the five models infinite, classical, transient, subtransient and general. Saturation curves for both, d-axis and q-axis.
- Automatic calculation of eigenvalues, eigenvectors, mode shapes, participation factors for eigenvalues and state variables.
- Text results: results are presented in clear form and can be customized by several output options.
- Graphical results: results can be visualized by the fully integrated graphical results manager. Charts can be easily printed and exported to external programs (e.g. Microsoft Word) by clipboard functions. A variety of chart options is available.
- The only requirement is the NEPLAN load flow module. However, the Small Signal Stability and the Transient Stability (time simulation) module of NEPLAN complement each other ideally.
- The Small Signal Stability module is completely integrated in NEPLAN and uses standard dynamic element data (like the Transient Stability module).

