POWER ENGINEERING SOFTWARE SOLUTIONS

CYME INTERNATIONAL T&D

TRANSMISSION & INDUSTRIAL SYSTEM ANALYSIS

Power Flow	Transient Stability	Short-Circuit	Harmonics	Voltage Stability	And more...

CYMFLOW, Power Flow Analysis

CYMFLOW is the analysis module of PSAF dedicated to power flow analysis in three-phase electric power networks. It is equipped with powerful analytical options and alternative solution techniques.

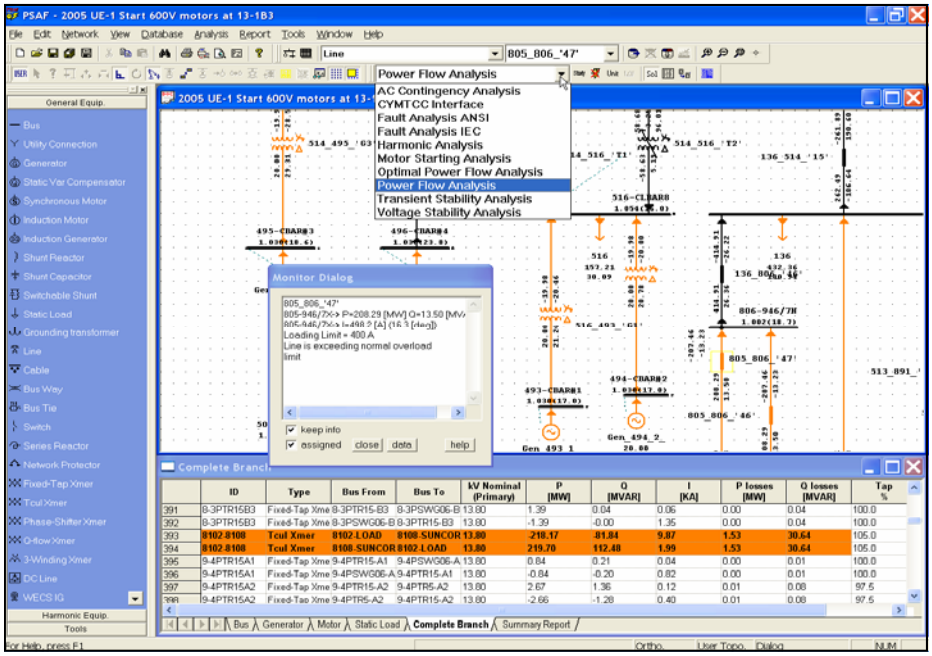
Program Features

CYMFLOW utilizes state of the art sparse matrix/vector methods and multiple solution algorithms:

- Full Newton-Raphson.
- Fast Decoupled (with or without constraints).
- Gauss-Seidel.

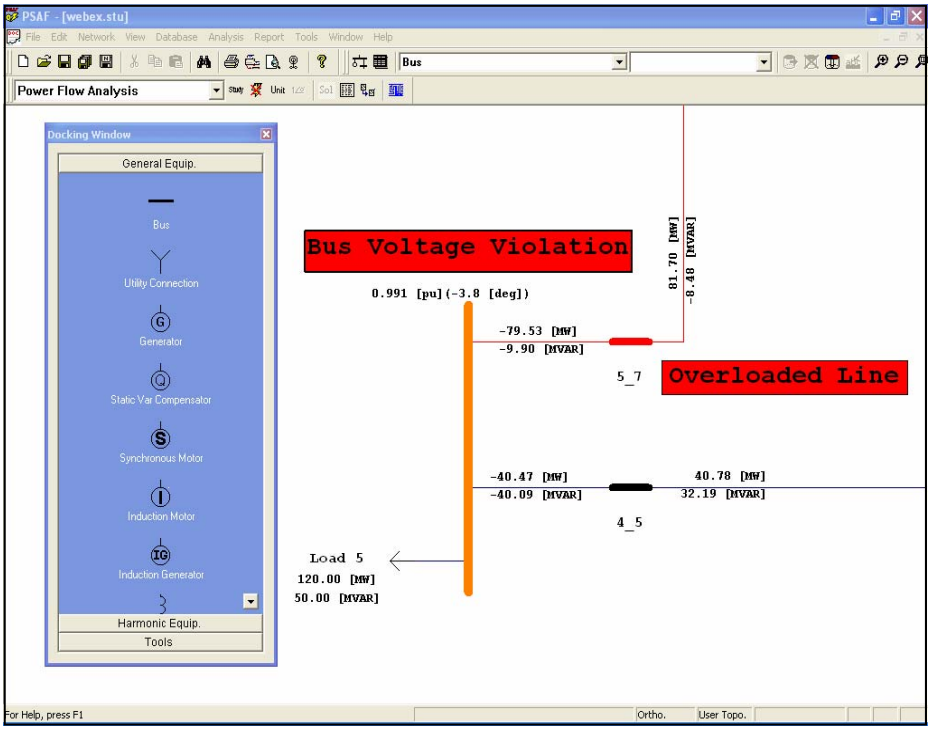
CYMFLOW is the main analysis module of PSAF and has a seamless interface with the other PSAF Modules namely:

- CYMFAULT to communicate the pre-fault voltage profile, current flows and transformer tap positions, for fault studies taking into account pre-fault system loading.
- CYMHARMO to communicate the fundamental frequency voltages and currents for harmonic distortion calculations.
- CYMSTAB to communicate the initial conditions to the transient stability simulator.
- CYMVSTAB for static Voltage Stability Studies.
- CYM-Motor Start account for system wide voltage drops during motor start.
- CYM-AC Contingency to solve unlimited variations of a base network.



Analytical Capabilities

- Analyze Networks with thousands of buses and branches.
- Multiple swing buses allowed.
- Automatic swing bus selection for isolated subsystems.
- Distributed Swing bus option.
- Simultaneous solution for islanded networks.
- Area Interchange with area control generators.
- Generator reactive power limits and remote voltage control.
- Local or remote control of voltage and reactive power flow through tap changing transformers.
- Control of real power flow through phase-shifting transformers.
- Switchable shunt element.
- Generalized load modeling, including Constant Power, Impedance and Current.
- Representation and control of DC lines.
- Wind Energy Conversion Systems (WECS).
- Modeling and representation of FACTS devices (UPFC and STACOM).
- Transformer inrush currents.



- Color coding on the network One-Line Diagram of overloaded equipment and buses with voltage violations.
- User-defined units for Bus voltages and line flows for both tabular and graphical results.
- Tabular reports can also be directly exported to other spreadsheet programs such as MS-Excel.

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