



Seminars - Dubai, Abu Dhabi and Qatar

Cooper Power Systems is pleased to announce a series of seminars that will highlight the latest CYME 5.02 Power Engineering Software as it relates to industrial power system modeling and analysis.

Some of the features incorporated in this new software generation will be demonstrated during the seminars, including an enhanced database of equipment, electronically coupled distributed generation, integrated protective device analysis, load flow contingency and voltage stability analysis modules, instruments and controls.

CYME 5.02 Features and Enhancements for Industrial

General Equipment Data Base

- Enhanced cable library that includes data as published by manufacturers
- Integration of CYMTCC protective devices in the Library of Equipment
- Auto-transformer and three-winding auto-transformer with load tap changer (LTC)

Electronically Coupled Distributed Generation

- Photovoltaic using a user-defined library of sun intensity models as a function of time
- Microturbine
- Solid oxide fuel cell
- Dynamic Control Models Including the representation of the DC / AC pulse width modulation (PWM) convertor

Control Models

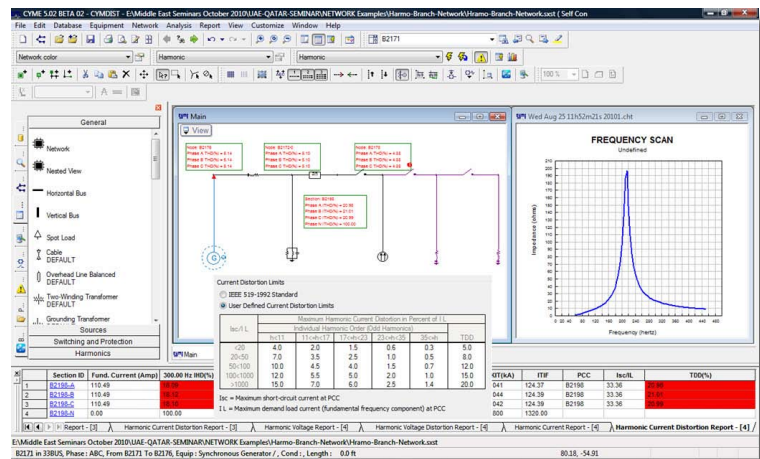
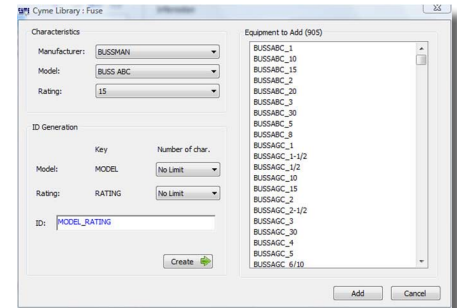
- New control models of turbines, exciters and stabilizers as per IEEE® published transactions
- Integration of static VAR dynamic controls
- Series capacitor dynamic response modeling
- Generic control model

Harmonic Analysis

- Harmonic voltage / current source
- RLC branch circuits
- Harmonic current distortion limits as per IEEE™ 519

Instruments and Controls

- Voltage and current transformers
- Three-stage load shedding voltage or frequency relay control
- Under and over voltage relay controlled breaker
- Under and over frequency relay controlled breaker



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CYME 5.02 features and enhancements.

Protective Device Coordination

The CYMTCC device database is now fully integrated into the CYME 5.02 software and includes over 7,000 devices which is equivalent to more than 100,000 curves of North American, European and Asian manufacturers. This includes fuses, relays, circuit breakers, motor starting and transformer damage curves.

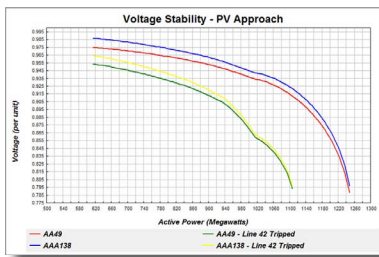
In addition, the program includes a protection and coordination analysis module that allows you to set the reach/loading and coordination criteria, select the coordination path on the one-line diagram and generate the time-current coordination view of a selected feeder.

Any time-current curve intersection or device that is not within the coordination, loading or reach criteria will have warning labels displayed on the one-line diagram.

Load Flow Contingency Model

This module is designed to assist the user for power flow related static contingency analysis. This module operates in conjunction with the CYMFLOW module. The analytical approach used is the same as in CYMFLOW. In other words, the contingency analysis is performed using full AC power flow solutions (no DC approximations are employed in the module).

The contingency module is structured so that an unlimited number of “what-if” scenarios, without the actual modification of the base case data and connectivity, can be included in a given contingency study. All contingency-related system modifications refer to the base case network. Single outages and/or multiple outages/modifications can be concurrently defined to represent an adverse contingency analysis scenario.

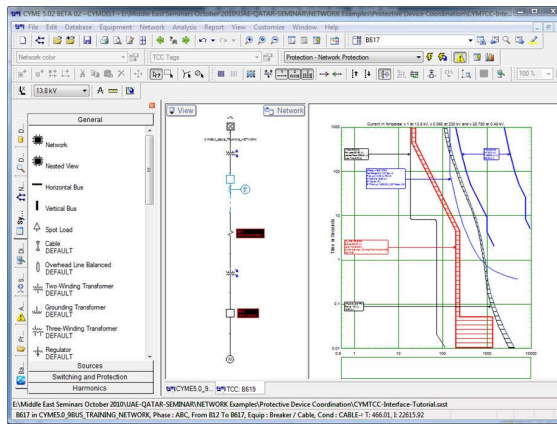


PV Voltage Stability Module

Voltage stability defines the ability of a power system to maintain acceptable voltages at all buses in the system under normal condition and when being subjected to a disturbance. This characteristic is needed in order to transmit sufficient power to meet load demand.

A power system network has an inherent limit as to how much power it can deliver to loads. When this limit is exceeded, the voltages experienced by loads become too low to be practically useful. In many cases, the voltages will go straight from nominal operating conditions to zero in a matter of a few seconds or minutes. This process is known as voltage collapse.

CYMVSTAB, an integral part of the CYME 5.02 package, is a suitable tool for assessing the ability of today's stressed power systems in maintaining stable voltages under different contingencies and loading conditions. Power system voltage instability is related to reduction in reactive power resources. It is very much similar to frequency instability when system does not have sufficient spinning reserve.



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