



Special Points of Interest:

- EMTP now available at CYME.
- Five days of activities planned for the next CYME Users Group in June. Register on our web site:
 - June 25 and 26: CYMCAP Users Group and Training Day.
 - June 26: course on Power Quality and System Harmonics.
 - June 27 to 29: CYMDIST-CYMTCC Users Group during which the next release of CYMDIST will be presented.
- The next CYMDIST-CYMTCC training is scheduled to take place next October in Montreal, Canada.
- Don't miss our 2-day CYMCAP training in Arizona, USA, next November 8 and 9; right after the PES-Insulated Conductors Committee Meeting.
- Visit us at:
 - CIRED 2007, May 21 to 24, Vienna, Austria.

New in CYMDIST: Simulation of Dynamic Behavior of Distribution Systems with Distributed Generation

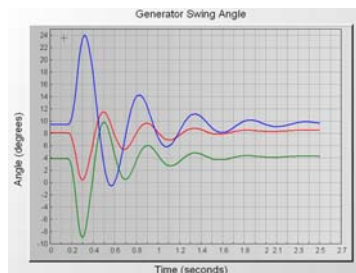
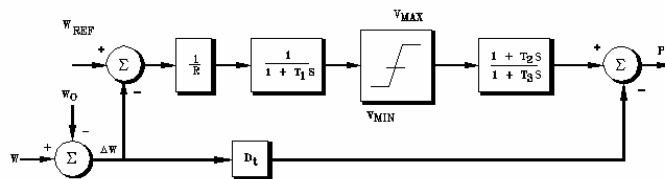
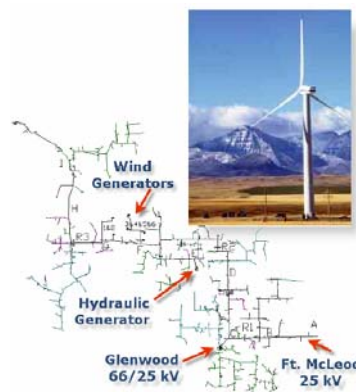
Transient stability studies are traditionally conducted for high voltage transmission systems. However, with the introduction of co-generation at the sub-transmission and distribution levels, the transient stability problem is now a concern at those voltage levels as well.

CYME is currently at the last stages of incorporating transient stability features into CYMDIST. This enhances the capability of the program to model distribution networks under various transient events such as the fault application/clearing, large motor starting, disconnection of co-generation units, as well as island formation, detection and survivability.

The transient stability model will include a library of dynamic models for synchronous generators with diesel engine, gas, steam or hydraulic prime movers along with their governor, excitation and voltage control systems. It also includes a variety of induction generators with wind turbine prime movers models.

This project was developed in collaboration with Natural Resources Canada's CANMET Energy Technology Centre in Varennes, Quebec, as part of their research and development program addressing the grid integration of renewable and distributed energy resources.

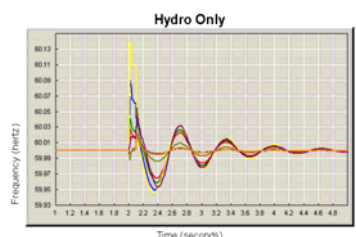
The CYMDIST transient stability program will be demonstrated at the CYME 2007 User's Group meeting in June.



Case Studies: Dynamic Behavior of Distribution Systems with DG

CYME has undertaken the responsibility to conduct a study for the Natural Resources Canada (NRCAN) to investigate the effect of distributed resources presence on the dynamic behavior of distribution systems in which they are embedded. Study cases were designed to demonstrate the dependence of the

dynamic behavior of the system on the type, size, and degree of penetration of the DG resources. The study cases were simulated using the recently developed transient stability module in CYMDIST to reproduce the response of the system to different disturbances.



(continued on page 2)

Case Studies: Dynamic Behavior of Distribution Systems with DG (cont'd)

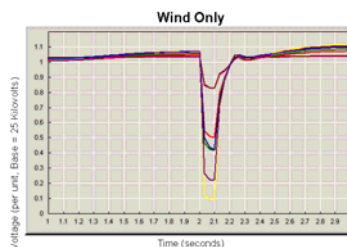
The dynamic system response of the distribution system, with distributed generation, was examined for the following cases:

- System response to major disturbances including: load loss, generation loss and short circuits.
- Distribution system separation from the main power system and the ability to detect island formation from the

values of voltage and frequency of the island as defined in the IEEE 1547 standards.

- The possibility of operating the separated system in an island mode (intentionally) and the conditions of survivability of the formed island.

The results of the study cases will soon be made public by Natural Resources Canada.



Quickly Set Up and Run Electromagnetic Transient Analyses

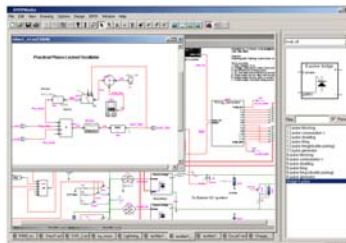
The world renowned EMTP-RV software is now available from CYME. Specialized for power systems, EMTP-RV is known for its modeling flexibility, superior graphical user interface and calculation accuracy.

This sophisticated computer program simulates electromagnetic, electromechanical and control systems transients in multiphase electric power systems. It features a wide variety of modeling capabilities encompassing electromagnetic and electromechanical oscillations ranging in duration from microseconds to seconds. Examples of its use include switching and lightning surge analysis, insulation coordination, shaft torsional oscillations, ferroresonance and power electronics applications in power systems. EMTP-RV can also be used to solve operating problems such as unexplained outages or equipment failures.

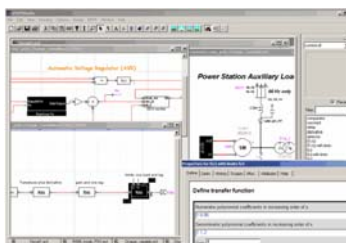
EMTP-RV supports the modeling of power systems of any size and of any complexity; it contains an extensive device library and the ability to externally program device data. It contains a large number of subnetwork creation options including automatic subnetwork creation and connection point positioning. A symbol editor allows modifying the symbols to the user's needs. A subnetwork can contain one or more subnetworks. The user can also program data masks for each of the subnetworks.

EMTP-RV features a 3-layer design (framework, scripting support, user/programming access) in an open architecture. The program provides unsurpassed customization options and can be easily converted and used for other applications in power system analysis.

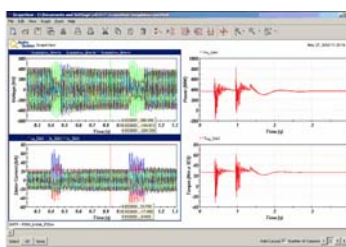
For more details and to obtain a quote or a demo version, visit: www.cyme.com/software/emtp/.



Example of an advanced HVDC file



EMTPWorks subnetwork capabilities



Example of signals drawn

CYME International T&D is a world-class Power Engineering Solutions provider with an established reputation for customer responsiveness and technical expertise. Our solutions stand behind thousands of T&D projects in over 100 countries around the world.

CYME offers an extensive line of Power Engineering Software that feature some of the most advanced analysis tools for transmission, distribution and industrial power systems. We offer comprehensive services in order for our customers to fully benefit from the CYME applications in their specific IT environment and to address their engineering analysis needs. This includes engineering studies, assistance to integration and comprehensive training.

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