Load-Flow, Stability & Transients

In the same software

EMTP®

www.emtp.com

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APPLICATIONS

Load-Flow
Frequency-scan
Integration of Renewables
Power electronics
HVDC and FACTS
Power-quality, Harmonic analysis
Insulation coordination
Temporary overvoltages
Capacitor bank & Reactor switching
Lighting, Switching transients
Series-compensated lines
Protection systems
Gas insulated switchgear
Electromagnetic transients
Electromechanical transients
Very fast simulation of very large-scale grids

We offer a wide range of applications

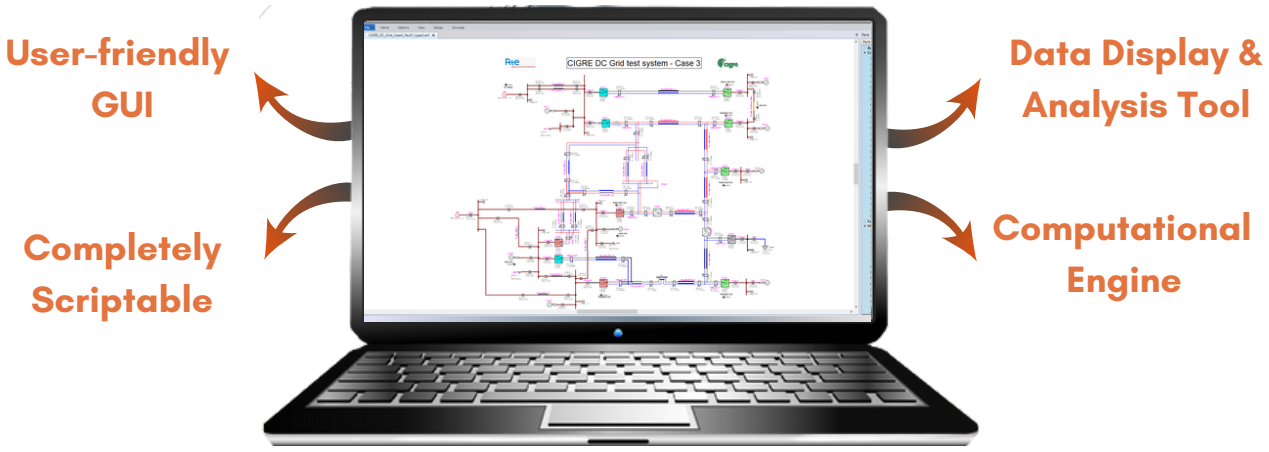
Our Industries

Transmission
Distribution
Generation
Power Electronics
Manufacturing
Research

We are proud to be partners with:

ABOUT EMTP®

Electromagnetic transients program (EMTP®) is the reference for the simulation and analysis of power systems. With its unique capabilities and accuracy, EMTP® is the fastest, most accurate and most stable software.



Time-Domain

EMTP® provides the most accurate, numerically stable, and consistent time-domain simulations. Parallel processing is possible.

Load-Flow & Steady-State

No need to waste your time with lengthy initialization process. The network is initialized right at the beginning of the simulation!

Frequency-Scan

A frequency scan option is available to determine the system impedance and to identify possible resonance frequencies.

ABOUT EMTP®

EMTP® is the most complete and technically advanced software for simulation and analysis of power systems.

70 countries

35 years of experience

500 universities

Unlimited network size

✓ Compatible with PSS®E, CIM, Simulink®

✓ Co-simulation using FMI standard

EMTP Models

IBR Models

A large collection of IBR models. Wind turbines and photovoltaics.

Machines

Advanced machine models and their controls are included in EMTP®.

Relay Models
Control Library
Transformer

Power Electronics

AC-DC and DC-DC converters are available in EMTP®.

HVDC & FACTS

LLC and MMC models with variants and customization.

Line & Cable

Accurate line & cable models and parameter calculation routines.

EMTP® BENEFITS

Data:
EMTP® has a complete library of components and a database of typical parameters.

Large-Grid:
In EMTP®, large grids are assembled and simulated directly with highly accurate methods and models.

Initialization:
No need to waste your time with lengthy initialization process. The network is initialized right at the beginning of the simulation!

Numerical Stabilities:
A combination of trapezoidal and Backward Euler methods to eliminate numerical oscillations that may occur at discontinuities.

Speed:
EMTP® uses sparse matrices to solve very large grids efficiently. Parallel solver is available.

Accuracy:
EMTP® uses a fully iterative solver to solve nonlinear models as well as control systems with algebraic loops.

The simulation of power systems has never been so easy !

OUR SERVICES

Consulting Services

There are a number of consulting services offered by EMTP® in the field of power system simulation and analysis. Our areas of expertise include:

- Integration of Renewable Energy Sources
- Interaction Analysis with Power Electronics Converters
- Sub-Synchronous Control Interaction (SSCI)
- Transient Stability Studies with Contingency Analysis
- Distribution & Transmission Systems
- Insulation Coordination
- Switching and Lightning
- Transient Recovery Voltage (TRV)
- Harmonic analysis
- Customized & Manufactured Models (white-box, black-box, DLL)
- Customized Tool Development
- Cable System Transients
- Very-Fast Transients (VFT), GIS
- HVDC transmission
- Failure analysis

We can help you with your projects.

Scan Here
Schedule a 1-hour free technical call with one of our experts.

OUR MODULES

Protection Toolbox

Comprehensive library of protective relays, fuses and protection tools.

PAMSuite

Provides a powerful environment based on MATLAB® that enables exploration and analysis of results and identification of critical parameters.

Exciters & Governors Library

Our Exciters and Governors Library includes more than 90 standard models for governors, exciters and stabilizers.

Power Electronics

Grid Forming Converter Model
STATCOM model
Detailed IGBT model
AC-DC and DC-DC converters

Scan to learn more about our latest updates and improvements.

OUR MODULES

EMTP® allows you to simulate fast to very fast electromagnetic transients.

Simulink® Toolbox

Easily convert and connect Simulink models to EMTP®.

LIOV Toolbox

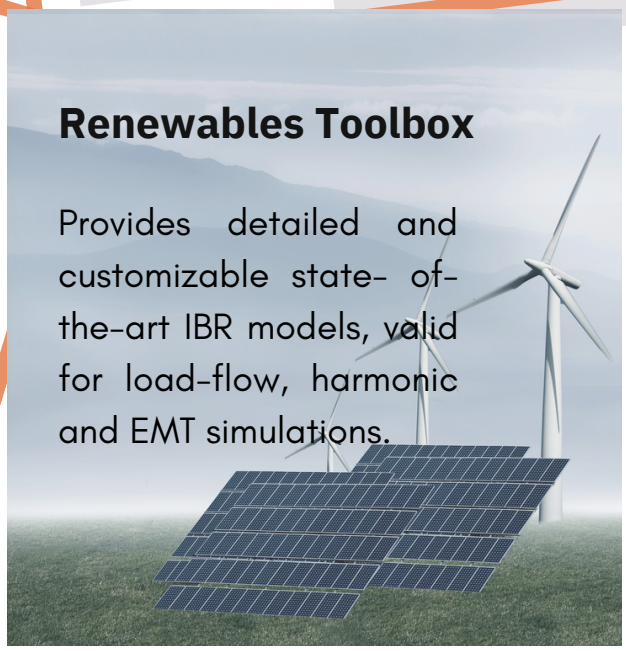
LIOV Toolbox is developed for the calculation of lightning-induced overvoltages on an overhead distribution network.

PSS®E Import Tool

Automatic conversion of PSS®E network models to EMTP® designs.

Renewables Toolbox

Provides detailed and customizable state- of-the-art IBR models, valid for load-flow, harmonic and EMT simulations.



CONTACT US

On-demand training

We offer training on EMTP® and courses on power system transients in general.

services@emtp.com

Contact our sales team

A free demo of the software is available as well as a free 15-day trial, and many training programs can be adapted to your specific needs.

sales@emtp.com

Become our partner. . .

As an academic you can partner with EMTP Alliance and benefit from an unlimited number of EMTP® licenses for FREE.

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