Integrated Power System Analysis Software

Generation·Transmission·Distribution·Industrial

PowerFactory incorporates extensive modelling capabilities with advanced solution algorithms, to provide the analyst with tools to carry out the most complex of power system studies. There are practically no limitations in the analysis of both steady state and transient behaviour observed in modern power systems. Based on a mixed 1-, 2- and 3-phase AC/DC kernel for arbitrarily meshed systems, PowerFactory provides an integrated system representation for applications in Transmission & Distribution Systems, Industrial Systems, Power Plants as well as Marine and Aerospace Industries.

Power System Planning

## DIgSILENT PowerFactory

PowerFactory

Power System Planning, Analysis and Optimization for Windows

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Load Flow Analysis

- Robust load flow for AC and DC systems
- Network and device control features
- FACTS and modern wind power
- Parametric studies via DPL scripts
- System stage management
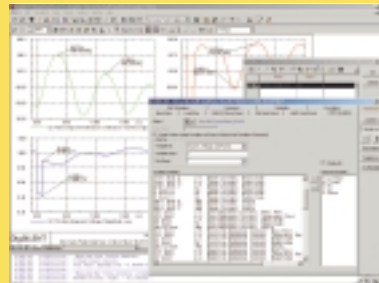
Optimal Power Flow

- Active and reactive power optimisation
- Non-linear fuel consumption curves

Fault Calculation

- IEC 909, VDE 0102/0103, ANSI C37
- Complete DIgSILENT method
- General, multiple fault analysis

Stability Analysis and EMT

- Large scale model validity
- Long-term stability
- Fast, adaptive step-size algorithm
- Comprehensive model library
- Flexible DSL-modelling
- Block diagrams
- Eigenvalue Analysis
- Electromagnetic Transients (EMT)
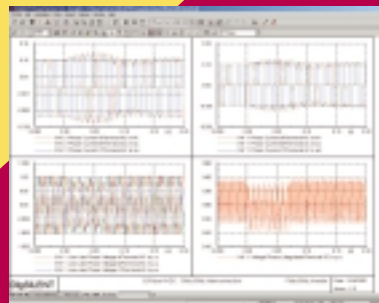
Enhanced Features

- Reliability assessment
- Voltage stability analysis
- dV/dQ sensitivities, PV-curves
- Parametric studies via DPL scripts
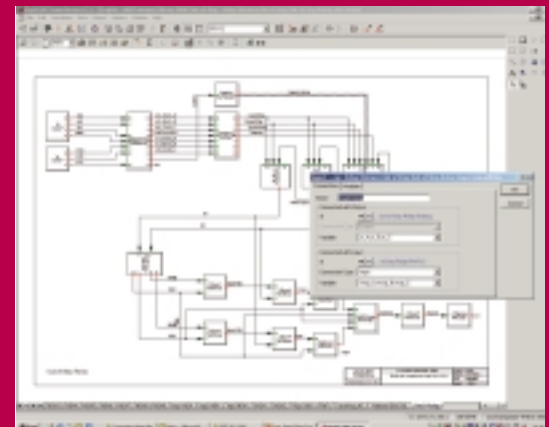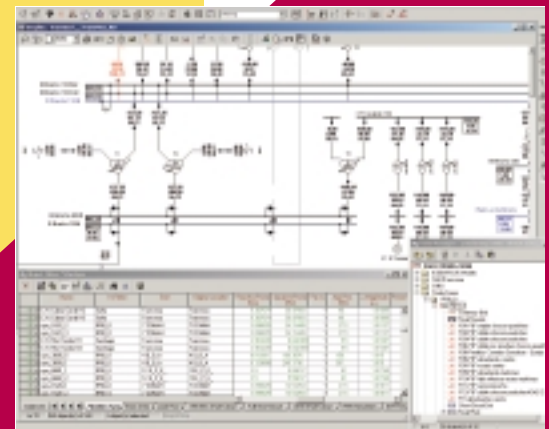
Supported PowerFactory Functions:

… balanced and un-balanced power flow, fault analysis, harmonic calculations, stability and EMT transients for arbitrarily meshed AC/DC systems with 1-, 2- and/or 3-phases; protection co-ordination with all levels of device response tests, level I-III reliability, eigenvalue analysis, network reduction, DPL script language, DOLE interface for GIS and SCADA links, interface to PowerFactory Monitor, ATC calculation, open-tie optimisation, capacitor placement, generic optimisation procedures, enhanced PSS/E compatibility….