At a glance
PSS®ODMS is a multi-purpose software product for electrical power transmission system planners and operators. The software is currently used by power companies around the globe to manage grid/network models, train system operators, augment existing SCADA/EMS functionality with online advanced network applications, and facilitate compliance with interoperability regulations based on the IEC CIM 61970 standard (NERC CPSM and ENTSO-E profiles).

PSS®ODMS offers a broad range of features designed to increase power system security, reliability, network modeling accuracy and productivity. The network modeling and analysis functions support past, present and future network states (including alternative future scenarios).

The challenge
Power utilities and other organizations responsible for operating a portion of the electrical grid often require a versatile tool for operator/dispatcher training to meet emerging regulatory requirements.

Our solution
Siemens PTI offers the Operator Training Simulator (OTS), configurable as either an independent single-user simulation or shared multi-user environment. The OTS provides a flexible and low-maintenance tool for operator training that leverages the proven capabilities of the PSS®ODMS platform to support operator training on customer specific network models. Unlike traditional approaches which may require months of model building, configuration and tuning work to deploy, the OTS can be configured quickly and efficiently. This versatile application can be easily deployed, including off-site and portable locations.

The OTS has the following simulation capabilities:

- System outages
- Voltage collapse
- Cascade scenarios
- Black start sequencing
- Safe switching procedures
- What-if scenarios
- Load shedding

Scenarios can be set up utilizing the PSS®ODMS model building and data import features to replicate the system in any area. The friendly user interface, using single line diagram representations, provides a familiar environment for operator navigation and enhances the training experience.

Training scenarios can be built to test system operators on a wide variety of operational procedures and have the ability to incorporate real historical event data as part of the simulation. The CIM environment and open data exchange architecture enables the PSS®ODMS application to be easily populated with multiple scenarios. Operator interaction with the simulator, and the analytical capabilities of the OTS, provide real-time feedback and instant realization of an operator’s actions.

Operators use OTS for NERC certified training compliance and to maintain NERC operator training credits.
Application example

Problem

“Our system operators train on a bulky/complex EMS platform, which leads to excessive training time.”

“New system operators are joining our team. We want them to be quickly trained outside of the real-time systems.”

Solution

Train new system operators using PSS®ODMS’s intuitive and lightweight training platform.

Clients use Siemens PTI’s OTS for NERC certified training compliance. Utilizing OTS helps the operators maintain NERC operator training credits.

Benefits:
- Reduce training time
- Increase training effectiveness
- Bolster employee development and retention
- Avoid compliance penalties
- Improve business process efficiency

Visualizing contingency analysis results in PSS®ODMS

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