PSS® ODMS: International Success

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About PSS® ODMS

With over 25 diverse clients worldwide, the PSS® ODMS product continues to grow and mature in terms of both features and client base. PSS® ODMS offers a wide variety of tools for transmission and distribution network modeling and data conversion as well as transmission operations simulation and analysis (both on-line and study). PSS® ODMS is fully compatible with PSS® E and is unparalleled in its ability to quickly and accurately export a solved real-time, historical or (projected) future snapshot case from operations (bus-breaker) format to PSS® E RAW data format for subsequent planning studies. Typically deployed in a networked, multi-user environment, the PSS® ODMS application connects to a platform-independent relational database (referred to as the PSS® ODMS Data Repository) which has been designed based on the Common Information Model standard (IEC 61970). PSS® ODMS supports model data exchange via the standard CIM/XML format and is used by Siemens PTI in formal CIM interoperability testing with various other major software vendors in the industry. Additionally, PSS® ODMS provides an open architecture that includes OPC, GDA and GID technology to facilitate enterprise-wide Technical Applications Integration.
The following section summarizes four diverse PSS®ODMS projects for international clients.

**COES Project (Lima, Peru)**

In May 2008, Siemens PTI successfully completed final Site Acceptance Testing and provided on-site software training for a project with COES-SINAC (Committee of Economic Operation of the National Interconnected System), the organization responsible for maintaining the transmission grid for the entire country of Peru. COES had contracted Siemens PTI to supply a turnkey solution for on-line Network Applications (State Estimator and Contingency Analysis) integrated with SCADA. Over the course of the project, the services provided by Siemens PTI included model building, hardware and software delivery, system integration and configuration, State Estimator tuning, on-site training, and acceptance testing. PSS®ODMS represents the first working solution of its kind for the National Interconnected System of Peru. A new and notable capability delivered with this project is bi-directional real-time data integration. The complete set of PSS®ODMS State Estimator results is published to TASE.2 (ICCP), making it available for display on SCADA screens or for potential use within other utility applications.

**swissgrid Project (Switzerland)**

In May 2008, in cooperation with Siemens PTI-UK, we delivered the second and final phase of a project with swissgrid. In its capacity as transmission grid operator, swissgrid is responsible for the secure, reliable, and cost-effective operation of the complete Swiss 380/220 kV grid. This project involved several key enhancements to the PSS®ODMS product, including the introduction of CIMedit (a user-configurable, hierarchical network model interface) and the addition of historical change highlighting (this feature adds to the existing historical modeling capabilities of PSS®ODMS by using color-coding to highlight portions of the network model that have changed between selected revisions).

**City Power Project (Johannesburg, South Africa)**

In March 2008, final Site Acceptance Testing, staged by our partners at Siemens EA, was completed successfully (with zero reported defects) for a project with City Power via FrankenData. City Power is the main electric utility providing power to Johannesburg, South Africa. FrankenData is a wholly-owned subsidiary of Siemens Power Transmission & Distribution, Inc. responsible, among other activities, for the maintenance of the Siemens EA SPECTRUM 3 EMS application. City Power had contracted with FrankenData to upgrade its SPECTRUM 3 solution to become CIM-compliant. PSS®ODMS was chosen by FrankenData for its CIM-based automated model conversion and one-line diagram building capabilities. As a result of this project, SPECTRUM 3 model data import and export functions were added to the PSS®ODMS product.

**Powerlink Project (Brisbane, Australia)**

Progress continues to be made on a major project with Powerlink to replace their obsolete centralized transmission operations/planning model maintenance system with PSS®ODMS. Powerlink is the principal supplier of electricity to Queensland, Australia. According to the Queensland Department of Mines and Energy, over the last 10 years, annual electricity consumption in Queensland has grown by over 53%. A key goal of the project is to provide Powerlink’s transmission planning engineers with convenient access to future network data up to 10 years in advance. To address the project requirements, a highly sophisticated Project Modeling feature set was added to PSS®ODMS. Project Modeling organizes planned network changes and provides interactive tools for recording and maintaining time-dependent project data. Additionally, future network “scenarios” may be previewed, validated and exported to PSS®E for planning studies. A new PSS®ODMS module called CIMdbNET (.NET API) was created to provide comprehensive access to the network model data for external processes. The primary advantage offered by CIMdbNET is that it can be used effectively based on knowledge of the CIM standard alone; the details of the PSS®ODMS database schema are abstracted and no SQL statements are used. Powerlink’s IT personnel have used this API successfully to create their own custom C# program to export the model to proprietary EMS format upon demand. Powerlink is actively testing the new software and plans to bring PSS®ODMS into production within the next several months.