Smart Grid Engineering Manager

Time-based modeling for enterprise data sharing and application integration
The Power Industry is Experiencing a Data Explosion

A Unified Data Model and Infrastructure are needed

Reliability and efficiency planning
Managed operational reliability
Resource optimization

APPLICATION LAYER

INTEGRATION LAYER
Integration Platform powered by Common Model

Siemens SGEM
DATA LAYER

Common Communications Protocols

Smart generation
Wind power
Distant solar power
Distributed energy resources
E-cars, batteries

Smart consumption
Industrial and commercial loads
Residential loads
E-cars, batteries

Infrastructure & Cities Sector – Smart Grid Division

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SGEM provides better management of Planning, Engineering and Operations Work
SGEM provides Time Based Modeling
Base Model Plus “Projects” and “SubProjects”

- Model is based on a base model plus changes (“Projects” or “Subprojects”)
- Target model at any point in time is base model plus applicable Projects/Subprojects
- Existing projects can be:
  - Changed
  - De-commissioned
  - Inserted
- Time based models available for:
  - Operations models
  - Planning models
Siemens SGEM Provides:
Static Data Models for the Enterprise

SGEM is modular

- **Module**
  - MOD® Case Management
  - PSS®ODMS
  - IMM
  - PTC
  - TNA

- **Discipline**
  - Planning
  - Operations to Planning
  - Operations and Markets
  - Project Tracking
  - Validation of Operations

- Based on industry-standard CIM model
- SGEM can be deployed Standalone
- SGEM can be deployed with an SOA architecture
  - Supplies Models to existing and new applications
  - Provides for use of “best of breed” application
Planning starts with a network model in place
- PSS®ODMS for converting the Node-Breaker to Bus-Branch
- PSS®E for Transmission planning
- MOD® for Web integration & Case Management

Add additional network model
- Project Tracker and Coordinator to manage planned changes
- Information Model Manager with SCADA and operational extensions
- Integrated transmission/distribution network chronological model
- Transmission Network Applications to validate and test operational model
- Export chronologically synchronized planning and operations models
- Export model to EMS/DMS using SOA

Add markets module
- Export chronological market model using SOA to Market Systems

Use SOA to integrate additional data
- Assets, AMI, GIS
Thank you for your attention!