

Computer- based learning

The Global Studies unit of San Jose State University has awarded CompuSharp a project for creating a state-of-the-art Computer based Learning System. The project includes setting up of on-line assessment to assist the global student to track perform self-evaluation of the progress.

The presentation of information involves complex images and audio-visual information that is presented alongside textual matter. Complex animation is produced in response to a highly interactive environment that enhances the learning experience.

Consulting services for Transmission Systems Operations – Cyprus

Under contract from ABB, technical specifications were prepared, in consultation with the TSO Cyprus, to procure specialized application software for use in the Control Center for the hour to hour definition of the reserve levels of each on-line generating unit. The preparation of the Technical Specification is based on the following steps:

The scoping requirements included:

- o Definition of the reserve and under-frequency requirements of the Application Software to be implemented in the Control Center environment.
- o Data definition and database requirements of the Application Software,
- o Interfaces of the Application Software with the existing SCADA/EMS system,
- o User interface, performance, hardware, failover, factory testing, site implementation, and site testing requirements to support the additional Application Software in the Control Center environment, and
- o Training of the use of the additional Application Software.

Subject Matter Consulting for Distribution Operations Management

Partnering with Accenture, CompuSharp provided Subject Matter Consulting to PG&E for major improvement initiatives in the area of Distribution Operations. Services included:

- Selection of vendor for a state-of-the-art Distribution Automation System
- Analysis of enhancements to Outage Management, Outage Reporting System
- Interfaces: DMS- GIS- AMI – SCADA – DA systems
- Document and Content Management Systems
- Distribution Control Center Consolidation

Training Program on Transmission Security Management

CompuSharp conducted a training program on Transmission Security Management (TSM) at GE Melbourne, Florida. The topics covered included:

- Network Modeling and Network Configuration
- TSM architecture
- State Estimation
- Power Flow
- Security Constrained Dispatch
- Voltage/ VAR Scheduling
- Remedial/ Preventative Action
- Fault Level Analysis

Upon completion of the course, the participants were able to:

- Identify functions of the principal TSM component programs
- Run Real-time Network Analysis, and Contingency Analysis functions
- Use optimization functions to develop plans for meeting specific operating objectives subject to system constraints
- Use Remedial/ Preventative functions to develop plans for minimizing the effects of harmful contingencies on the Power Systems
- Store case studies for future retrieval and analysis

Training Program on Dispatcher Training Simulator

CompuSharp conducted a training program on Dispatcher Training Simulator (DTS) to Central Maine Power (CMP) at Augusta, Maine. The participants learnt the functions of DTS to be able to train other dispatchers for real-time simulation of the energy control center environment. Engineers got well-versed in the instructor/ simulator interface and the procedures involved in the set-up and execution of a model simulation.

Upon completion of the course, the participants were able to:

- Set-up and store initial and future scenarios
- Use the Instructor Interface to simulate system conditions and disturbances
- Set-up a list of events (generator outages, breaker change-of-state, etc) to occur during the simulation according to a specified time schedule or conditional events
- Use DTS and train other dispatchers on using simulating normal and emergency operations, and creating projected future system scenarios.