

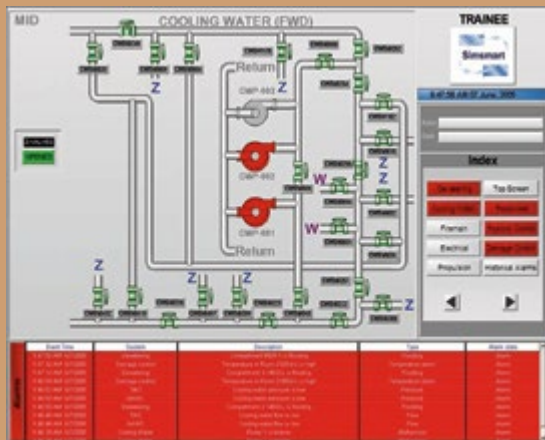


Customer Success Story

Simsmart Brossard (Quebec), Canada



Simsmart Provides Applications for Military Ship Design, Training and Personnel Tracking



A Trainee Station View by Simsmart

About Simsmart

Simsmart Inc., of Brossard (Quebec), Canada, is a provider of process systems design software, process performance analysis, process training solutions and related application engineering. Simsmart's Engineering Suite and TPTS (Total Platform Training System) multidiscipline, physics-based, dynamic modeling/simulation design and training tools are the result of extensive research and development. The tools are used in a wide range of military and industrial applications where liquid and gas processes, Heating Ventilating and Air Conditioning (HVAC), associated AC/DC electrical systems and related process controls are involved.

Simsmart's products provide advanced engineering and cost effective solutions for both new construction and retrofits. The company looked to GENESIS32™, in

particular its visualization capabilities, to meet integral training system requirements.

ICONICS Software Deployed

Simsmart selected ICONICS GENESIS32™ Web-enabled, OPC-integrated HMI/SCADA suite. The training modules developed by Simsmart utilize the rich GraphWorX™32 visualization development environment for creating eye-catching animated displays. The TrendWorX™32 module is used for simulated data collection, logging, charting, reporting and analysis while the AlarmWorX™ module is used for simulating real life alarms and events. The ICONICS OPC Simulator driver, available as a free download from ICONICS.com, is also used for simulating some of the real world situations.

Project Summary

The displays are created via a GENESIS32 GraphWorX environment where graphical objects are placed on a window and connected to OPC resources for Input/Output. The controls are simulated by using ICONICS Simulator OPC Server and Simsmart's Engineering Suite. Trainees operate the emulated control panel by pushing buttons, turning knobs, manipulating sliders, etc, as if performing the tasks themselves in real life.

Each training environment can have its own separate configuration for trainee(s) and instructor(s). The instructor layout display can be used as a template to display operating procedures to be monitored.

The GraphWorX GUIs for Instructors can also be configured to display malfunctions to be injected such as an eductor failure or bulkhead failure (by actuating sliders)

to ensue progressive flooding. The instructor actions have a hand shake with the LPMS to initiate incidents, monitor tasks or activate crew actions.

Benefits of the System

Utilizing award-winning GraphWorX software, trainee stations consist of emulated local control panels or duplicated machinery control system operator pages along with all related controls simulated. To avoid negative training, the look, feel and functionality is duplicated as close as possible to the real system. This allows trainees to be more “hands on”, although remaining in a secure learning environment.

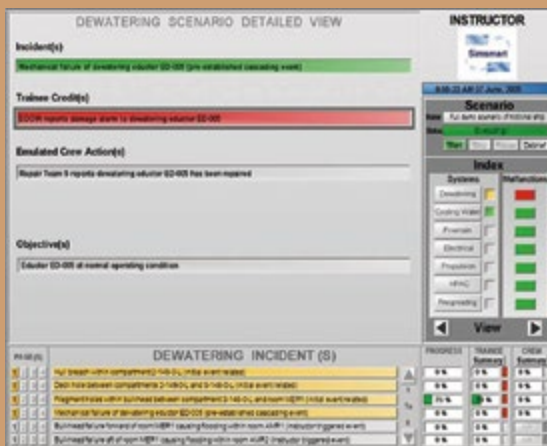
Solutions Highlighted

GraphWorX

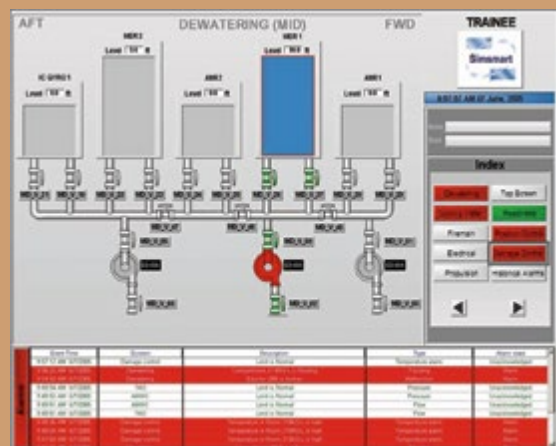
HMI Graphical Display Package

TrendWorX

Data Logging, Charting and Reporting Software



An Instructor GUI Example by Simsmart



A Mock Malfunction Introduced into a Simsmart Training Application

The benefit is two-fold in that instructors can introduce intentional failures into the training scenario and immediately measure trainee response, in as realistic a manner as possible.

Conclusion

Simsmart devises unique methods and solutions to help customers resolve seemingly unsolvable engineering design problems.

ICONICS, with the GENESIS32 suite of OPC Web-enabled HMI and SCADA applications (the multi-faceted GraphWorX in particular) has reinforced Simsmart’s ability to continue to meet this challenge.

Case Study Details

Simsmart set out to enhance a training system that could perform a variety of functions including:

- Emulating Local Control Panels with Control Functions
- Duplicating Machinery Control System Operator Pages
- Multidiscipline Process Simulation Tool
- Lesson Plan Management System

