

UniSim Operations Suite

Training Solutions for Foxboro IA Systems



The Challenge: Preparing Operators for Operations

To take responsibility for the operation of a complex, modern industrial facility, operators must gain familiarity with process, control systems and operating procedures, and demonstrate their abilities to operate the plant in a manner that does not place risk on the safety of other personnel, plant equipment or the environment.

The Opportunity: Reproducing the Operator Environment

The control room operator's window to plant operations is the operator station. From this workstation, operator commands will be entered and interpreted by the control system that initiates action in process devices and equipment. The workstation provides information that the operator must interpret to help operating objectives and ensure safe operation.

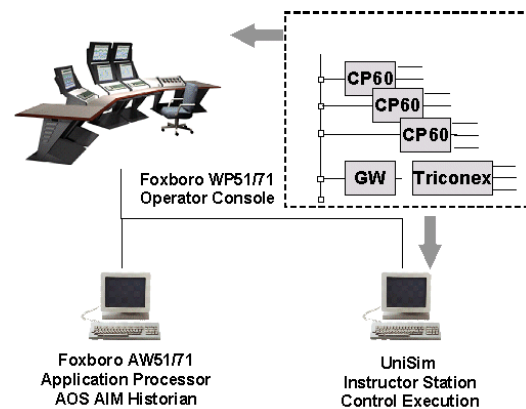
Another critical component in the interface between the operator and the process are the controls that regulate field devices and safety logic that protects the operations. Reproducing these systems accurately is critical in establishing familiarity with the sequences of operation so that the operator is prepared for action in unsuspected scenarios.

Since the automation system configuration is never static, the simulation solution must be frequently maintained. Consequently, system software and configurations must be easy to update.

The Solution: UniSim Operations Suite for Foxboro IA

UniSim® Operations Suite is founded on current releases of actual Foxboro IA hardware and software. Consequently, graphics and control databases built with FoxCAE on the Integrated Control Configurator load directly into UniSim's applications. This makes it easy in the initial simulator development and for system updates on a periodic schedule.

Series 51/71 Workstation Processors (WP51/71) provide all the tools for operator interaction and support button tabs, alarm displays, operating graphics and dynamic trends. A Series 51/71 Application Workstation Processor (AW51/71) serves data between the operator station and the dynamic simulation. Series 71 is hosted on a Windows XP system platform while Series 51 is hosted on a UNIX system platform.



UniSim Operations Suite/Foxboro IA System Architecture

Foxboro Control Processor (CP60) and Invensys Triconex TMR safety logic execution is hosted by UniSim for tight integration with the process model and coordination of simulator functions. UniSim's control environment supports Foxboro and Triconex control equations, device parameters and connections between devices. Flowsheet connections to the process model (valves, switches, motors and transmitters) are automatically initialized according to tag naming conventions.

The process and controls are hosted on a single workstation. The model execution is self-contained, deployable in many locations for different uses and simplifies simulator execution.

Administration of a common snapshot for process and control variables simplifies the instructor's job in managing the training program. All simulator time-based functions (freeze, step, fast time) are synchronously coordinated by UniSim user interface.

Engineering toolkits help manage database changes by detecting differences between versions. Deletions, additions and parameter modifications can be reported to guide the simulation engineer in upgrading the simulation.

Automated model switchover procedures for the Foxboro WP and AW stations are provided to help the instructor prepare the simulator for a broad range of training scenarios.

Benefits of UniSim Operations Suite

UniSim's training solutions for Foxboro IA systems offer significant benefits to the instructor, operator trainee and engineer performing system maintenance.

- Prepares operators for operation by accurately reproducing the Foxboro IA control environment
- Provides tools to help the instructor manage the training curriculum
- Take the simulator anywhere you will benefit from visualizing plant execution
- Provides tools that improve control system development and checkout
- Easy to integrate and maintain controls and logic

System Requirements

The recommended system configuration for UniSim Operations Suite is a Pentium III/1.0 GHz or higher processor with 512 MB of RAM operating under the Microsoft® Windows 2000 operating system or Microsoft Windows XP Professional operating system (Service Pack 1).

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For More Information

To learn more about how UniSim Operations Suite can help improve operator effectiveness, visit www.honeywell.com/ps or contact your Honeywell account manager.

Automation & Control Solutions

Process Solutions

Honeywell

2500 W. Union Hills Dr.

Phoenix, AZ 85027

Tel: 877.466.3993 or 602.313.6665

www.honeywell.com/ps

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