



**PICS Simulation™ software tests and validates your control program and associated software applications and acts as a training tool for operators before the system goes operational.**

## PICS Simulation Software

**Test, validate and train before going “live”**

### Benefits

#### Save time and money

- **Faster startups - typically save up to 30% of the overall project programming, installation and debugging time**
- **Eliminate software bugs earlier in the project**
- **Locate and correct software problems 10 to 20 times faster in a simulated environment**
- **Reduce downtime by installing tested and proven software**

#### Reduce project risk

- **Minimize project scheduling and cost uncertainties associated with debugging control logic problems**
- **Identify and correct problems before they cause delays and cost over runs**

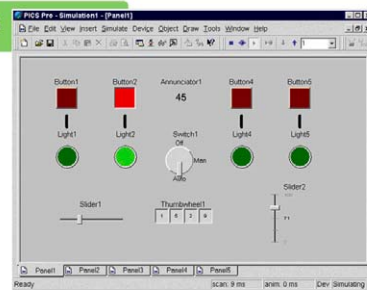
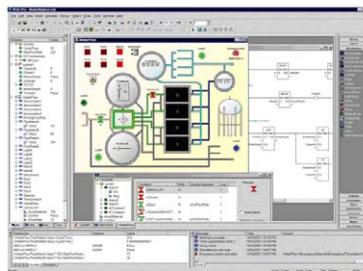
#### Improve operator training

- **Operators can gain valuable experience running production on the “live” control system in a simulated environment**
- **Training sessions can include emergency scenarios that would be too dangerous using the actual equipment**

### Simulate in six simple steps

1. **Create an I/O connection**
2. **Import your variables**
3. **Design your device templates (optional)**
4. **Create a device worksheet**
5. **Add the devices to the worksheet**
6. **Wire the devices using the actual I/O addresses**

As simple as this



or as powerful as this!

### Overview

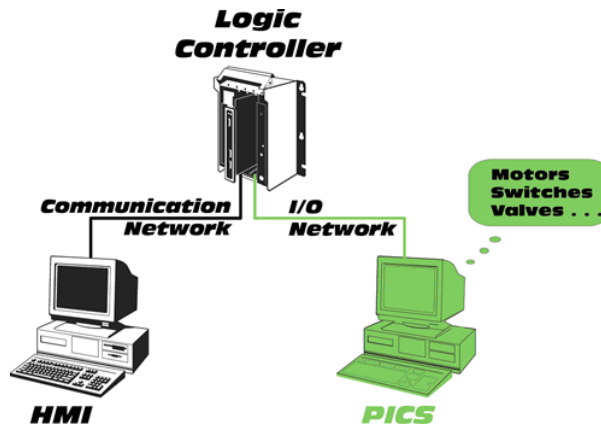
PICS Simulation software simulates real-world systems and machines controlled by DCS, PLC and PC control systems. The entire system (communications, sequencing/interlocking, HMI/SCADA, and alarms) can be tested, all emergency faults can be verified and operators trained, with minimal downtime.

#### *What can go wrong will be detected*

PICS Simulation software enables you to identify and correct control system errors in the office, implement new processes quickly and accurately and avoid the high cost of production downtime before “flipping the switch”. PICS Simulation software provides your project team with a realistic and versatile testing and training environment.

#### *How PICS works*

PICS Simulation software allows you to create a dynamic model on a PC that duplicates the behavior of the I/O devices, providing the control system with simulated device feedback.





## Features

- Modern, customizable, visual development / debugging environment
- Ladder diagram editor for developing simulation logic (based on the IEC-1131 standard)
- Easy-to-use template editor for creating simulated devices and logic function blocks
- Device worksheets for graphically displaying the status of simulated devices and interacting with controls
- Importing I/O variables from popular PLC programming packages or from any delimited file format using the Import Wizard
- Editable scenarios for restoring or setting a simulation to a specific state greatly simplifies problem re-creation
- And much more...

## Industries using PICS Simulation

PICS Simulation software has proven its value on thousands of projects in a wide variety of industries including:

- Automotive
- Food and beverage
- General manufacturing
- Material handling
- Nuclear energy
- Petrochemical
- Pharmaceutical
- Rubber and plastics
- Utilities and waste water treatment

## Benefits to Systems Integrators

For systems integrators, the competitive environment is such that fewer and fewer jobs permit an open-ended time and material clause for the start-up phase of a project. Using I/O simulation for control system testing helps to keep projects within quoted prices and avoids costly penalty clauses. As more integrators accept jobs further afield, the ability to reduce travel costs and site time both during and after installation is appealing and can help boost morale, as employees spend more time at home. Many integrators have recognized they can improve their reputation by using a product like PICS. In fact, many are promoting it as a value-added service to differentiate themselves from their competitors.

## Industry Feedback

*"Each day of (PICS) simulation saves a week of start-up."*

Paul Evenson  
Industrial Automation Systems  
St. Paul, Minnesota, USA

*"PICS was able to reduce risk of the project by testing emergency logic and control logic. This was the greatest benefit of simulation. Also important to us was the higher confidence levels of the project team and the equipment operators."*

Harold Vyn  
Union Gas  
Dresden, Ontario, Canada



## Ordering Information

### Base Software Package:

Part Number	Product Description
SST-PICS-PRO*	PICS Simulation on CD and parallel port hardware key
SST-PICS-PRO-U*	PICS Simulation on CD and USB hardware key

\* Special module may be required for PLC.  
I/O driver and interface card or DDE server and I/O service license fee may be required for the computer running PICS.

### I/O Network Drivers:

Part Number	Protocol / Network Supported	Windows			NIC Required*
		95/98	NT4	2000 / XP	
PICS-PRO-AB	Allen-Bradley® 1771 Remote I/O		√	√	5136-SD-ISA or SST-DHP-PCI
PICS-PRO-PBMS	PROFIBUS DP I/O		√	√	SST-PBMS-PCI
PICS-PRO-OPC	OPC Server - dependent on server		√	√	Dependent on network
Included with base software package	DDE Server - dependent on server		√	√	Dependent on network

### Rockwell Automation RSLinx® DDE/OPC Servers:

PLC Vendor	Protocol / Network Supported	Windows			NIC Required*
		95/98	NT4	2000 / XP	
Allen-Bradley	RS-232 DF1	√	√	√	Serial
Allen-Bradley	Ethernet	√	√	√	Ethernet
Allen-Bradley	5136-SD-ISA or SST-DHP-PCI for DH+	√	√	√	5136-SD-ISA or SST-DHP-PCI
Allen-Bradley	1784-KT/KTX(D) for DH+	√	√	√	1784-KT or 1784-KTX
Allen-Bradley	Remote device via Linx gateway	√	√	√	Ethernet

### DDE Client

PICS Simulation software can simulate an extremely wide range of protocols by using DDE servers as PICS drivers. PICS Simulation acts as a DDE client supporting many DDE or fast DDE compliant servers when used with the PICS DDE client driver. The DDE client driver is included with the PICS Simulation software. Note that limitations on accessible data point types and multi-station capabilities may render certain servers unusable. Technical notes are available on our website to assist you in using PICS Simulation with numerous I/O servers.

### OPC Client

PICS Simulation can simulate a growing range of protocols by using OPC servers as PICS drivers. PICS Simulation acts as an OPC client, supporting any OPC compliant server, when used with the PICS OPC client driver. Note that limitations on accessible data point types and multi-station capabilities may render certain servers unusable. Technical notes are available on our web site to assist you in using PICS Simulation with numerous I/O servers.

OPC clients successfully used with PICS Simulation include:

- SST™ DH+™ OPC server
- SST ControlNet OPC server
- SST PROFIBUS DP multi-slave OPC server
- applicom® Modicon® OPC server
- Rockwell Automation RSLinx OPC servers (various)
- Matrikon™ OPC servers (AB serial, AB DH+, AB Ethernet, Modbus™, Modbus Plus™, Modbus Ethernet)
- Merz OPC server (AB serial)
- IO server OPC server (for AB and Modicon PLCs)
- Kepware Technologies OPC server (AB, Modicon, and GE Ethernet)
- Many others are available. Please note limitations on accessible data point types and multi-station capabilities may render certain servers unusable.

### Wonderware® Device Connectivity Servers

Wonderware I/O servers provide a DDE connection to the PICS DDE client. Many protocols are supported such as:

- Allen-Bradley DH / DH+ / DHII / DH485 / Serial / Ethernet Direct
- Bristol Babcock OpenBSI / Ethernet
- GE Ethernet
- Mitsubishi Serial
- Modicon Modbus Serial / Ethernet
- Omron FINS / Controller Link / Ethernet / Serial / Hostlink / SYMAC NET
- Reliance R-Net / Serial / AutoMax PC Link
- Siemens 3964R / S7 PROFIBUS / H1 Industrial / PROFIBUS FMS / SIMATIC TI TIWAY / SIMATIC TI Serial / SINEC H1 CP / SINEC PROFIBUS / L2 FDL
- Square D SY/MAX Ethernet / SY/MAX SY/LINK / RS422

Wonderware DAServers provide an OPC connection to the PICS OPC client. Many protocols are supported such as:

- Allen-Bradley DH / DH+ / DH485 / DF1 / Ethernet Direct
- Modicon Modbus Serial / Ethernet
- Siemens S7 MPI / S7 Ethernet

For a current list of device connectivity servers available from Wonderware and the requirements and capabilities for each server, refer to the Wonderware website. [www.wonderware.com/products/device\\_integration/](http://www.wonderware.com/products/device_integration/)

To contact us: [www.woodhead.com](http://www.woodhead.com)

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