



THE SUPERIOR CONTROLLER

VOLUME 7 ISSUE 1

Pharmaceutical Facilities Get Connected

Last year two New England based pharmaceutical companies hired Superior Controls—each with the same goal—to tie together their separate automation areas with several different PLCs into one industrial network. These separate areas or “islands of automation” had been installed over the years with different

controllers that came from different parts of the world. They included:

- CIP—Allen-Bradley SLC 5/04
- Fermentation—Allen-Bradley SLC 5/03
- Filling—Siemens S7-300
- Packaging—Omron C-200
- Conveyor system—Modicon Momentum
- Lyophilizer—Allen-Bradley 5/50
- HVAC—Andover Controls
- HVAC—Siemens

The objectives of these two fast-track projects were the same:

- Connect the different systems into one common 21CFR Part 11 compliant database for each company to use for alarming and monitoring purposes.
- Provide the ability over corporate network segments to access Electronic Batch Reports and Down Time Reports.
- Implement the new systems in a manner that minimizes any manufacturing disruption and does not require revalidation of the existing systems.

“... customers can easily access their ... electronic batch records from their offices ...”



The Superior Controller is published by Superior Controls, Inc. of Plaistow, NH—the leading controls system integrator specializing in the design and implementation of industrial automation and information systems.

The purpose of this newsletter is to present project examples to our customers. Your comments are welcome. Write or Fax:

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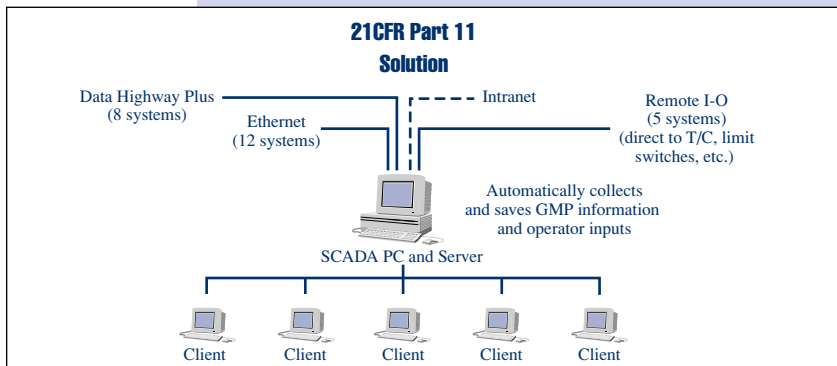
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Superior Controls Passes Quality Audit

We don't mean to brag, but ... did you know that Superior Controls, Inc., is one of only 20 system integrators nationwide to pass the rigorous “Best Practices and Benchmarks” quality audit performed by an independent consulting firm working with the Controls Systems Integrator Association (CSIA)? Did you also know that Superior Controls is the only Level 1 systems integrator (meaning annual sales greater than \$5 million) in New England to pass this stringent quality audit?

CSIA, Exton, PA, (CSIA@www.controls.org) is comprised of more than 160 control system integrators located throughout North America. The Association set forth several years ago to develop a set of professional practices and standards for their members that would lead to measurable and comparable success for the control system integrator industry and the Association's members. They created a manual



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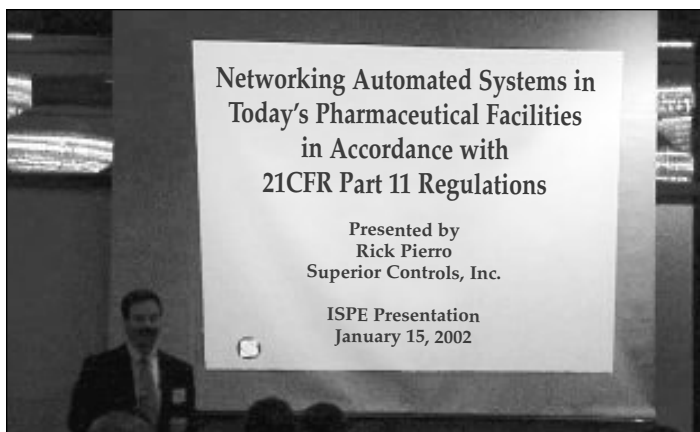
Pharmaceutical Facilities Get Connected • *(Continued from Page 1)*

Fortunately, Superior Controls has an engineering staff of more than 20 experienced engineers—each with specific experience with the existing PLCs. With these resources, Superior designed PC-based systems communicating through the appropriate industrial networks (Data Highway, DH485, Profibus, Modbus, Ethernet) to communicate with most of the PLCs. The existing code of each PLC was carefully reviewed to identify key registers and values to be monitored for alarm and production reports. The newly installed PCs were configured with Intellution's iFix and Microsoft SQL database to collect and store the appropriate information. Validation documentation was provided throughout the course of each project to ensure that the system was compliant with the FDA's regulations including 21CFR Part 11. This also required providing an automatic, always on, audit trail that would record any changes to electronic

batch records including who made the change, what change was made, and the time and date of the change.

Finally, each server was configured with a RAID 5 (Redundant Array of Independent Disk Drives) disk backup system. In this way a failed hard disk could be replaced without turning off the power and the disk would be reconfigured automatically without losing valuable data. The servers also were configured by Superior Controls to provide HTML-based reports over the existing intranets. Therefore, all employees attached to the companies' intranets could simply call up the Electronic Batch Reports using their built-in browser.

Now our customers can easily access their 21CFR Part 11 compliant electronic batch records from their offices.



Pierro Discusses 21CFR Regulations

More than 150 pharmaceutical engineers and employees joined Rick Pierro at the January 15th ISPE Presentation to discuss Networking and the FDA's 21CFR Part 11 Regulations concerning Electronic Records and Electronic Signatures.

Superior Controls Passes Quality Audit • *(Continued from Page 1)*

in 1997 that enabled CSIA members to improve their business practices in six critical areas:

- General Management
- Human Resource Management
- Project Management
- Quality Management
- Financial Management
- Business Development

These focused areas were considered the most important by customers in the selection of control systems integrators. Only those firms that perform well in all these areas (as measured by an independent auditor) can earn the "Registered Member" status. That means that customers can be assured that "Registered Members" of CSIA can successfully implement automated systems using skilled engineers and expert managers.

Superior Controls had distinct advantages prior to the audit. Ten major pharmaceutical companies and engineering firms had already successfully audited Superior Controls over the past eight years. These quality audits were typically conducted by a team of quality assurance engineers and validation engineers to ensure that Superior Controls had the documented project management and validation procedures and policies in place to manage very large (several million dollars) control projects for the pharmaceutical and biotech industries.

Superior Controls is very proud to be one of the few, independent, system integrator firms in the country to have passed the rigorous CSIA quality audit . . . but we're not making a big deal out of it—that would be bragging!

THE PEOPLE WHO ARE SUPERIOR CONTROLS

Superior Controls Welcomes Jim Bowen

Jim Bowen is a talented electrical and mechanical engineer with degrees from Columbia University and Santa Clara University. He has more than 15 years of industrial control experience. Jim's career includes ten years at Anafaze, a Watsonville, California, based manufacturer of microprocessor-based controllers and software, where he served as Technical Service Manager. He also spent a couple of years implementing networked SCADA software and SQL database packages for an engineering company in Nova Scotia. Most recently, he spent a year in sales for a New England based system integrator.

In 1996, Jim spent a year doing volunteer work in Santa Cruz, Bolivia, where he met his wife, a native Canadian who was working in a Bolivian orphanage. Jim, his wife, and three children now live in Exeter, NH.

Welcome aboard, Jim, we're glad you're working with us.



Jim Bowen



More than 80 Superior Controls employees and family members attended this year's Company Picnic held at Cedardale Country Club.

UMass Looking for Process Control Equipment

The University of Massachusetts-Lowell Chemical Engineering Process Labs are being refurbished. If your facility has relatively modern process control equipment available, please consider donating it for the benefit of future chemical engineers. UMass-Lowell is especially interested in obtaining newer PLCs, SCADA software, flowmeters, and other process control equipment. Contact Rick Pierro at Superior Controls to arrange your donation.

Team Superior Runs Road Race Challenge for 7th Year—and Wins

In sweltering 100°F heat (the hottest day of this past summer) Team Superior ran the CIGNA Corporate 5K (3.1 mile) road race for the 7th year in a row in Manchester, NH, on August 9. In a stunning upset, the 15-member Team Superior clearly left their friendly rivals, Horizon, in the burning dust. The trophy was immediately engraved with “2001—Superior” and proudly repossessed by Superior Controls after a two-year absence.

Our top five finishes from first to fifth were Joe Gordon, Rick Pierro, Bryan Graham, Steve Hill, and Ron Pierro. Congratulations to all for avoiding heat stroke and finishing the race.



Above, Superior Controls President, Rick Pierro proudly accepting the trophy from their Team Superior road-race rivals, after a two-year hiatus.

Left, Superior Controls will defend its title and trophy in August 2002.