



# AUTOMATION FAIR HIGHLIGHTS

Attendees' strong interest in automation optimization reflects analyst, manufacturer and machine-builder reports that the economy has turned the corner.



If you want to know what's going on in the realm of industrial automation, the annual Automation Fair® event hosted by Rockwell Automation is the place to find out about the industry's progress. The 18th annual event held November 11 and 12, 2009 in Anaheim, Calif., didn't disappoint the almost 7,700 attendees.

Themed "Smart, Safe and Sustainable Manufacturing," the event demonstrated the newest technologies and solutions available to help improve plant-wide optimization, machine-builder performance and sustainable production. Attendees talked with exhibitors and explored technology for multi-disciplined control, information, process, safety, stand-alone machines and sustainable production.

"Our goal this year is to help customers make the most of their investment in automation and information technology,

## >> Automation Fair 2009 Resources Online!

**YouTube:** Watch videos from Manufacturing Perspectives trends and forecast presentations: <http://bit.ly/8QaIQc>.

**Twitter:** Follow @AutomationFair at [www.twitter.com](http://www.twitter.com).

**TweetPhoto:** View tweets and photos posted live from exhibitor booths: <http://bit.ly/6OQzxM>.

**Slideshare:** Access PowerPoint presentations about trends and forecasts from Manufacturing Perspectives: <http://bit.ly/8WkOee>.

**Flickr:** View photos from the event: <http://bit.ly/6u6lhA>.

**LinkedIn:** Search for and join the Automation Fair 2009 Group: [www.linkedin.com](http://www.linkedin.com).



### >> Only One of Its Kind: Predictive Diagnostic Tool for DeviceNet Network

Rockwell Automation Encompass Product Partner Molex Inc. announced that its Brad PLC/PAC communication modules for the ControlLogix and SLC™ 500 systems are now supported within the Rockwell Automation Integrated Architecture™ Builder (IAB). System designers now can specify Brad modules as they define the automation system bill of material (BOM) using IAB. The IAB graphical software tool helps users select hardware and generate BOMs for applications that include controllers, I/O, networks, PowerFlex® drives, On-Machine™ cabling and wiring, motion control and other devices. [www.rockwellautomation.com/go/p-molex](http://www.rockwellautomation.com/go/p-molex)

### >> World's First EtherNet/IP Infrared Camera

At the Automation Fair® event, Rockwell Automation Encompass Product Partner FLIR Systems introduced the A320 IR, the world's first EtherNet/IP infrared camera, according to the company. The A320 is designed for machine vision and automation systems that require noncontact imaging and temperature measurements. It features real-time analog and MPEG-4 digital video output; LabView and C++/visual basic support; and maintenance-free, uncooled, microbolometer detector. It includes an advanced, uncooled microbolometer focal plane array (FPA) detector that delivers crisp, longwave images in a multitude of palettes. The A320 can detect temperature variations as small as 0.08 °C. [www.rockwellautomation.com/go/p-flir](http://www.rockwellautomation.com/go/p-flir)

improve their competitiveness, and make sure they are well-positioned to capitalize on the economic recovery,” said Keith Nosbusch, Rockwell Automation chairman and CEO.

Exhibitors comprised Rockwell Automation solutions and Encompass™ Product Partners, Solution Providers, Alliance Partners and Machine Builder Partners in the Rockwell Automation PartnerNetwork™.

In addition to direct access to the latest technologies, two other primary factors drive the event's popularity. First, it provides free user training, technical sessions, tutorials, workshops, hands-on labs and forums. This year's forums focused on the food and beverage, machine builder, life science, oil and gas, and water and wastewater industries. Manufacturers learn best practices and explore new technologies that can help them stay competitive during this time of economic recovery.

Second, representatives from major manufacturing companies, industry analyst groups and partner companies in the Rockwell Automation PartnerNetwork discuss industrial automation trends and forecasts to help attendees stay on top of their game.

### Trends Directly Affecting Manufacturers

Nosbusch discussed manufacturing trends and forecasts for reporters during the Rockwell Automation Manufacturing Perspectives media forum on November 10. At this media day, industry leaders examined trends and outlooks for the manufacturing sector. The forum featured speakers from Rockwell Automation, Manufacturers Alliance/MAPI, The Coca-Cola Co., Procter & Gamble (P&G), Owens Corning and many other leading brands.

He outlined several emerging trends that he believes will help position the manufacturing sector for the global economic recovery. He spoke about the transformation of manufacturing from an IT-linked enterprise to an optimized plant and supply network — a transformation enabled by the convergence of control, power, communication and information technologies.

“Each of these technologies come together to create an optimized plant and supply network that drives greater productivity by doing everything more efficiently,” Nosbusch said. “When control, power, communications and information technologies converge, manufacturers can continuously improve operations across the enterprise, throughout the plant and up and down the supply chain.”

Nosbusch described how manufacturers can use an agile supply network to meet market demand for customized products with minimum inventories when they integrate real-time customer demand data with manufacturing processes.

“Plant-wide optimization represents a new era in manufacturing,” he noted. “Companies making the investment are better-positioned to address new sustainability objectives and respond to changes in consumer demand.”

Representatives from P&G and Coca-Cola North America, along with leading global analysts, agree the sector is on the “cusp of significant” changes because of this convergence.

“We are at the center of productivity and product, and what we will be able to deliver to customers in the future. We are poised to make some of the greatest impacts because of this convergence,” explained Jeff Kent, technology section head for control and information at P&G.

David Bynum, principal engineer for Coca-Cola’s 22 North American plants, stressed information visibility has

## >> World’s First Redundant Physical Layer

The MooreHawke fieldbus division of Rockwell Automation Encompass Product Partner Moore Industries-International, Inc. offers fieldbus device couplers and power supplies, such as TRUNKSAFE, the world’s first redundant fieldbus physical layer. The TRUNKSAFE Fault-Tolerant Fieldbus System is designed to provide a cost-effective and reliable strategy to maintain continuous communications between field devices, and a host system in the event of any single point failure on a FOUNDATION Fieldbus H1 or PROFIBUS PA segment. [www.rockwellautomation.com/go/p-moore](http://www.rockwellautomation.com/go/p-moore)

## >> Energy Efficiency, Legislative Uncertainties and Sustainability Opportunities

Reducing energy consumption is critical to most sustainable production programs. Another factor is the need for energy conservation and carbon footprint reductions, which is driven in part by incentives, and in part by penalties for insufficient action. Customers also are increasingly demanding socially responsible vendors.

An experienced panel sought to define the actions that manufacturers need to take to better manage and reduce these costs, and to speculate on what new approaches might be available. They addressed these issues at the Manufacturing Perspectives press event at the 2009 Automation Fair® event.

Frank Peel, electrical support specialist at Owens Corning Canada, put the opportunities in perspective. He noted that the annual energy bill for the Owens glass-melting process is about \$1 billion. He said upper management has some of its compensation based on meeting greenhouse gas (GHG) and other emission targets. “Our engineering and maintenance heads targeted cutting \$100,000 from our energy budget this year.”

The underlying message of the panel makes it clear that this is a battle on two fronts: Compliance with legislative actions being considered in the U.S. Congress and more self-initiated actions by companies in both the private and public sectors. The panel reported increasing levels of company action in reducing both energy consumption and carbon footprint.

Most of the discussion about possible legislative actions revolved around the Waxman-Markey bill. The bill includes a requirement for 20% of electricity to come from



“The utility bill for our glass-melting process is on the order of \$1 billion.” Frank Peel of Owens Corning Canada, along with other distinguished panelists, discussed the energy efficiency’s role in improving the sustainability of manufacturing processes.

renewable fuels by 2025; carbon capture and storage incentives; smart grid and electrical car provisions; higher energy efficiency standards for buildings, lighting and appliances; a cap-and-trade program; reduction of global warming gases by 83% of 2005 levels by 2050; programs to compensate energy-intensive industries for costs incurred under the bill; and green job creation.

ConAgra Director of Engineering Evan Hand said his company recognizes and monetarily rewards the top five facilities that met energy goals. “As part of our engineering goals, and we’re on target to meet them, I have a personal goal of tens of millions of dollars in energy savings.”

Our summary here just scratches the surface of this in-depth discussion. Visit <http://bit.ly/8g1xaR> for details.

to be “turned into useful action items at the plant floor and for planning purposes so that we meet our demand for the 1.6 billion servings a day that our customers drink in a way in which everyone is satisfied.

“What’s happening now within our organization is we’ve gone beyond a controlling equipment mindset, to controlling processes and enabling operation processes to become more efficient,” Brynum said.

## What’s to Come for Manufacturing?

Discussing the industry outlook, Nosbusch said the speed at which business conditions deteriorated earlier this year was “stunning.” However, he noted that the global GDP has shown recent signs of improvement.

Key manufacturing macroeconomic indicators such as industrial production and capacity utilization, while still at very low levels, appear to have stabilized. He also noted

### >> Economist: Structural Costs, Not Tough Economic Times, Pose the Most Risk

Even though he declared both the manufacturing and general economic recession over, Manufacturer’s Alliance/MAPI economist Jeremy Leonard still worries about the fate of U.S. manufacturers. “Unfortunately we have a lot of policies at home that make it difficult for our manufacturers to compete effectively,” Leonard told industry editors at the Manufacturing Perspectives media day.

He said a moderate manufacturing recovery is under-way, and that U.S. manufacturing remains an “engine for growth in the global economy.” Productivity and wages have consistently outpaced the rates of other U.S. industries and international manufacturers. Manufacturing productivity has more than doubled in the last two decades, almost twice the growth for the overall economy, he noted.

“This is a boom for our competitiveness and the general prosperity of the economy,” Leonard said. “Contrary to popular belief, the U.S. economy is not de-industrializing.”

While U.S. manufacturing is “more than holding its own,” he’s concerned about the “high structural costs” U.S. manufacturers face relative to our other trading partners — costs U.S. manufacturers don’t directly control. These include one of the highest corporate tax rates in the industrialized world, which puts U.S. manufacturers at a “competitive disadvantage, as well as health care costs, tort liability and regulatory compliance.

“Were it not for these structural cost disadvantages, U.S. manufacturers would be internationally competitive,” he maintained. “Manufacturers are doing their part. The things that need to happen are from a policy standpoint and are dependent on what happens in Washington.” Lack of sufficient government investment in basic and applied research and development needed for innovation is also problematic.

Manufacturer’s Alliance/MAPI predicts slow but steady growth over the next five years. Its economists also foresee



“Contrary to popular belief, the U.S. economy is not de-industrializing.”

— Jeremy Leonard, Economist, Manufacturer’s Alliance/MAPI

a slower but still steady drop in the unemployment rate. But Leonard doesn’t see a lot of new construction in manufacturing in the coming months. “Plants will be putting idle capacity back online rather than building new capacity,” he said.

Leonard said the “actionable items” manufacturers need to focus on include capital-intensive automation improvements and reaching out to emerging markets where capital-intensive investments are growing.

While he expects the overall economic recovery to be “tepid,” Leonard forecasted that the manufacturing sector over the next two years will grow “quite a bit faster” than the economy as whole. The economist noted this is a typical post-recession pattern.

Visit <http://bit.ly/1z13ga> to learn more about Leonard’s trends analysis and forecast.

Manufacturer’s Alliance/MAPI  
[www.mapi.net](http://www.mapi.net)

## >> Plan Now for Automation Fair 2010

November 3-4

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[www.automationfair.com](http://www.automationfair.com)

that the Purchasing Managers Index has been on a steady march upward. However, Nosbusch said the shape of the recovery still remains uncertain.

Jeremy Leonard, a Manufacturers Alliance/MAPI economist, presented the short- and long-run outlook for U.S. manufacturers (**see sidebar on page 36**). His presentation assessed how global competition and innovation will affect manufacturing, and how this relates to smart, safe and sustainable manufacturing as a strategy to make U.S. manufacturing more globally competitive.

Leonard cited four major legislative issues that affect how manufacturers can improve their operations: tax rates, health care costs, tort reform and regulatory compliance.

### Machine Builders Strive to Meet Customer Expectations

A panel of international machine builders (OEMs) who spoke at Manufacturing Perspectives reported they have seen firsthand the signs of an economic recovery and increased client interest.

“Our customers have become alive again. During the first part of the year, there was talk about projects, but with no timeline. But during the third quarter customers started to become more affirmative,” said C.P. Fang, vice president of Crown Machinery Co., a leading coating and converting equipment manufacturer in Taiwan. “There is good indication of a turnaround.”

The panelists agreed that the economic situation gave them a chance to think about doing things in new ways. For example, they cited how they define machine builder performance, and how that definition has evolved beyond performance aspects including throughput and runtime.

“You can’t forget machine performance is what brings you to the table and gives you an opportunity to play. But we look at a couple of different aspects, particularly market acceptance, technical capability and reliability, service and support, sourcing and lead time, and total cost of ownership,” said Andy Pringle, engineering leader, Paper Converting Machine Co. (PCMC). “What I’ve learned over the years from a business perspective is you have to look at machine performance as holding market value so the customer wants to invest in it.”



### >> Module Lets Messaging Services Connect Enterprise and Plant-Wide Systems

In addition to the people that visited Rockwell Automation Encompass Product Partner Online Development, Inc.’s booth at the Automation Fair event, another 1,400 visited live via the Internet. A Web portal on the company’s Web site during show hours included a live streaming video of booth activity, and live audio and video broadcasts of the company’s new product introductions.

Online Development introduced the new eATM (Enterprise Appliance Transaction Manager) module that enables users to connect plant-floor data with enterprise and plant-wide systems via Java Messaging Service (JMS) connection technologies. It installs in a ControlLogix PAC, or in a panel to accomplish data exchanges. As an information appliance, the eATM module simplifies configuration of data exchanges and involves no programming. The module is a self-contained hardware and software system available with various JMS messaging, communications and automation adapters to facilitate bidirectional data exchange. [www.rockwellautomation.com/go/p-odi](http://www.rockwellautomation.com/go/p-odi)



## » Connected Components Speed Time to Market for OEMs

The Rockwell Automation “Connected Components” wall, within the Essential Components booth at the 2009 Automation Fair® event, was all about simplicity. “Our job is to make things really simple for OEMs,” explained Rockwell Automation business director Co Nguyen. “Simple to develop, simple to buy, simple to use and simple to maintain.”

Control-system design is responsible for a large portion of a machine’s development time and budget. The Connected Components Building Blocks (CCBB) toolset is designed to make it faster and easier for machine builders to implement common control-design tasks. “The building blocks make it a lot easier to go through the wiring diagrams and codes,” said Nguyen. “In a development environment, getting to market sooner is a big differentiator.”

Designed for machine builders that provide low-cost, stand-alone machines, CCBB is built around a core of Allen-Bradley® MicroLogix™ controllers, Allen-Bradley PanelView™ Component HMIs and other components, such as Allen-Bradley PowerFlex® 4 drives. The CCBB tools help designers integrate these devices and other Rockwell Automation industrial components.

Learn more about Rockwell Automation connected components at <http://bit.ly/6vFeu7>.

Michael Sweet, manager of corporate controls for First Solar, agreed machine performance includes all of those factors but also, “how well the machine plays with others.” He said this issue is similar to “islands of automation” challenges manufacturers face.

Visit <http://bit.ly/88fhk4> to learn much more about what these and other machine builder panelists said about how OEMs are helping manufacturers.

## Encompass Partners Offer Key Technologies

Rockwell Automation Encompass Product Partners ([www.rockwellautomation.com/go/tjencompass](http://www.rockwellautomation.com/go/tjencompass)) demonstrated innovative products that complement Rockwell Automation solutions.

For example, **ProSoft Technology** released its new Wireless POINT I/O adapter. It’s a high-speed, standards-based 802.11g wireless I/O communication adapter offering a wireless alternative for linking Rockwell Automation controllers to distributed process I/O modules. The module’s add-on profile (AOP) uses the RSLogix™ 5000 programming environment and connection-based EtherNet/IP for configuration and communication. Visit [www.rockwellautomation.com/go/p-prosoft](http://www.rockwellautomation.com/go/p-prosoft) for more information.

**FreeWave Technologies** demonstrated its new I/O Expansion Module with the Allen-Bradley® DataSite™ rugged Remote Terminal Unit (RTU) controller from Rockwell Automation. The I/O expansion module offers a significant increase in the I/O available for DataSite. It adds of up to 36 I/O points as an in-cabinet solution through a serial connection or as a remote wireless I/O solution. Their show floor demonstration showed the ease with which users can easily modify or add to their existing IO network count at a fraction of the cost of the traditional method of adding more radios. Visit [www.rockwellautomation.com/go/p-freewave](http://www.rockwellautomation.com/go/p-freewave) for more information.

**Helm Instrument Co., Inc.** dual-channel weigh scale input modules now are featured in the Rockwell Automation Integrated Architecture™ Builder (IAB) software. The 1734 POINT I/O™ platform features 20-bit resolution with adjustable update times from 200 ms to 3 ms (100,000 counts full-scale). A single-channel version is available. The weigh-scale modules feature strain-gauge signal conditioning, built-in tare function, programmable averaging (standard, rolling) and sampling rates, programmable gain and calibration. Visit [www.rockwellautomation.com/go/p-helm](http://www.rockwellautomation.com/go/p-helm).

**Littlefuse Inc.** demonstrated its UP-LINK remote indicating fuse holders. They’re designed to reduce downtime in critical manufacturing processes by communicating to

PLCs that can then send notification to personnel when a fuse opens. Visit [www.rockwellautomation.com/go/p-littlefuse](http://www.rockwellautomation.com/go/p-littlefuse) for more information.

**Form Automation** introduced the AuditMatic v5, a mobile data collection and reporting solution. It's a mobile-worker task management, data collection and decision support solution that replaces paper forms with handheld computers. New features include historian export — data collected and stored in AuditMatic v5 can be integrated with Rockwell Automation FactoryTalk® Historian and other applications without transcription cost, error and delays. Also, GPS data capture and mapping capabilities allows location-centric data gathering applications. Users can confirm the route of workers while they collect data, create a database of asset locations, assess damage and view this location-sensitive information on a map. Visit [www.rockwellautomation.com/go/p-fas](http://www.rockwellautomation.com/go/p-fas).

**Control Station, Inc.** demonstrated its LOOP-PRO TUNER software for PID diagnostic and optimization. Its patent-pending Non-Steady State (NSS) Modeling Innovation is designed to give users significant technical and economic advantages when tuning dynamic processes.

## >> A Day in the Life of a Process System

At the Rockwell Automation Process Solutions User Group (PSUG) meeting held November 9-10, 2009 before the Automation Fair event ([www.rockwellautomation.com/go/psug](http://www.rockwellautomation.com/go/psug)), Rockwell Automation technical personnel treated the audience to a detailed demonstration called "A Day in the Life of a Process System." This demo used real-world simulation to showcase how well the PlantPAx™ process automation system features worked together.

"PlantPAx," said Dave Knowles from Rockwell Automation, "is designed to integrate tools for resources management, equipment management, inventory integration, business intelligence, ERP, decision-making and energy optimization. That's a big laundry list, so we decided to show you a set of production facility scenarios to illustrate how well and how easily the PlantPAx control system suite handles a typical process plant day."

The detailed demonstration is an effective tool to understand the PlantPAx process automation system. Visit <http://bit.ly/7BmmVK> to learn how each of the four scenarios played out.

## >> A Beacon of Success Showcased at Food & Beverage Forum

"I closed my control room. All of my operators are out in the plant with portable HMIs," declared Tim Foster, vice president of engineering and joint founder of Green Planet Farms. "I've got 25% of the staff I had before, and they're more qualified people," he said as he and Steve Schiedemeyer, vice president of engineering at Engineering Solutions Experts (ESE), discussed the results of the project GPF did with ESE, a system integrator and Rockwell Automation Solution Provider.

"My partner and CEO went to see a plant that was producing soy protein isolates using water instead of hexane. She came back and told me that she wanted a plant that worked just like that one. So we got with ESE and did it," Foster explained. "After we had been in operation for a few months, I visited the other plant, and found out that they had no automation at all — it was entirely manual! If I had known that, we might not have the plant we have now."

Visit <http://bit.ly/8kpMXi> to learn more about the amazing results Green Planet Farms achieved using the Rockwell Automation PlantPAx process automation



"Operators can be anywhere, and they can make changes to the system from their mobile HMIs." Tim Foster discussed the productivity improvements enabled by Green Planet Farms' adoption of a plant-wide Logix architecture from Rockwell Automation.

system, and systems and equipment from a range of Encompass Product Program partners in the Rockwell Automation PartnerNetwork™. Visit <http://bit.ly/5xCCbr> for the full case study.



## >> Life Sciences Face New Challenges

Life sciences companies are faced with the challenges of global competition, higher production costs and increasingly stringent environmental standards. That means streamlining manufacturing processes while minimizing water, energy and material costs to help achieve sustainable operations.

Challenges for life sciences companies include managing patent expiration, reducing time-to-market, managing the high level of attrition in the R&D pipeline, reducing cost and productivity within the constraints of compliance, creating sustainable manufacturing processes and addressing the issues created by consolidations driven by mergers and acquisitions.

"Very often a product can fail after \$900 million has been spent on it, so there's a huge risk," warned Paul Greene, business manager, global solutions, Rockwell Automation. "From a cost and pipeline perspective, you're seeing a lot of consolidation. It's creating an enormously diverse manufacturing network. In the pharmaceutical industry, there are potentially harmful byproducts, so we're also seeing a lot more focus on end-of-line treatment."

At the 2009 Automation Fair® event Life Sciences Industry Forum, three companies shared how they optimized their production and the consequential improvements they realized. Visit <http://bit.ly/6nhUNi> to learn how Bosch Packaging Services, F. Hoffmann-La Roche and Teva Parenteral Medicines are successfully meeting their challenges.

LOOP-PRO software can accurately model and rapidly tune PID controllers in an array of industrial applications, including normal operations and the start-up and commissioning of production processes. It's easily integrated with the Rockwell Automation PlantPAx™ process automation system. For more information, visit [www.rockwellautomation.com/go/p-controlstation](http://www.rockwellautomation.com/go/p-controlstation).

## Rockwell Automation Draws Attention

Rockwell Automation also launched many new products, including its FactoryTalk Historian Machine Edition (ME) software (<http://bit.ly/8Vc8Ev>). This machine-level data historian is an embedded, solid-state module hardened for on-machine data collection. It features a limited software footprint, no moving parts, and reduced risk of data loss caused by network or other system interruption. It allows personnel in different locations and operating levels to view and analyze role-appropriate historical data. It's installed in the Allen-Bradley ControlLogix® backplane, then auto-detects the controllers and configures all tags to be historized.

The new FactoryTalk VantagePoint EMI business intelligence software (<http://bit.ly/4RdRov>) provides information through Web-based dashboards, and reports on key performance indicators from multiple manufacturing and business data sources. The software connects to multiple real-time, historical, relational and transactional data sources. This creates a single resource that can access, aggregate and correlate information via a Web browser.

Rockwell Automation also announced a portfolio of products for closed- and open-loop drive control on EtherNet/IP. This provides Integrated Motion solutions ([www.rockwellautomation.com/go/prmotion](http://www.rockwellautomation.com/go/prmotion)) for the new Allen-Bradley ControlLogix L73 and ControlLogix L75 programmable automation controllers (PAC), Allen-Bradley Kinetix® 6500 servo drives, and enhanced Allen-Bradley PowerFlex® 755 AC drives.

The company also announced its support of the use of automation software on virtualization solutions from VMware (see page 8). Virtualization inserts a thin layer of software called a "hypervisor" on the computer hardware or a host operating system. This layer contains virtual machines that can be transparently allocated to hardware resources as needed. Multiple operating systems can run concurrently in isolated virtual machines on a single physical computer and share hardware resources with each other. Rockwell Automation will participate in a VMware Ready program, with plans to validate its Rockwell Software configuration, human interface and information products.

The Kinetix 300 EtherNet/IP indexing drive from Rockwell Automation ([www.rockwellautomation.com/go/tjmotion](http://www.rockwellautomation.com/go/tjmotion)) is designed to provide a cost-effective single axis solution for low-axis count motion control applications. Using one standard EtherNet/IP network for an entire machine, including motion, control, I/O and HMI, helps simplify wiring, reduce panel layout costs and allow easy integration into manufacturing and enterprise systems.

## Depth of the PlantPAx Process Automation System

Rockwell Automation used Automation Fair to outline the six areas of focus for its PlantPAx process automation system ([www.rockwellautomation.com/go/prps](http://www.rockwellautomation.com/go/prps)): core process-control capabilities; design productivity; process networks and field device integration; asset management; process safety and critical control; and operations productivity.

Core process-control capabilities are part of the Rockwell Automation Integrated Architecture. The supervisory-

## >> First-of-Its-Kind 2-Axis Motion Module

At the 2009 Automation Fair® event, Rockwell Automation Encompass Product Partner AMCI released the only LDT interface module for the Allen-Bradley ControlLogix PAC from Rockwell Automation. Bringing Linear Displacement Transducer (LDT) position sensor data into the 1756 ControlLogix PAC, AMCI's two-channel 7252 LDT/MDT interface card can directly interface to two magnetostrictive sensors with PWM, control pulse or start/stop signals. Features include latch inputs, onboard diagnostics, and Rockwell Automation-licensed technology.

The interface module is a direct interface to common LDT sensors. It incorporates onboard diagnostics to monitor and report errors to help ensure reliable readings to save time for system integrators and PAC programmers. [www.rockwellautomation.com/go/p-amci](http://www.rockwellautomation.com/go/p-amci)

## >> Exploring Ways to Conserve Global Water Resources

Fresh water is a precious commodity, and we can't take it for granted just because it's been so inexpensive for so long. Ways to stretch our global fresh water resources include conservation, using it more efficiently, desalting it and even directly recycling wastewater into very high-quality drinkable water. This was the main message delivered by the presenters at the Water Wastewater Industry Forum during the 2009 Automation Fair® event.

Dr. Val Klump, director of the Great Lakes Water Institute at the University of Wisconsin Madison, reported that population growth, climate change, overdrawn of underground aquifers, pollution and other factors are quickly depleting the 0.34% of the planet's water that's available as fresh.

"Half of the world's river basins are shared by more than one nation, so fresh water also can be an increasingly significant cause of political strife, conflict and war," Klump said. "It's also very costly to pump and move water, and doing it requires using huge amounts of energy. Also, water is used to directly or indirectly produce numerous products, and this can be done much more efficiently too."

To begin treating fresh water more respectfully and efficiently, Ken Ortega, public works director for Oxnard, Calif., reported that his city spent \$25 million to



"Rockwell Automation and its products have really measured up to the test." Ken Ortega, of the city of Oxnard, Calif., related the municipality's success in converting wastewater to drinking-water quality levels.

build and open its new 7.5 million-gallon-per-day (mgd) brackish water desalting facility, which went online at the end of 2008. The three-stage, reverse-osmosis desalter's capacity can be increased to 15 mgd, but that expansion isn't scheduled yet. The desalter also is a Gold LEED-certified facility.

Learn how the City of Oxnard turns wastewater to fresh water at <http://bit.ly/8MSddC>.

## >> Functional Safety Helps OEMs Help Customers

A popular feature of the Automation Fair® experience, the Safety Automation Forum brought together industry experts and attendees. They learned about safety's importance within the manufacturing industry, its effect on the top and bottom line, and how changing standards



"Previously, we'd be faced with rewiring numerous relays like everyone else." Gram Equipment's John Christiansen shared the company's successful implementation of the Rockwell Automation GuardLogix machine safety platform.

can best be leveraged. Leading authorities from around the globe shared their knowledge about best practices, evolving standards, and how integrated safety solutions can help improve production.

A highlight of the forum was a presentation by John Christiansen, automation manager with Gram Equipment in Vojens, Denmark. During his discussion, "Functional Safety Using GuardLogix - An OEM Customer Story," Christiansen described how the company conducted a risk assessment, then implemented Rockwell Automation GuardLogix® controllers in 2005.

"If you're going to migrate to a new safety system, you have to go with state-of-the-art and safety standards-compliant systems. This is because, if it ever comes down to the courtroom, the question then will be was your system state-of-the-art and safety-compliant? There's no question that this is the case with GuardLogix," Christiansen said.

Visit <http://bit.ly/4Xqwjy> to learn how Gram Equipment successfully implemented a new machine safety platform.

Also, download all Automation Fair 2009 Safety Automation Forum presentations at <http://bit.ly/8u5o68>.

layer visualization servers and operator workstations are delivered ready to configure, and the PlantPax system is tested as a single entity versus requiring individual product testing. Design productivity integrates standard Integrated Architecture technologies with process-focused system configuration tools.

At the annual Process Solutions User Group event (PSUG, [www.rockwellautomation.com/go/psug](http://www.rockwellautomation.com/go/psug)), Rockwell Automation announced the availability of pretested, preconfigured, single-activation PlantPax Servers and Workstations and PlantPax Process Libraries. Rockwell Automation also announced further interoperability testing between Strategic Alliance Partner Endress+Hauser, Inc. ([www.rockwellautomation.com/go/p-eh](http://www.rockwellautomation.com/go/p-eh)) field devices on HART, Profibus PA and Foundation Fieldbus.

Endress+Hauser also unveiled the Promass 83 Coriolis Mass Flow Meter with EtherNet/IP connectivity. Rockwell Automation complements this hardware development with software tools for Rockwell Software RSLogix 5000 and FactoryTalk View integration as part of the PlantPax system.

Some of the benefits jointly delivered include reduced network count, simpler installation, seamless integration and reduced programming time.

### Many Reasons for Optimism

Most analysts, manufacturers, OEMs and attendees at the Automation Fair® event were cautiously bullish that convergence, safety and sustainable manufacturing will provide returns on both investment and assets that will continue to justify their automation investments, even in times of low capacity utilization. Nosbusch stressed that Rockwell Automation is intensely focused on making its customers successful.

"Today, we have a broad portfolio of products, services and solutions, more domain expertise, enhanced industry knowledge, and a stronger global presence," he said. "I strongly believe that we are well positioned in these challenging times to help our customers optimize their plants, and emerge successfully through the difficult economic environment." □

Automation Fair

[www.automationfair.com](http://www.automationfair.com)