EXCHANGE TODAY

CONTROL ENGINEERING • Wednesday, September 12, 2007 • Emerson Global Users Exchange

Emerson's Wireless Technology Road Map, Part 1

Wireless technology is growing in importance as a key enabler for advancing sensing and control efforts in process plants. In an interview with *Control Engineering* editors, John Berra, president of Emerson Process Management; Peter Zornio, chief strategic officer; and Robert Tinker, director of business development, Cisco wireless networking business unit; lay out the road map for ongoing development.

CE: In your keynote, you suggested that wireless represents as major a technological change as the shift to DCS. Could you expand on that?

Berra: If you look at the changes from electronic analog control, with the large panel boards to distributed control, using microprocessors—and, in those days, CRT-based operator stations—it totally changed the way people approached control, the impact on operators, the benefits to customers. When it was first introduced, the adoption rate with many customers was relatively slow in the beginning, but then it caught on within a few years where that was the way people did a new project.

I really think wireless has the same potential. In fact, it has even more potential because it can be applied in small, targeted kinds of projects to get particular problems solved where it was cost prohibitive to do it with wires before. And then another can be done, and another, linking these together, eventually you've gained a lot of benefit. I see all the signs pointing toward the advent of wireless in process industries, changing the way people think about what they do things, in particular being able to get more information for this predictive intelligence than they've ever had before.

CE: Do you think that's the way wireless will be adopted, in small independent network applications?

Berra: Our industry is conservative, and they're going to try things before they make a complete commitment. That was the case with fieldbus. We did a lot of small projects first. We must have done eight or nine small projects with Shell before they made a decision to go with fieldbus on new projects. I think that's the way it will be with wireless, too. It will start with relatively small applications. They'll try it; it will work. Eventually it will become a change in philosophy of how you do a plant and become an integral part of how you think about automation.

CE: So you think networks will grow up from the instrumentation level rather than down from the top?

Berra: I think it will come up from below. I'm not trying to diminish the importance of the top, and with our partnership with Cisco, we're trying to cover all those bases. I also think there will be Continued on page 6

Best Bets for Today

Agenda updates

Session 685; Keeping Systems and Communicators Up-to-Date Using EDDL; 3:00, Austin 2

Session 839; Get SMART About Your Turnarounds; Moved to Thursday, 10:00, Grapevine 4

Session 874; Abnormal Situation Prevention Applications in a FCC Unit; 2:00, San Antonio 1

Session 989; Using Advanced Diagnostics, Innovative Functionality and New Technology to Improve Your Plant Operations; 1:00, Grapevine 2

Session cancellations

Session 583; Conversion from Mod 5 to DeltaV Controls at Huntsman Freeport; 8:00, Ft. Worth 2

Session 770; Optimization of Level Measurement in Skinner Tanks and Primary Cut; 1:00, Grapevine 5

Session 891; Wireless Works in Steel Mill/Blast Furnace Environment; 4:00, Ft. Worth 4

Workshops and short courses

Wednesday short courses and workshops begin with longer half-day time slots. These are filled on a first come, first served basis and seating is limited. Don't linger at breakfast or you might miss a spot. Some are repeated twice today and again on Thursday, but some are only offered once. Check the schedule carefully and choose wisely.

Educational Services Courses

Only offered once:

8:00 a.m., Texas 2: Applying Automation to Your Electrical Distribution System.

8:00 a.m., Texas 5: NFPA 70E: What Does it Mean to You?

1:00 p.m., Grapevine C: Learn the Basics of Human Information Processing to Help You Develop Better DeltaV Interfaces. Continued on page 6

NEWS BRIEFS

EMERSON TO ADOPT WIRELESS HART

John Berra plans to shift SmartWireless instrumentation to the WirelessHART protocol as soon as it is adopted. Migration will be available for existing users to update installed equipment to the new system. Read "Emerson Road Map for Wireless Technology" for details in coming days.

LAST NIGHT FOR EXHIBIT AREA

Tonight is your final opportunity to visit the exhibits, 5:00 to 9:00. Make sure you see the demonstrations at the SmartWireless and PlantWeb theaters, right inside the entrance.

SOLVE THE PUZZLE, ENTER IPOD DRAWING

Page 4 has a special Exchange Today puzzle, which includes a technology message. If you complete the puzzle, fill in your information and place it in the box by the Cyber Café before 8:30 a.m. Friday, you could win a 80 Gb Classic iPod. Entries can also be placed in the box outside the dining area during mealtimes. Winner will be announced at breakfast, Friday morning. Emerson employees not eligible.

EDUCATIONAL SERVICE COURSES

Watch the schedule carefully so you won't miss the four-hour time slots, beginning at 8:00 a.m. and 1:00 p.m.. Seats are limited.

BEEN TO THE BLOG?

Visit www.controleng.com/pillartopost to see the latest postings from the exchange.

ADD YOUR COMMENTS

Send letters to the editor at exchangeeditor@reedbusiness.com. We want to hear from you.

EMERSON GLOBAL USERS EXCHANGE

September 12, 2007

Control Engineering's video crew tapes a demonstration of new turbine condition monitoring capabilities for PlantWeb.

Visitors to the MTL booth spend a moment learning about a new device-level cyber security firewall.

Attendees learned a lot but also took some time out to relax.

EMERSON GLOBAL USERS EXCHANGE

Be Sure to visit the Emerson Exchange Blog: www.controleng.com/pillartopost

Advisory Board

Washington Savannah River Co.
Greg Stephens, Chairman

Emerson Process Management
John Allwein

Degussa
James Cook

Fluor
Ken Valentine

Board of Directors

Idaho National Laboratory
Marty Edwards, Chairman

Washington Savannah River Company
Greg Stephens, Vice Chairman

Solutia Inc.
Kris Chandrashekar

Ergon Refining
Steve Elwart

Emerson Process Management
Don Fregelette

Chemtura
Mark Garnett

Emerson Process Management
Stuart Harris

Control Southern
Jim Hendrix

Emerson Process Management
Dave Imming, Executive Sponsor

Emerson Process Management
Bruce Johnson

Lubrizol
Bruce Johnson

Seadrift Coke
Kevin LaPierre

Genentech, Inc.
Christoph Lebl

Suncor Energy Inc.
Sunny Mohar

Chevron
Devon Rae

Emerson Process Management
Neal Rinehart

Puffer Sweiven
Don Scharringhausen

Eli Lilly and Company
Aaron Wood

September 12, 2007

No wires, no limits: Emerson-Cisco Collaboration called "A Good Marriage"

An overflowing room of media representatives were on hand at the Global Users Exchange in Grapevine, TX, Monday to hear Emerson Process Management and Cisco executives announce that the two are collaborating to offer open-standard solutions for wireless process and plant management applications that install easily and operate reliably in the challenging manufacturing environment.

Emerson's wireless process applications use self-organizing field networks for increased monitoring of plant data for control and asset optimization; they also offer mobile operator and maintenance worker applications. Cisco wireless plant networks offer applications including those for worker mobility, voice-over-IP communications, tracking of personnel and assets and video applications.

Discussing the details of the announcement, John Berra, president of Emerson Process Management, said he was pleased to be working with Cisco. Noting the cultural similarities between the two companies, Berra said, "The combined field and plant communications platform supports current and future applications that help enable faster and more effective business management over the life of the plant. In addition, Cisco's commitment to open standards makes it an ideal partner for Emerson and our customers. It is a good marriage."

A year ago, Emerson introduced our Smart Wireless field networks and its vision of the open wireless digital plant. Now a year later, Berra briefly outlined examples a variety of customers applications, including:

• PPG's use of wireless instrumentation for temperature profiling of plant steam headers, redundant level measurement on caustic tanks, and vibration monitoring of brine centrifuges;

• Wheeling Pittsburgh Steel's use of wireless for monitoring coiling water and grease system health in hot strip mills and cooling water flow to work rolls in a roughing mill, a move that nearly eliminated downtime and improved productivity as much as 10%; and

• Croda's use of wireless for temperature monitoring of chemicals in moving railcars, a Smart Wireless solution

Continued on page 7

Maciej Kranz, vice president of product marketing for Cisco's wireless business unit, describes mobile operator applications during a demonstration of wireless capabilities on the exhibit floor at the Emerson Global Users Exchange. The demonstration followed the announcement by Emerson and Cisco that they will collaborate to offer open-standard solutions for wireless process and plant management applications.

Smart Machinery Health Management for Turbomachinery Debuts

The benefits and features of Emerson Process Management's extension of PlantWeb to include smart machinery health monitoring capabilities came under close scrutiny Monday at a media event that included several presentations and a live exhibit floor demo. Members of the press gathered at the Global Users Exchange in Grapevine, TX, to learn more about the major advance. The solution now includes the CSI 6000 Machinery Health Monitor and provides API 670 protection, which is the American Petroleum Institute's globally accepted definition of industry best practices for turbomachinery protection. The addition of protection for turbomachinery completes Emerson's online machinery monitoring offering.

Emerson's Smart Machinery Health Monitoring integrates with the process automation environment, enabling maintenance and operations personnel to maximize equipment reliability and plant performance. The new CSI 6000 monitor protects critical machinery from catastrophic failures, permitting orderly shutdown of equipment and related processes. Through the PlantWeb digital plant architecture, the monitor integrates with Emerson's AMS Suite of predictive maintenance applications. Further integration with Emerson's Ovation and DeltaV automation systems provides operators with essential machinery information.

Extending PlantWeb's Smart Machinery Health to such critical assets adds machinery protection to provide a complete, integrated solution, including prediction, protection, and performance monitoring, noted Brian Humes, vice president and general manager, machinery health management for Emerson. "Doing more with less," is more than a slogan, said Humes. "It is critical to our survival." Humes observed that assets must operate at peak performance to maximize throughput and that plants must strive to attain zero unplanned downtime with fewer people. Safety, health, and environmental compliance are paramount, said Humes, adding, "If assets as big and expensive as these are not running, the plant is not running."

Four Emerson Process Management representatives participate in a show floor demonstration of PlantWeb Smart Machinery Health Monitoring capabilities Monday at the company's Global Users Exchange. From left are Don Marshall, director, marketing, machinery health management; Brian Humes (holding a turbine blade), vice president and general manager, machinery health management; Craig Llewellyn, president, asset optimization, and Deane Horn, marketing manager, machinery health management.

Compliance of the CSI 6000 machinery health monitor with industry standards makes the device ideal for refining, chemical, power, oil and gas and petrochemical applications. Machinery events can be unpredictable, predictable or controllable, explained Deane Horn, marketing manager, machinery health management for Emerson. Effective online machinery monitoring addresses all three situations. "It integrates process control information and sends it to operators so that they can make live decisions," said Horn, adding that AMS Suite graphics let operators "see" what's happening, make a decision, and orchestrate a shutdown, if necessary.

"Turbomachinery is at the heart of every process plant, and, to operate with confidence, our users need predictive diagnostics, performance monitoring and protection systems integrated with process automation," said John Berra. "By delivering these capabilities through the PlantWeb digital plant architecture, Emerson enables users to improve machinery performance over the life cycle of a plant."

Learn more about these offerings by visiting www.assetweb.com/mhm.

Solve the Puzzle and Win a Video iPod!

If you can completely solve this puzzle, you will reveal a special message and be eligible to win an 80GB iPod Classic to be given away Friday during breakfast.

Fill in all contact information below, tear out, and drop into the contest entry box outside the Texas ballrooms. On Friday, one name will be drawn to receive the iPod Classic. (You do not need to be present to win.)

Name _____
Company name _____
Street, City, State, Country _____
Phone number _____
E-mail address _____

How to solve the puzzle

1. Following the clues, write the words with a letter for each numbered dash.
2. Transfer the letters to the corresponding square on the grid.
3. As you figure out words in the grid, transfer those letters back to the corresponding clues. The letter in the box identifies its corresponding clue.
4. When the grid is filled in, the quote can be read left to right. Black squares indicate breaks between words. The first letters of the words by the clues read down indicate the name of the speaker and the topic.

A. "Once … twice shy"
__ __ __ __ __ __
21 51 116 15 109 85

B. Uncovered
__ __ __ __ __ __ __
29 27 90 17 119 86 35

C. 90's teen star Christina…
__ __ __ __ __
101 48 72 32 20

D. "Up on the …"
__ __ __ __
47 25 54 93

E. Come on the scene
__ __ __ __ __ __
115 68 95 36 79 26

F. Uses pipes
__ __ __ __ __
103 70 50 59 107

G. Calibrating authority **(Acronym)**
__ __ __ __
52 14 62 24

H. Extra … perception
__ __ __ __ __ __ __
74 89 83 8 63 77 65

I. Contrary to
__ __ __ __ __ __ __
94 16 58 117 18 73 81

J. Without beauty
__ __ __ __
67 84 22 98

K. VA DC suburb
__ __ __ __ __ __
60 23 13 53 42 49

L. Micro Motion technology
__ __ __ __ __ __ __ __
114 71 3 80 39 5 44 7

M. Give strength
__ __ __ __ __ __ __
4 41 69 33 87 97 104

N. Make a point: Give a … **(2 words)**
__ __ __ __ __ __ __ __ __
19 57 113 102 61 11 38 108 96

O. Everybody has one
__ __ __ __ __ __ __
78 99 2 111 82 46 30

P. Throw a …
__ __ __
64 110 37

Q. Famous 1846 "party"
__ __ __ __ __ __
31 66 43 55 100 118

R. Wireless helps us … devices **(2 words)**
__ __ __ __ __ __
10 88 112 40 12 1

S. Entice
__ __ __ __ __
91 6 105 76 28

T. Profound pieces of music
__ __ __ __ __ __ __
106 34 45 92 56 9 75

1 R	2 O	3 L	4 M	5 L	6 S	7 L	8 H		9 T	10 R	11 N	12 R	13 K		14 G	15 A		16 I	17 B
18 I	19 N	20 C	21 A	22 J	23 K		24 G	25 D		26 E	27 B	28 S	29 B	30 O	31 Q		32 C	33 M	34 T
35 B	36 E	37 P	38 N	39 L	40 R		41 M	42 K	43 Q	44 L	45 T	46 O	47 D	48 C	49 K	50 F		51 A	52 G
53 K	54 D		55 Q	56 T	57 N		58 I	59 F	60 K	61 N	62 G		63 H	64 P		65 H	66 Q	67 J	68 E
	69 M	70 F	71 L	72 C	73 I	74 H	75 T		76 S	77 H	78 O	79 E	80 L	81 I	82 O	83 H	84 J		85 A
86 B	87 M		88 R	89 H	90 B	91 S	92 T		93 D	94 I	95 E		96 N	97 M	98 J		99 O	100 Q	101 C
102 N	103 F	104 M	105 S	106 T	107 F	108 N	109 A		110 P	111 O	112 R	113 N	114 L	115 E	116 A	117 I	118 Q	119 B	

Global Perspective: Asia-Pacific Region Growing Rapidly

If you want to follow Mike Train day-to-day, you'd better bring your running shoes.

"I'm having one of my typically fun weeks," he says. "I was in Australia on Monday, Tasmania on Tuesday, Shanghai on Wednesday, and I'm headed to Seoul on Thursday. Then back to Singapore to see my kids on the weekend."

Mike Train

Building frequent flyer miles isn't a problem when you consider the territory he covers as president of Emerson Process Management, Asia-Pacific. It includes Australia, China, India, Indonesia, Japan, Korea, Malaysia, New Zealand and Pakistan and everything in between. That's easily one-third of the world with huge population centers. "We've got plenty of action," he says, laughing. "I'm not begging for more."

Right now Train is paying very close attention to the market segments driving Asia where Emerson is a major participant.

"Power is a big one in China especially," he begins. "Over the last five years they've built a lot of power plant capacity. They were going quite fast, but now they're slowing down to a reasonable rate. They're still adding on 600 and 1000 MW plants in many parts of China. Our Ovation products, our valve products and our Rosemount products have all done very well with that, so that's a major segment of our business there. Power is also big in China, Korea and southeast Asia with renewed economic development in that part of the world. India has not built the power infrastructure they need, so it's becoming quite urgent there now. You're going to see an explosion in the Indian power industry in the next couple of years.

"Oil and gas is another big segment for us, as it is for the whole world right now. In China they have oil offshore, gas in various parts of the country and lots of pipelines. Oil and gas is the main process industry in southeast Asia. There's oil and gas on shore and offshore all over Indonesia, Malaysia, Thailand, Brunei and others. Australia has some oil but a lot of gas with huge deposits in the northwest. There will be LNG projects coming out of the north of Australia for the next 10 or 15 years. The Reliance Group is developing a big offshore gas field off the east coast of India.

"For us, oil and gas business for us comes in two flavors. First there are the greenfield projects with the new construction, but there are also the plants that were built 20 years ago, especially in southeast Asia where we're going back, rebuilding platforms, and updating things. They're looking at the types of architectures and resetting them for another 15 or 20 years of operation. So we're working with both kinds of projects."

That's a lot to keep track of, and a key challenge of staying with such dynamic markets. China is growing anywhere from 10%% to 15% annually, depending on who makes the estimate. "China is taking resources from the whole region which is driving everything," he notes. "But if China stops, the whole region would stop. Probably half the world would stop because of all the activity right now that relates to the growth in China."

Emerson's eggs aren't all in one basket, though. Train sees projects originating in Asia spreading out around the world. "Our group here also works on projects that are destined for the Middle East, like the Qatar gas projects through engineering companies like Chyoda and Technip. We've been doing valves that are 12 and 14 feet tall through our engineering and manufacturing facilities here in Asia. It's all linked together now days."

Growth in China has come with many costs, particularly serious pollution side effects, but the country is beginning to attack the issue more seriously. "China is really beginning to pay attention to environmental issues. There are some legacy problems, but the government and large companies seem genuinely concerned and are trying to stay on top of it. They're using technology to bring best practices to China. I think that environmental concerns will be a driver over the longer term."

Visitors to Asia often return with reports of major technological advances in plant design and construction, with operations competitive with any in the world. "Plants in Asia aren't only world class in sophistication, they're world class in scale, Train observes. "In many cases they're the largest versions of the plants that have ever been built. The process licensors are those we all recognize globally, so they are bringing global standards of design to China. They don't want to overwhelm things with labor, as was the policy in years past. If you visit these plants, there isn't a lot of manpower, they're run as well as anybody's plant in the world is. That's true of what you'll see in India as well. Our customers have been good adopters of what we do with PlantWeb. They've been willing and able to use digital architectures, to use all of the software solutions that are available to put into these plants. Technologically, they're quite willing to try new things. Of course some industries in some areas are more conservative. For example, after they've built 50 powerplants, they really don't want to change much when they build number 51. But in oil and gas, they're always willing to try new technology."

So will Asian customers Continued on page 7

Road Map

Continued from page 1

small projects at the top. You don't have to think of all the top-to-bottom applications and put them all in at the same time. Wireless has the potential to start small, add to it, build up whether you start at the top and work down or start at the bottom and work up, you can still do it in an incremental way.

CE: Given our overall process orientation, do engineers generally start by thinking of wireless instrumentation rather than wireless workers and walk-around HMI as the starting point?

Berra: People who live in the world of instrumentation and control can be expected to start there as they think about wireless. But the walk-around thing is a really important aspect, not only for operations but for maintenance. Our customers tell us, "Everything in the plant's more complex, we don't have all the people we once had, knowledgeable people are retiring, please help us with troubleshooting and maintenance."

I envision a maintenance technician having a walk-around screen and having a very meaningful conversation with the piece of equipment that he or she happens to be sitting next to. The equipment can guide the technician through what needs to be done or the operator can go online, download instructions, go online with other people, all of this taking place real time.

Zornio: If you want to look at something as a technology shift, one perspective we might offer is if you have a big enough change in technology, and organizations, peoples' work processes change and adapt in a significant manner to take advantage of that new technology so they can do something different.

Take a simple analogy: Before cell phones, you had to schedule your life to be by a phone when you had an important call or teleconference. Now we've all adapted our practices to say, "I can take the important call while I'm driving to work or at the airport." Wireless, like DCS did, provides those kinds of changes in the automation world. People will no longer be dependent on coordinating field operations with the central control room because they need to have access to both. On the sensor side, everybody makes decisions and looks at analyzing their process from the perspective of "the data we got's the data we got."

With wireless, one of the big promises is the ability to provide additional sensors to a trouble area. You can put a blanket of sensors there. Today, you don't even think of that as a potential solution.

CE: Is the addition of new networking capabilities changing your fundamental thinking as you move from a "traditional instrumentation but without wires" into a more integrated approach?

Berra: I'm going to differ with you a bit. Our whole direction when we launched PlantWeb many years ago was to provide our customers with another layer of use out of the instrumentation and valves and systems. And that layer of use is related to things like asset optimization and asset performance improvement and understanding the health of the system. We launched a strategy of predictive intelligence, early warning, better information about what's going on, not only with the instruments and valves, but with the process around them and the equipment that they're attached to. That's always been our direction. We did it with HART, we did it with Foundation Fieldbus in the wired world.

When we launched wireless a year ago, we expected that the ability to do the kinds of things we were already doing with PlantWeb would become exponentially better, because that barrier of installation cost was reduced so substantially. We envisioned that some non-traditional applications of sensors would emerge. We also envisioned that some new types of sensors would have better economics in the wireless world than they did in the wired world. Think of detecting things like corrosion and vibration. Wireless allows those to be more completely deployed. I don't think we started in one direction and now discovered a year later that this is really where it's going. I think we did a good job of anticipating this and seeing wireless as something that turbocharges the whole PlantWeb message. It's very consistent with what we've been doing for the last 10 years or so.

Zornio: I think one reason for the partnership with Cisco is if we focused just on that aspect of wireless, when customers ask us, "What about this other side of wireless?" they can be assured that we have a vision and a plan. We aren't creating a stand-alone kind of system. Partnering with someone like Cisco and making sure we have a combined architecture makes everybody feel there is a whole story here if I choose to start in the field and then move up to the plant network.

CE: Based on some of the early case studies published by various vendors on early adopters of wireless, it seems that some companies are beginning with ancillary applications such as safety shower alarming or VoIP and that provides the infrastructure for wireless instrumentation. Do you also see such possibilities with your new capabilities?

Zornio: Think about another big networking change, the Internet. What's the first thing you heard about? E-mail. For a while, it wasn't about the Internet, or shopping online, it was about the fundamental, first value driving application that attracts people to the technology, and the infrastructure gets in place. Here's the business need I have and here's how we deliver value, and the fringe benefit is that the infrastructure gets in place. Is that infrastructure going to be useful for other things. Did you buy an e-mail appliance as a single-purpose device? If you know you will want to do other things, you want to have a solution with additional capabilities. The analogy for us as we look at these sensor applications is the ability to do the other things that John was mentioning yesterday.

Berra: The whole idea of what's base and what's ancillary when technology goes through these changes all change. Things that we might have thought of as ancillary go into the base. If our customer base sees the role in the narrow sense of putting in just what is needed to do process control, they're narrowing their view too far. What an automation professional really needs to think about is all of the things I can do through automation to make the plant run better, safer, more securely, better use of energy, all these things that affect the economics of our customer's plant. Those aren't ancillary applications.

Zornio: I don't need to be the eyes and ears for automating the plant, I need to be the eyes and ears of the plant. What is it that the plant needs? And here's this new tool that's going to make it easier to do that. Who else is going to fill that role?

Best Bets for Today

Continued from page 1

1:00 p.m., Texas 2: Ensuring Optimal Power System Reliability Through Proper Grounding, Testing and Maintenance.

1:00 p.m., Texas 5: How to Troubleshoot Like an Expert: A Systematic Approach.

Educational Services Courses

Sure to fill up:

8:00 a.m., and 1:00 p.m., Texas 3: DeltaV SIS.

8:00 a.m., and 1:00 p.m., Texas 6: Self-organizing Wireless Network Setup—Wireless From Planning to Implementation.

8:00 a.m., and 1:00 p.m., Grapevine 1: Practical Loop Tuning Using Lambda Tuning Method.

Workshops

8:00 a.m., Grapevine A: Electric Fault Analysis in AC Induction Motors Using Vibration, Electric Current and Flux.

8:00 a.m., Grapevine C: Modern Asset Management + Traditional Troubleshooting = Optimized Control.

10:00 a.m., Grapevine C: Smart Wireless Vision, Opportunities and Solutions.

10:00 a.m., Ft. Worth 5: DeltaV Communication for Data Transfer, Control and Reporting Using OPC and OPC HDA.

1:00 p.m., Ft. Worth 6: A Veteran's Guide to Securing Your Architecture.

3:00 p.m., Grapevine A: Techniques for Improving Machinery Health Across the Chemical and Refining Industries.

NEW PRODUCT

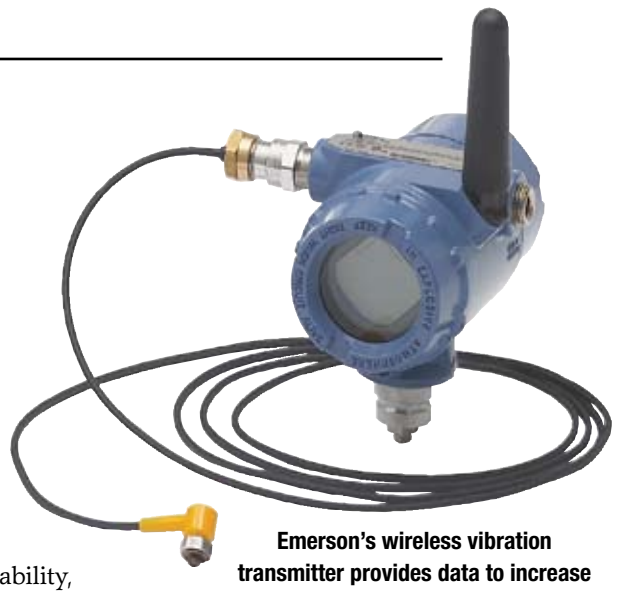
Wireless Vibration Transmitter Boosts Reliability, Safety

A new wireless machinery health transmitter from Emerson Process Management expands the family of Smart Wireless field instruments for process monitoring and predictive diagnostics. Introduced at the Emerson Users Group Exchange this week, the CSI 9420 provides monitoring of mechanical equipment, delivering predictive diagnostics for improved reliability and plant safety.

A rugged industrial transmitter connects quickly, easily, and economically to any machine. Through PlantWeb digital plant architecture, it delivers vibration information over a reliable, wireless self-organizing network for use by operations and maintenance personnel.

Configuration, diagnostics, and alerts from the transmitter are available in AMS Suite predictive maintenance software. Vibration data are also available in data historians or any control system for trending and analysis with other process parameters. The transmitter also includes PeakVue technology for advanced bearing diagnostics.

The device can be used in a wide range of equipment, including pumps, motors, fans, compressors and pulverizers. Benefits go beyond reliability to health, safety, and environmental applications. "Adding the wireless vibration transmitter to Emerson's portfolio of Smart Wireless devices gives plant personnel another powerful predictive tool to increase safety, reliability, and uptime of machinery in process plants," said Craig Llewellyn, president of Emerson's Asset Optimization division.



Emerson's wireless vibration transmitter provides data to increase equipment and plant availability.

For more on this product, visit www.assetweb.com.

Good Marriage

Continued from page 3

that allowed early detection of potentially hazardous temperature rises and kept employees from having to climb to the top of railcars to take measurements.

The success of these applications, said Berra, "is music to my ears. It should be music to your ears as well."

Calling the wireless architecture the enabler for new plant solutions, Peter Zornio, Emerson's chief strategic officer, cited extended plant and asset information, enhanced mobile and remote workforce productivity, and improved business and plant management among the benefits. Wireless in process applications has some very specific requirements, said Zornio, including bandwidth, security, reliability, and power needs. "We cannot drop a call," he noted.

Zornio enumerated Emerson's rich offering of existing wireless field devices, and the introduction of several new ones at the Global Users Exchange [see new product discussions elsewhere in this issue.]. Zornio also pointed to the benefits of industry standards, such as WirelessHART, which was approved by the HART foundation leadership earlier this month. Fully compliant WirelessHART products from Emerson will be available in the spring of 2008.

Turning to the recent collaboration announcement, Emerson executives said that the two companies are "uniting to deliver complete, best-in-class wireless solutions for the process industries." Cisco and Emerson noted they will leverage their joint expertise for all wireless plant applications including video, voice, mobility, and tracking.

"Our solutions are complementary," agreed Maciej Kranz, vice president of product marketing for Cisco's wireless business unit. "Networks and mobility are dramatically transforming our customers businesses and in-plant processes. By delivering a combined wireless architecture from Emerson and Cisco, we are enabling our manufacturing process customers to deploy flexible, scalable and safe wireless solutions and mobility applications in rugged plant environments."

Kranz underscored Cisco's commitment to the industrial side, citing a variety of products (industrial class mesh AP, industrial class Ethernet switch), solutions (including common architecture for IT and plant systems), and expertise. He also noted how Cisco and Emerson are working to increase productivity, efficiency, and safety in the plant and leveraging information to make real-time business decisions.

At a live demonstration of wireless applications on the exhibit floor, Emerson's Bob Karschnia, vice president, technology, Rosemount Measurement and Cisco's Kranz joined forces to show what Karschnia called "complete solutions to extend plant visibility wirelessly." Included were a demo of Emerson's new wireless vibration transmitter gathering trending data that can be seamlessly integrated to a DeltaV system and wireless sensing at an eyewash station used to enhance safety by locating and alerting relevant personnel.

For more about these companies and the collaboration, see Monday's issue of the 2007 Emerson Global Users Exchange Exchange Today, or visit their Websites at www.emersonprocess.com and www.cisco.com.

Global

Continued from page 4

be well represented at the Exchange? Yes, because they have not yet developed the extensive industry networking common in North America and Europe. "They don't have the depth of experience of other parts of the world, so they're seeking out connections when they come to the Exchange and other key customer types of events. That's one of the benefits of the exchange. They'll go to sessions where they can hear about new things as they look for ways to add value. They're value driven, just like everybody else is. They're trying to build their businesses and be successful.

In spite of the time spent traveling, Train enjoys his work and his customers. "I get to interact with people from North American companies as they're contemplating investments here. We show them what our customers have done and our capabilities here, and I think sometimes they're surprised and impressed with what they see. It's a fast paced environment and there's a lot of capability here. Emerson has tried to build teams and skills within our organization in addition to technologies. When new companies come and see what we do here, they appreciate having us along as they make initial investments in the region. We become their experience base to share with them."

Can you keep up with the pace if this growth continues? Yes, but growth presents its own challenges. "It certainly makes management a lot of fun. We're constantly recruiting people to keep up with that. HR here is a contact sport," he notes.

"In the next three to four years, we don't expect a lot to change. People still want to invest, they want to build plants, they want to spend money, so the pace will be the same for the near to medium view. I don't have any customers saying they're going to stop. There's no talk of that kind of thing. The biggest talk right now is that engineering companies are sold out. That's affected Houston, London and other parts of the world. That's the only thing standing in our way right now."