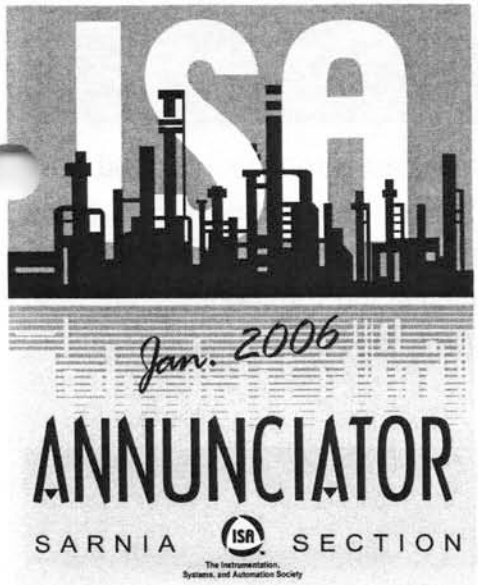


DINNER MEETING NOTICE

MONDAY

JAN. 30, 2006

SARNIA GOLF & CURLING CLUB
500 Errol Road West, Sarnia
Phone: (519) 336-2201

Cocktails 6:00 p.m. – Dinner 7:00 p.m.
All Guests are Welcome!

GUEST SPEAKER...

AMIR GHOREISHI

Topic... *"Radar Level Technology for Chemical & Petrochemical Industries"*

Amir Ghoreishi will cover the fundamentals of pulse and FMCW radar technologies. The topics like frequency relationship to performance and antenna selection will be discussed with a few application examples.

MENU

CREAM OF BROCCOLI WITH CHEDDAR SOUP
PORK A LA ORANGE
SCALLOPED POTATO
MIXED GREENS
CHOCOLATE LAYER CAKE

NOTE: KINDLY BOOK BEFORE DEADLINE INDICATION.

Please phone in or E-Mail your reservation by...
Jan. 26, 2005 to... MAUREEN LYNAS
Phone: (519) 336-3006 • Fax: 344-0607
E-Mail: maureen.lynas@willereng.com

New Member Benefit! **MEMBERS $10 ▸ GUESTS $20**

NOTE: *ALL Members and guest are requested to reserve in advance. Please oblige... we need your support to plan your evening!*

Upcoming Events

- June 9, 2006 - ISA Golf Tournament

2005 Directory

The 2005 Sarnia ISA Directory is now available. Call... Kevin (519) 333-6705 for details.

The Sarnia Section has a domain on the internet. Next time you're on the net give us a look at:

www.isasarnia.com

Announcements

• The section regrets to advise all our members and vendors that the proposed Valve Seminar and Expo anticipated for February 2006 has been cancelled. We appreciate all the vendors and members who consented to participate and we send our gratitude.

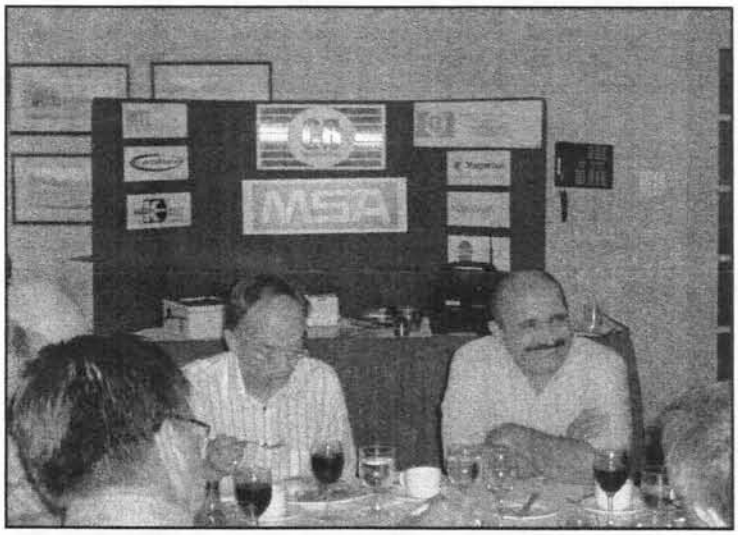
• We would like to thank Paul Strong for his good work as Program Chairperson and Honours & Awards Chairperson over the last many years. Paul has accepted a new position in the Toronto area. We wish his family and him well in the future. Thanks Paul!

Guest Speaker Abstract

Amir Ghoreishi - Siemens Canada

Amir is a Level Product Manager for Siemens Canada at their Peterborough facility. He has a Bachelor's degree in Electrical Engineering. Amir has been working for 15 years with Siemens-Milltronics as application engineer, marketing specialist and now Level Product Manager. He has been involved in application of hundreds of non-contract level measurement devices, both Ultrasonic and Radar.

September Dinner Meeting



"They can monitor enough data of the equipment to tell if it is having a problem," said Ron Dawson, product manager at Kessler-Ellis Products Co. in Eatontown, N.J. "The whole idea is to gather all the information and try to put it together in a way that is useful— not just a random pile of data."

Deploying wireless sensors to monitor equipment can reap big dividends by preventing equipment problems, alerting IT managers to severe temperature spikes, and eliminating poorly made product, executives said. "If they can detect temperature spikes in equipment in real time, they can take preventative action," said Niemi. "The edge is they are able to run their whole operation more efficiently. With wireless, you can put a sensor on every motor in your plant now. Manufacturers can sense in more spots, and they can sense continuously."

Other companies are using sensors to control today's sky-rocketing HVAC costs, he said. Niemi points to a business installing sensors on all four sides of a building so the East-facing wall receives less heat in the morning, when the sun rises, than the other sides. "If you can save 10% of your heating and air-conditioning costs, that's not insignificant."

"Customers normally have a target in mind—they've been able to determine what they'd like to improve. In our discussion with them, we can tell them what measurements we can take based on the current sensors they have in the field," said Mike McMann, general manager at Automation ONSPEC Software Inc. in Rancho Cordova, Calif. "Most of the time, folks already know what to do but can't do it with the tools they already have.

"We put the logic back into the software— if a tank is 80% full, then we want to shut it down, or if it is certain heat, do this. ... It makes the process more automatic. We also have 10 levels of alarms. It builds safety right into the system," McMann said.

In addition, a well-implemented wireless system allows for information to be shared readily among various departments or even geographic locations. "As the lines between operations blur, [manufacturers] benefit from the flexibility of sharing data among many functional areas within their facility, as well as remote sites," Dawson said.

"The ability to move information easily throughout the enterprise using different computing solutions and platforms, both horizontally and vertically, cuts costs, speeds development, and promotes improved operating efficiency. Wireless SCADA controllers and remote terminals can clearly help manufacturers integrate, monitor, and control remote sites with minimal investment," he said.

Developing standards

A lack of standards and mix of proprietary solutions have been holding some manufacturers back from wireless SCADA adoption, officials said. The industry is taking steps to overcome standards committee on Wireless Systems for Automation expects to have a draft standard available for review in the first quarter of 2006. The SP100 group consists of vendors and has the support of the Wireless Industrial Networking Alliance, an end-user-oriented group created in February 2004.

"Standards are going to ensure that newer technologies will be adopted," Williams said.

Of course, standards—such as WiFi, Bluetooth, 802.11, and its iterations—already exist. The emerging ZigBee standard also is generating a lot of interest. "The good part of ZigBee is it's created this buzz and got a lot of peoples' attention," Williams said. "It isn't really an industrial-type standard, [but] big companies are looking at ZigBee."

"The technology has evolved significantly, even in the past one to five years," said John Crockett, marketing project manager at MaxStream, an Orem, Utah based manufacturer of wireless communication modules and standalone radios. "The reliability is there. It's starting to take off, especially with these new standards like ZigBee and WiFi."

Prices are dropping. And wireless network installation can be less pricey than hard-wiring a manufacturing floor or building. Asbestos and high priced electricians are only two costs wireless SCADA networks can help manufacturers overcome.

"You can spend a lot of money when you want to run a cable from one part of a manufacturing plant to another," said Dawson. "You have high-priced workers running conduits, maybe having to run it up to the ceiling and down again. In a big factory, it can be hundreds of yards of wire. In that case, it is really useful to go wireless. Wireless has gotten a lot more reliable than it used to be—and it used to be more expensive and more prone to interference and noise. Now it is reliable and inexpensive. It's become cheaper than cable."

Vendors also have added the robustness and features manufacturers want, Niemi said. "If you look at wireless mesh, the products are just now at a point where they have enough features for industrial customers."

Waiting for buy-in

Despite its enhanced security, robustness, and features, as well as its declining admission cost, wireless is not—and most likely, never will be—the best solution for all manufacturers' SCADA needs. Rather, wireless and hard-wired networks must coexist and integrate to truly meet a business' information collection and analysis needs, industry executives said.

"The SCADA system is usually a plantwide investment, and you don't usually say, 'Let's go wireless and rip everything else out,'" said Pete Craner of Teamwork Solutions Inc., a Syracuse, N.Y.-based software and integration firm.

"If you go to some normal factory, they're probably not deploying much wireless on the factory floor yet because they can wire it," Niemi said. "We've got another good year of kicking the tires."

New buildings or manufacturing sites generally are more willing to add expansive wireless networks since they have no legacy network in place, said Crockett. "For those looking to start out—a new building, a new manufacturing factory—the benefits of wireless far outweigh the existing way," he said. "The numbers are skyrocketing."

For now, adoption of wireless SCADA has consisted of "different deployments and different things," said Niemi, noting none of "the big guys" have invested yet. Once they do, many more will follow.

"Wireless is something that is impacting all of our lives, whether personal or business," said Craner. "Manufacturers are adopting wireless, but in small ways. You don't jump in and change their whole plan. I've seen wireless in several manufacturing plants where they put in wireless installations for places that would have been costly to hard-wire. That's why I am so sure we'll see it propagated throughout the plants."

ABOUT THE AUTHORS

Alison Diana and **Hailey Lynne McKeefry** have extensive experience reporting on and writing about the channel and technology (www.professionalink.biz).

President's Message

Happy New Year! Greetings once again from Sarnia ISA executive. I trust everyone had a great holiday season.

We are once again in high gear, looking ahead to increase the recognition of the Sarnia section via an increased visibility through honours and awards. The section executive held a special meeting January 9 to nominate members through recognition via the honours and awards system. You should hear feedback from this soon.

We are looking forward as well to a spring District 13 meeting in Toronto, and a President's spring meeting as well. These should aid in increasing the tools on hand to support our local sections. Other activities include some new approaches that our program committee is looking at to increase interest in our meetings. We invite you to take a moment to send any suggestions on to Kalpen Vachharajani, the program chair, or to myself.

Once again, as always I, along with the rest of the executive urge you to get involved, and see what great rewards are offered in the involvement in the local section, the District, or any of the many branches of ISA. Never underestimate the value of the technical aspects, the training, the networking , or the social aspects of your society.

Don Murch, CET
ISA Sarnia Section President

Executive 2005-2006

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Wireless SCADA Gains Foothold

Dropping prices, niche applications, and standards efforts fuel interest among manufacturers.

By Alison Diana and Hailey Lynne McKeefry

In an environment that included fiery temperatures and molten metal, a steel manufacturer was unable to use traditional hard-wired networks to monitor much of its sophisticated, expensive equipment. But, like many manufacturers facing global competition and tight margins, the company wanted to install sensors on its steel manufacturing equipment for preventative maintenance because they knew downtime meant lost revenues.

"There are a lot of applications where you can't get hard-wired devices. Molten metal melts copper wire," said Gerald Niemi, product line manager at B&B Electronics Manufacturing Co., an Ottawa-based manufacturer and distributor of industrial communications products.

While manufacturers are comfortable with hard-wired supervisory control and data acquisition (SCADA) solutions, most have been slow to adopt wireless iterations of these devices, industry executives said. In an environment where change takes a long, gradual turn, there have been successful pilot programs at a diverse group of manufacturers, which are helping wireless SCADA gain foothold in this vast vertical market.

Executives are considering using sensors for applications such as temperature, moving machines, HVAC, security, and utilities, Niemi said. Among the most popular applications are process monitoring, environmental monitoring, predictive maintenance, process control, and industrial safety monitoring.

FAST FORWARD

- IT executives are eyeing wireless sensors for a host of applications, such as temperature, moving machines, HVAC, security, and utilities.
- Some companies want wireless sensors on costly or heat-sensitive equipment, enabling them to detect problems.
- The ISA-SP100 standards committee on Wireless Systems for Automation expects to have a draft standard available for review in first quarter 2006.

Starting small

"The manufacturing companies historically felt pretty comfortable with wired solutions," said Frank Williams, vice president of Elpro Technologies, a San Diego-based developer of wireless products and systems for process and manufacturing applications. "In the SCADA marketplace, they had a reallife problem. They had to transmit data over long distances."

Given the high cost and frequent impossibility of laying miles of cable, manufacturers began casting about for wireless technologies to resolve their long-distance, data-collection problem, he said. To be players in the competitive international market, manufacturers need to access, digest, and learn from corporate and logistical information, Williams said.

"The manufacturing companies are saying, 'Look, I compete on a global stage now. Ninety-eight percent productivity isn't acceptable any more,' " he said.

Some companies are installing wireless sensors on costly or heat-sensitive equipment, such as that found in a steel mill.