

SCADA USERS GATHER FOR JOINT ISA/WEF SPECIALTY CONFERENCE ORLANDO

Graham Nasby, P.Eng, PMP, Eramosa Engineering Inc.



his past summer, Supervisory Control and Data Acquisition (SCADA) professionals from across the US and Canada gathered for a speciality

conference focused entirely on SCADA, automation, and instrumentation.

SCADA refers to the automated computer systems, instrumentation, wiring, and communication networks that utilities use to effectively control, monitor, and optimize our collective water and wastewater infrastructure. This unique symposium encourages collaboration between both the water and wastewater sectors, which often use similar SCADA technology as a vital part of their operations.

The International Society Automation (ISA) Water/Wastewater and Automatic Controls (WWAC) Symposium represents a unique collaboration between the Water Environment Federation (WEF) Automation and Info Tech Committee, the local American Water Works Association AWWA section, and the ISA's Water/Wastewater Industries Division. The annual ISA WWAC symposium brings together SCADA professionals from both the water and wastewater sectors in an environment where they can learn about new techniques and share ideas. With the recent demise of IMTech, the ISA WWAC symposium is now the only conference of its kind in North America.

As both an ISA and WEAO member, I have had the privilege of leading the organizing committee that put together the 2012 WWAC Symposium as well as the planning effort for next year's upcoming 2013 WWAC symposium, which will be taking place August 6-8, 2013. (Please see the Call for Abstracts for a list of Speaking Track topics.)

With its 2.5-day format, the WWAC symposium is a highly focused event that centres on operational considerations and design best practices for SCADA systems. The first day consists of one or two optional training courses and a no-cost late-afternoon plant tour. This is

then followed by two full days of technical speakers, papers, and posters. Thanks to the Tuesday to Thursday timeline, many attendees use the symposium as an opportunity to take a few vacation days, bringing the family along to visit Walt Disney World.

As part of the 2012 symposium, a full-day course was offered on identifying and managing cybersecurity risks. The course was well attended with over 35 operations specialists from across North America attending the class. For 2013, a two-day course on advanced cybersecurity techniques is planned along with a one-day introductory course on flow meter selection and sizing.

With a typical attendance of around 200, the ISA WWAC symposium offers a small enough atmosphere to get to know people but enough critical mass to make it worth attending. This year's technical program consisted of some 30 papers and presentations, including a keynote speaker on asset management and two invited speakers on cyber security and high performance Human Machine Interface (HMI) design. Guest speakers from the WEF Automation and Info Tech Committee and the local AWWA section also gave talks about current SCADA trends in both the water and wastewater sectors.

At the 2012 symposium, attendees toured the brand-new Southern Regional Water Supply Facility (SRWSF), with complimentary bus transportation provided by one of the symposium's platinum sponsors. Tour hosts, Orange County Utilities (OCU), brought most of its operations team out to showcase its newly opened flagship plant. For the 2013 symposium, OCU will host a tour of one of its recently upgraded wastewater treatment/water reclamation plants.

Thanks to recent teaming agreements with the local WEF Member Association and AWWA section in the Florida area, the symposium will also offer recognized Continuing Education Units (CEUs) and Professional Development Hours (PDHs) attendees can use for meeting the continuing education requirements for their operator and engineering licenses.

Reciprocity agreements with other associations typically allow for these credits to be used by attendees from across the US and Canada.

The symposium is also a cost effective way to get training credits for SCADA professionals. Attendees at the 2012 symposium received a total of 2.0 CEUs (or 20 PDHs), plus a further 0.7 CEUs (or 7 PDHs) if they signed up for the full day course on cyber security. A similar number of CEUs and PDHs are planned for the 2013 symposium.

One of the themes of the 2012 symposium was how to make better use of the many assets utilities operate and maintain. The 2012 keynote talk entitled Facing Utility Challenges: Managing Risk and Addressing Aging Infrastructure Needs was given by Celine Hyer from Malcolm Pirnie/ARCADIS. Hyer outlined the need to increase the use of SCADA technology for better monitoring of asset conditions over time and how that data from the SCADA-system can be used to make more intelligent asset maintenance and renewal decisions. Touching on this theme, several symposium papers showcased how different SCADA techniques could be used to accomplish this goal.

Another major theme was the importance of automation cyber security for SCADA systems. With Ethernet-based networks increasingly used in SCADA systems and remote connectivity becoming more commonplace, it is more important than ever that SCADA networks be adequately secured and protected from cyber security threats. Along with a full-day course on managing cybersecurity risks, the 2012 symposium featured an invited speaker from the ISA99 Industrial Automation and Control System Security Committee along with six other speakers on cybersecurity related topics.

Also explored at was how to more effectively present operational data on Human Machine Interface (HMI) computer screens. The concept of high performance HMI was introduced by an invited speaker who talked about designing computer screens around operator tasks and taking human factors into account. The talk included new research

highlights from organizations such as the Abnormal Situation Management (ASM) Consortium, Engineering Equipment and Materials Users Association (EEMUA), Electric Power Research Institute (EPRI), and the ISA101 HMI Design Standards Committee with interesting insight into how operations and maintenance personnel use HMIs as part of their jobs. This is no doubt a topic to be explored further at the 2013 ISA WWAC Symposium.

Online registration is now available, and is priced at \$375/person (with the WEF member discount applied), with a

hotel rate of \$92/night. The symposium includes printed proceedings, complimentary hot breakfasts, buffet lunches, a supplier showcase room, and a catered evening reception. Two optional training courses are also being offered: a two-day intensive course on advanced SCADA cybersecurity techniques and a one-day course on flow meter selection and sizing.

For more information about the 2013 ISA Water/Wastewater and Automatic Controls Symposium see www.isawwsymposium.com.



About the Author
Graham Nasby, P.Eng., PMP is a system integrator with Eramosa Engineering Inc. He is the general symposium chair of the upcoming 2013 ISA Water/Wastewater and Automatic Controls Symposium, which is taking place August 6-8, 2013 in Orlando, Florida.
Contact: graham.nasby@eramosa.com

2013 ISA WATER/WASTEWATER AND AUTOMATIC CONTROLS SYMPOSIUM

Crowne Plaza Orlando-Universal Hotel.....Orlando, Florida, USA.....August 6 to 8, 2013

Presented by the ISA Water/Wastewater Industries Division – www.isawwsymposium.com

Technical co-sponsors: WEF Automation and Info Tech Committee and the Florida AWWA Section



CALL FOR ABSTRACTS

Proceedings will be published and made available to water/wastewater division members, and papers will be considered for publication in the ISA's technical journal, ISA Transactions (www.isa.org/isatrans/).

GUIDELINES FOR SUBMISSION

- All authors/speakers must pay the speaker registration fee (\$125)
 - o The speaker registration fee is a discounted conference rate (regular \$425)
- 250 word (max 300 words) abstract in US English shall be submitted electronically
- Authors must indicate what format they wish to present in:
 - o 30 minute presentation (no paper)
 - o 6-12 page paper and 30-minute presentation
 - o Large format 3 foot wide x 4 foot high poster
- Final presentations must be on the supplied symposium PowerPoint template
- Final papers must be submitted in MS Word using supplied symposium template
- Papers/presentations/posters accepted for presentation and/or publication will require completion of ISA Rights and Responsibilities form
- Student papers and posters are welcome
- The lead author is the main contact

SUBMISSIONS

Submit your abstract via email in MS Word format to:

abstracts@isawwsymposium.com AND provenzano2@comcast.net

DEADLINES

Abstracts Due..... January 31, 2013

Notification of Acceptance.....February 20, 2013

First Draft Due.....March 22, 2013

Final Draft Due.....May 15, 2013

A full author information package, along with sample abstracts, templates and a list of topic ideas can be found at www.isawwsymposium.com

FOR ADDITIONAL INFORMATION, CONTACT:

Graham Nasby, P.Eng., PMP
 General Symposium Chair
 Eramosa Engineering Inc.
 +1 519-763-7774
graham.nasby@eramosa.com

Joe Provenzano, M.Sc.
 Symposium Program Chair
 KPRO Engineering Services
 +1 203-560-1816
provenzano2@comcast.net

Rodney Jones
 Staff Contact
 ISA Symposia
 +1 919-990-9418
rjones@isa.org

TOPICS INCLUDE BUT ARE NOT LIMITED TO:

Speaking Track 1 – General Topics

- Instrumentation: New Technologies and Applications
- SCADA Security, ISA99, CSET, and Mitigating Risks
- Control System Redundancy and Robust Design
- Wireless Technologies
- System Integration
- Automation Techniques for Existing Plants
- New Control System Technologies
- Project Management for Integration Projects
- Plant Case Studies
 - Plant Upgrades & New Facilities
 - Control System Upgrades & Replacements
 - Lessons Learned
- Process Optimization
- Automated Control Techniques
- Project Management Lessons for Integration Projects
- Specific Water and Wastewater Challenges

Speaking Track 2 – Smart Water

- SCADA – Supervisory Control and Data Acquisition
- Modelling Non-revenue water & collection networks
- Energy use modelling and Optimization with SCADA
- Capturing and Evaluating Stakeholder Needs
- HMI Design for Operator Effectiveness
- Effective Use of Multiple HMI Screens
- Human Factors and Control Room Design
- Intelligent & Expert Systems
- Alarm Management & Alarm Rationalization
- Implementing of ISA, EEMUA, WEF & AWWA Standards
- Techniques to Reduce Nuisance Alarms
- Call-Out Alarm Rationalization and Techniques
- Data Reporting & Presentation Techniques / Strategies
- Data Management, Historians, and Data Retrieval
- SCADA and the Current Regulatory Environment
- Mobile HMIs, Tablets, Remote Access, and Dashboards