



Water/Wastewater Industry Division

Calendar of WWID Events

- Jun 13-16, 2015 **ISA Spring Leaders Meeting**
Raleigh, North Carolina, USA
- Aug 4-6, 2015 **2015 ISA Water/Wastewater and Automatic Controls Symposium**
Wyndham Lake Buena Vista Resort
Orlando, Florida, USA
- Oct 10-13, 2015 **ISA Fall Leaders Meeting & 53rd ISA Honors & Awards Gala**
Louisville, Kentucky, USA

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Fall 2014 Newsletter

Director's Welcome



Fall is always an exciting time of year at the ISA. It is a time of reflection, with the ISA Honors and Awards Gala and the Council of Society Delegates Meeting, where we look back at the accomplishments of the year. Yet it is also a time to look forward to the year ahead and what is in store for our division and

the ISA as a whole.

This past month, I had the pleasure of attending the 2014 ISA Fall Leaders meetings in Kansas City, Missouri as director of our division. For any of you who have not attended a FLM meeting before, I encourage you to do so.

The Fall Leaders Meeting fulfills several functions of the ISA. Some of the meetings and events that take place at the FLM include: the ISA's official annual general meeting called the Council of Society Delegates (CSD), society-level executive board meetings, meetings of various boards/councils/assemblies within the ISA's governance structure, the annual society-level ISA Honors and Awards Gala, and ISA standards committee meetings.

The other thing which happens at the FLM is that you get to meet other ISA members and leaders from all over the world. Each section in the ISA sends a delegate to the FLM to be part of the CSD. From going to various fall and spring leader

meetings over the years, I have formed strong friendships with fellow automation professionals from all around the world. Automation, whether it is in our sector or in other industries, has a strong professional community which you need to be part of. The ISA performs an important role by providing opportunities like the leader meetings and our symposium so you can get to know others in our field. I encourage you think about the important role that networking has in your career and to think about how ISA involvement can help towards this goal.

I'm pleased to report that our 2014 ISA Water/Wastewater Symposium was a resounding success. In the lead-up to our event, problems with the ISA's online registration system meant online registration was offline for almost 9 weeks, yet we still had 170 people come to the symposium.. I can't wait to see what our 2015 symposium numbers will look like, once the ISA gets the bugs worked out of its new conference registration system.

In this newsletter you will find a comprehensive report on our 2014 symposium, information about our 2015 symposium, and a technical article on cyber security risk management. Enjoy!

Regards,
Graham Nasby
WWID Director
gaham.nasby@eramosa.com

Message from your Director-Elect



For the past 2 years I have had the privilege of serving you as the division's director elect. My goal was to understand what the members wanted from the division and welcome everyone with open arms. With my role as the water/wastewater and automatic controls (WWAC) symposium chair, Graham and I have agreed that it would be best to focus my attention on the symposium chair role. Therefore, Graham has graciously accepted the role of Division Director for another year to allow the symposium to get the well-deserved attention that is needed to make it even more successful.

It seems like it was just yesterday that the 2014 ISA WWAC Symposium was taking place, but in reality it was nearly 3 months ago and we are now in gear for the preparations of the 2015 ISA WWAC Symposium. I would encourage all WWID members to stay up-to-date on symposium happenings on the website at www.isawwsymposium.com.

Be sure to read in this newsletter about our upcoming 2015 WWAC Symposium that is scheduled for Aug 4-6, 2015 in Orlando, Florida, which I truly feel has been getting better each and every year. I also encourage you to submit an abstract for our call for papers which will be closing on December 15, 2014. The symposium is a great time to meet new professionals in our industry and share knowledge that will help you become better throughout your career. I hope to see you there!

Additionally, the student scholarship application is now open and we are currently taking all applications. In an effort to make students aware of the water/wastewater automation profession, the student scholarship is a great benefit for our members and their relatives. I began my career as a co-op student for a water/wastewater engineering firm and still look to that moment as the valuable knowledge I gained that helped me understand the industry and shape my career. The students are most impressionable during these years and helping them become aware of the work that has shaped all of our careers can only help our ever growing industry.

In closing, it's been a privilege serving as the director-elect and as the general symposium chair. It has been quite an experience. I truly look forward to our new venue in Orlando which will be taking place at the Wyndham Lake Buena Vista Resort which is located on the Disney property. This is a great time to not only get informed on the automation industry but also take in some rest and relaxation with the family.

As always, please do not hesitate to contact me with any of your ideas and suggestions for the division to help it continue to be beneficial for our members.

Respectfully,
Kevin Patel, PE, MBA
WWID Director-Elect

2015 WWAC Symposium Announced

We are pleased to announce that our 2015 symposium will be taking place August 4-6, 2015 at the Wyndham Lake Buena Vista Resort Hotel Orlando, Florida, USA.

2015 CALL FOR ABSTRACTS NOW AVAILABLE

250-word abstracts are due December 15, 2014.

Authors can present a 30 minute presentation,
6-12 page paper, or a large format poster.

See www.isawwsymposium.com for more info

The August 4-6, 2015 timeslot has been chosen so that we don't conflict with the major AWWA and WEF conferences. Keep in mind the ISA WWAC Symposium is the only conference that is focused solely on instrumentation, automation, and SCADA in the water/wastewater sector. We look forward to seeing you in 2015!

- ACE15: American Water Works Association (AWWA)
June 7-10, 2015 – Anaheim, California, USA
- **2015 ISA Water/Wastewater and Automatic Controls Symposium** - Wyndham Lake Buena Vista Resort
August 4-6, 2015 - Orlando, Florida, USA
- WEFTEC 2015: Water Environment Federation (WEF)
Sept 26-30, 2015 – Chicago, Illinois, USA

We have selected the August timeslot for several reasons. First of all this is "low season" for the area which translates into better airline and hotel rates – we know that many of our attendees come from public utilities where every training dollar counts.

We also selected the August timeslot so that participants can bring their families – in August school is out and Walt Disney World is just around the corner.



ISA Water/Wastewater and Automatic Controls Symposium

AUGUST 4 - 6, 2015
Wyndham Lake Buena Vista Resort • Orlando, FL

SAVE THE DATE

Highlights:

- 2.5 Day Symposium with Short courses on Asset Management Integration and Alarm Management
- Attendee Registration Rate \$425
Discounts for ISA, AWWA, WEF, and IFA members

More Information:
www.isawwsymposium.com

Presented by the ISA Water and Wastewater Industries Division, in collaboration with WEF Automation and Info Tech Committee, the Florida AWWA Section, Florida Water Environment Association, the ISA Tampa Bay Section, and the Instrumentation Testing Association, the WWAC Symposium helps professionals in the water and wastewater sectors understand how to use instrumentation, SCADA (supervisory control and data acquisition), and automatic control applications for purification, distribution, collection, and treatment of water and wastewater.



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www.isawwsymposium.com

2015 ISA Water/Wastewater and Automatic Controls Symposium

August 4 to 6, 2015.....Wyndham Lake Buena Vista Resort.....Lake Buena Vista, Florida, USA

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

Technical co-sponsors: Florida AWWA Section, the WEF Automation and Info Tech Committee , Florida Water Environment Association, Instrumentation Testing Association, and ISA Tampa Bay Section



Call for Abstracts

Presented by the ISA Water/Wastewater Industries Division, in collaboration with the Florida Section of the AWWA (FSAWWA), the Florida Water Environment Association (FWEA), the WEF Automation and Info Tech Committee, and the Instrumentation Testing Association (ITA), the WWAC Symposium helps professionals in the water and wastewater industries understand how instrumentation, SCADA (supervisory control and data acquisition), and automatic control applications are vital to the treatment and distribution of water, and the collection and treatment of wastewater. The symposium also provides an excellent opportunity to gain valuable technical information, networking, professional development, and continuing education credits (CEUs and PDHs).

This 3-day symposium is focused on the challenges associated with automation and instrumentation in the water and wastewater sector. It features: 2 full days of presentations, a tour of a local water/wastewater facility, a general reception, networking events, a poster session, and a supplier showcase. The first day begins with registration, an optional full-day short course on a current SCADA/automation related topic, and a plant tour. The second day kicks off with a keynote speaker, followed by presentations on general topics such as instrumentation; system integration, automation, plant case studies, new technologies and process optimization/automation. The third day starts with an invited speaker, guest speakers and is focused on the Future of Automation with topics geared towards SCADA, PLC, HMI, Expert Systems, Data Modelling, and Alarm Management. The Tuesday-Thursday timeslot has been selected so that families can easily take their kids to Disney World, both during and before/after the symposium. 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)
 - 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:
 - 30 minute presentation (no paper)
 - 6-12 page paper and 30-minute presentation
 - 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 December 15, 2014

Notification of Acceptance January 16, 2015

First Draft Due March 9, 2015

Final Draft Due..... May 18, 2015

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:

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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

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 – Future of Automation

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

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

WWAC2015_call-for-abstracts_rev2014-07-15.doc

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2014 Symposium Boasts 170 attendees!

Official ISA news release from August 21, 2014

The 2014 International Society of Automation (ISA) Water/Wastewater and Automatic Controls (WWAC) Symposium drew more than 170 attendees, 30 expert speakers and 27 exhibitors to Orlando, Florida, USA in early August to explore and confront the varied challenges associated with automation and instrumentation in the municipal water and wastewater sectors.

The three-day, highly targeted event - focusing entirely on the needs of automation professionals - included an extensive program of technical presentations; an interactive panel discussion; poster presentations; a tour of a local wastewater treatment plant; a vendor exposition; and two sold-out training classes - one on [industrial cybersecurity](#) and the other on [troubleshooting instrumentation and control systems](#).

The 2014 ISA WWAC Symposium was organized by the [ISA Water/Wastewater Industries Division](#) in collaboration with the Florida Section of the American Water Works Association (FSAWWA), the Florida Water Environment Association (FWEA), the Water Environment Federation (WEF) Automation and Info Tech Committee and the Instrumentation Testing Association. In addition, 15 corporate sponsors supported the event.

“This year’s symposium delivered an excellent platform to examine in detail the key topics and challenges relating to automation in the water and wastewater industries, and to stay informed on the trends and dynamics shaping the future of these industries,” reports Kevin Patel, the general chair of the event. “The symposium featured some of the world’s most knowledgeable and experienced subject matter experts.”

Among the diverse topics addressed during the technical sessions were: SCADA standardization, SCADA integration, Latest instrumentation, Wireless communications, DNP 3.0 protocol, Cloud-based SCADA, Cybersecurity, Data management, Smart Water, Human factors, Alarm management, Optimizing process controls, ISA Certified Control System Technician® (CCST®) exam information, A strong emphasis was placed on identifying opportunities and challenges faced by clean water agencies and pinpointing forward-looking solutions, some of which are being implemented today.

The keynote address, titled "A Vision for the Water Resources Utility of the Future," was delivered by Thomas W. Sigmund, P.E., Chair of the NACWA Utility and Resource Management Committee & Executive Director of NEW Water. Other notable speakers at the event included:

- Don Lovell, of ISA, who discussed the importance of troubleshooting in daily plant operations.
- Michael Sweeney, deputy executive director of the Toho Water Authority and long-time member of the American

Water Works Association, who reviewed the current news and trends in the municipal drinking water sector.

- Tom DeLaura, vice president of Eramosa International and chair of the Water Environment Federation's Automation and Info Tech Committee, who highlighted the current news and trends in the wastewater sector.
- Bryan Singer, principal investigator for Kenexis Security, who outlined the most effective ways to conduct industrial security vulnerability assessments, and separated out what cyberattackers can and can't do.

Given the increasing risks posed by cyberhackers, cybersecurity was a hot topic. In his presentation, Singer helped attendees better understand the real threats posed by cyberattack and showed how owners and operators of critical infrastructure can better defend and protect industrial control systems (ICS). He pinpointed the most common techniques hackers use to exploit vulnerabilities and gain system and network access.

Utilizing modern ICS cybersecurity standards and engineering skills, Singer emphasized, can contain and limit the risk of significant network and system damage as a result of cyberwarfare.

In addition, a forum session on the Role of Automation within the Utility of the Future was held. Moderated by Tom DeLaura, the session examined how the evolving operating challenges of utilities will influence the need for automation. Panel members discussed that water utilities, for instance, are increasingly regarded as producers of a highly valued commodity, and that they will require significant operational improvements in order to be cost efficient.

Forum session panel members included: Tom Sigmund, P.E., Chair, NACWA Utility and Resource Management Committee & Executive Director, NEW Water; Kalanithy Vairavamoorthy, Ph.D., Dean, University of South Florida, Patel College of Global Sustainability; Barry Liner, P.E., Director, Water Science & Engineering Center at WEF; Zdenko Vitasovic, Ph.D., Senior Engineer, Metropolitan Water District of Southern California; and Mike Sweeney, Ph.D., P.E., Florida Section of the AWWA & Deputy Executive-Director, Toho Water Authority.

Adding to the value of the symposium were the [two training courses](#), the networking and professional development opportunities, and the continuing education credits (CEUs and PDHs). The credits, provided by ISA and the Florida Section of the AWWA, can be used toward continuing education requirements for various state-issued water operator, wastewater operator and engineering licenses.

“It’s great to know that the symposium is getting better and better and larger and larger,” emphasized attendee Charles Aycock of the city of Roseville, California, USA.

Photos from 2014 Symposium

Thanks to all the participants who contributed photos. Special thanks to our official symposium photographer Christine Cousins for all the photos.



Our symposium hotel – Crowne Plaza Orlando-Universal



Rodney Jones, our ISA staff person, gets the Registration desk ready



Direction signs for our exhibitors to get set up.



Speakers take the bus to the speakers dinner.



Fine dining for the speakers dinner at Vito's Chop House



Enjoying Shrimp cocktails at the speakers dinner



Rodney, Joe and Kevin survey the room at 7am



Symposium Chair kicks things off!



Moderator Pavol Segedy introduces one of our speakers.



We had a full house with over 170 attendees.



Juliana tells an attendee about her poster on HMI design



Program chair Joe Provenzano gives his opening remarks.



The exhibit hall was busy with lots of exhibitors and attendees.



Symposium chair Kevin Patel gives guest speaker Tom Sigmund some authentic Texas Chili sauce.



We even had some nice art to go on the wall for the exhibitors!



It was a busy afternoon in the exhibit hall.



Invited speaker Bryan Singer talks about cybersecurity risks.



The hotel had great catering for the lunches.



Friendly social atmosphere in the exhibitor hall.



ITA Executive Director Tom Delaura and Joe Provenzano chat.



One of the many in depth discussions in the exhibit hall.



The Xylem team at their booth in the exhibit hall.



The guys from EATON in their booth ready for action.



Brian Hembigner receiving a paper award from 2013 symposium.



Dr. Vairavamoorthy points to one of his slides during then panel.



Blair Sooley receiving his award for best 2013 presentation.



A photo of our five panelists in the panel discussion.



Norm Anderson and Bill Phillips with 2013 award for best paper.



Tom DeLaura keeps a close eye on the panel discussion.



Kevin Patel introduces the Utility of the Future Keynote



Gary Wong from OSIsoft shares a word with ISA Water/Wastewater Division Director Graham Nasby



Many thanks to our sponsors and media partners



Don Dickinson from Phoneix Contact talking on cybersecurity



Symposium chair Kevin taking a break in the afternoon



Karl manning his booth for Data Flow Systems



Jon Grant learns about firewall routers in the exhibit hall



Kevin says "See Ya All Later" at the end of the symposium



Jeff Smith from PFS manning his booth, for the 8th year running!



Volunteer appreciation dinner after it was all over! Kevin and Joe grinning after a job well done.

Thanks to our 2014 Symposium Sponsors

The symposium organizing committee would like to thank our 2014 symposium sponsors:

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Keynote Sponsor



Gold Sponsors



Symposium Technical Co-Sponsors



Silver Sponsors



Media Partners



WATER DESALINATION REPORT



Thank you to our 2014 Symposium Exhibitors



Exhibit Booth Information for WWAC2015

Exhibitor tables are still available for WWAC2015, which will be taking place August 4-6, 2015 in Orlando, Florida at the Wyndham Lake Buena Vista Resort.

Exhibitor tables at the 2015 ISA Water/Wastewater and Automatic Controls Symposium are priced at \$875 each which include:

- one six foot table with skirting, 2 chairs, duplex electrical outlet
- two full conference passes, which include ID badges and full conference access (an \$850 value)
- additional vendor passes can be purchased for \$200/each
- breakfasts, coffee breaks, and lunches on Day 1 and Day 2
- admission to the general reception with cash bar on the evening of Day 1
- exhibits room hours: Day 1 & 2 (8:00am-5:00pm), and during Aug. 5th evening reception
- exhibit setup: on Tues August 4, 2015 from 6pm-9pm. exhibit teardown is Thursday, August 6 from 5pm-8pm

SAVE THE DATE

2015 ISA Water/Wastewater Symposium

Aug 4-6, 2015 – Orlando, Florida

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For more information on how to exhibit and sponsor at the symposium please refer to our sponsorship and exhibitor opportunities brochure: www.isawwsymposium.com/exhibit-sponsor/.

2014 Symposium Tour Report

At this year's 2014 ISA WWAC Symposium, attendees had the opportunity to tour Polk County's North East Regional Wastewater Treatment Facility. The NER WWTF is the newest and largest regional plant currently in Polk County. The original plant was constructed in 2001 with a capacity of 2 mgd (million-gallons/day). In 2012 the facility was expanded to a 6 mgd facility with build out capacity of 9 mgd.

The facility is a state of the art BNR/Oxidation Ditch treatment facility consisting of the following: an influent lift station, a screening structure (with two mechanical perforated plate screens, one manual bar screen, one biological nutrient removal tank (with grit removal and flow equalization capability) of 3.5 million gallons, two oxidation ditch aeration basins, three clarifiers, a standby polymer feed system, four deep bed filters, six chlorine contact chambers, ten aerobic digesters, two screw presses, and a docking area for a mobile sludge centrifuge. Also included is a RAS/WAS pump station with three pumps and a blower building with five positive displacement blowers. This plant is operated to meet secondary treatment with high level disinfection and meets Class I reliability.

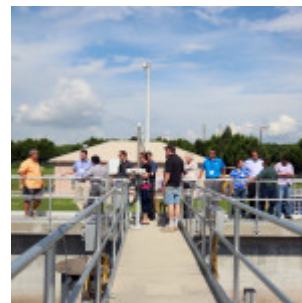
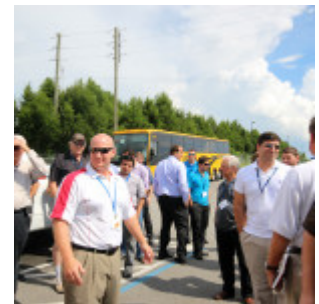
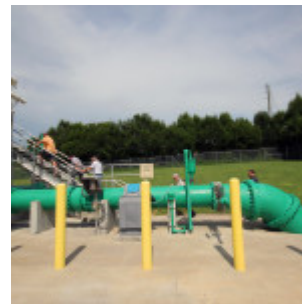
Tour attendees had the opportunity to learn about the plant's treatment process and its fully automated control system. Major pieces of equipment were explained, and insight was offered as to how the plant's automated control system works. The tour comprised of a walking tour where attendees had the chance to "walk through the process."

In addition to walking through the plant, attendees also had the opportunity to see the plant's central control room and see how the operators use the plant's SCADA system to remotely control the various parts of the plant. Hosted by the PCU's Northeast Regional WWTF Supervisor, the tour gave symposium attendees a glimpse into the facility's extensive instrumentation and SCADA control system which provides continuous monitoring of the plant processes and data collection to maintain compliance with regulatory agencies.

The plant has a fully automated control system consisting of redundant iFIX HMI servers with Historian and terminal server based clients communicating to distributed Siemens PLCs over a fiber optic Profibus DP network. Instrumentation and valve actuators at the plant are "smart" type having Profibus DP and PA communications back to the system PLCs to provide additional data to the control system. This facility also utilizes WiFi hotspots throughout the plant to provide operations staff access to the SCADA system while working out in the plant environment. Additionally, the facility has an integrated Electronic Security System allowing viewing of CCTV cameras and gate controls from the operations building. Other County systems can also be viewed from the operations building across the County Wide Area Network.



Many thanks to Polk County and our tour guides Jeff Goolsby, David Carr, Norman Anderson, and Jason Jennings for hosting the tour. Below are some photos from the tour.



Thank you to our 2014 Program Committee



Joe Provenzano, MSc
Program Committee Chair

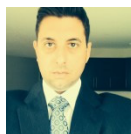
KRPO Engineering Services
Naugatuck, Connecticut, USA



Richard Birdsell, PE
Orange County Sanitation District
Orange County, California, USA



Peter Craan, PE, CAP
Hazen and Sawyer
New York, New York, USA



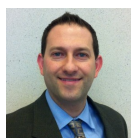
Mike Crawford
Haldimand County
Caledonia, Ontario, Canada



Jon DiPietro
Bridge-Soft LLC & Domesticating IT
Manchester, New Hampshire, USA



Bob Dusza
Manchester Water and Sewer Dept.
Manchester, Connecticut, USA



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Paul Lanzillotta
Consultant
Smithtown, New York, USA



Bob Loncar
The Regional Municipality of Halton
Oakville, Ontario, Canada



Dan Machado
Cobb County Water System – Water
Protection Division
Marietta, GA, USA



Paul McGuire, PE
North East Ohio Regional Sewer District
Cleveland, Ohio, USA



Graham Nasby, P.Eng., PMP
Eramosa Engineering Inc.
Guelph, Ontario, Canada



Matthew Phillips, P.Eng.
City of Guelph Water Services Department
Guelph, Ontario, Canada



Emile Richard, PE
Portland Water District
Portland, Maine, USA



Pavol Segedy, PE
Brown & Caldwell
Raleigh-Durham, North Carolina, USA



Steve Valdez
GE – Water/Wastewater Division
New York City, New York State, USA

X



**Water/Wastewater
Industry Division**

Thank you to 2014 Symposium Committee



Kevin Patel, PE, MBA
Signature Automation
General Symposium Chair
& Director-elect, WWID



Pavol Segedy, PE
Brown & Caldwell
Assistant Symposium Chair
& Membership Chair, WWID



Graham Nasby, P.Eng., PMP
Eramosa Engineering Inc.
Past Symposium Chair
& Director, WWID



Jon DiPietro
Bridge-Soft LLC & Domesticating IT
Social Media Chair
& Past-Director, WWID



Tom DeLaura, PE
Eramosa Engineering International
WEF Liaison



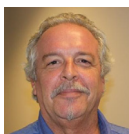
David Wilcoxson, PE
MWH Global
Committee Member
& Secretary/Treasurer, WWID



Derrick Stableford, MIET, LCGI
Associated Engineering
Committee Member



Bryan Sinkler
Trihedral Engineering
Plant Tour Coordinator



Dan Machado
Cobb County Water System – Water
Protection Division
Honors & Awards Chair



Rodney Jones
ISA Staff
Senior Administrator,
ISA Technical Divisions

Congratulations on this successful summit [WWAC Symposium]. You did an outstanding job organizing this, sticking to the schedule and keeping us informed. I learned a lot, met some great people (including colleagues at CDM Smith) and was very impressed by your leadership. Not to mention Graham's sense of humor. Superb!

– *Michael Waddell - Principal, Application Development Practice Leader, CDM Smith*

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Introducing the 2015 Symposium

By Kevin Patel, 2015 Symposium Chair

I am pleased to announce that our 2015 WWAC symposium is now a reality. The 2015 symposium will be held on August 4-6, 2015 in Orlando, Florida at the Wyndham Lake Buena Vista Resort located on the Walt Disney World property.

We have been able to negotiate a discounted hotel rate of only \$89/night and online registration is now available for the symposium and the hotel. Thanks to our sponsors, we have also been able to keep our attendee pricing low. List price for the 2.5 day symposium is only \$425 and includes breakfast, lunches, a general reception, plant tour, and a set of proceedings. ISA members can attend for \$325, and AWWA/WEF/ITA members can register for the discounted rate of \$375.

The theme for our 2015 symposium will be “Future of Automation.” Attendees will gain further insight into the evolving industry along with common problems that continue to be seen in our industry. Real-world applications, procedures and publications will be discussed that will help attendees not only become more informed, but also provide them with the tools to begin making their facility a more robust and efficient workplace.

I encourage you to read our Call for Abstracts and submit an abstract to share your knowledge and experience with others in the industry. Abstract submissions are due on December 15, 2014, so now is the time to start talking to your boss and colleagues if you are interested in presenting. As further incentive, speakers at the symposium receive a further discounted rate of only \$125.

Don't forget to set aside your training dollars for 2015. The symposium offers a very cost effective way to get targeted and relevant training for the annual CEUs/and PDHs you need and learn valuable information targeted for your field of expertise. I look forward to seeing everyone at the 2015 ISA WWAC Symposium in Orlando

Kevin Patel
General Symposium Chair
2014 ISA Water/Wastewater and Automatic Controls Symposium

Read about our 2015 Symposium

August 4-6, 2015

www.isawwsymposium.com

Introducing our 2015 Symposium Chair

By Graham Nasby, WWID Director

The board and I are pleased to announce that **Kevin Patel**, of Signature Automation, will be the general symposium chair for our 2014 and 2015 WWAC Symposiums.



Kevin has been a member of the WWID board since 2011, and was heavily involved with the organizing committee for the WWAC 2012 symposium. In 2013 he was Assistant Chair of our symposium and organized the symposium tour. In 2014 he completed the first year of his two-year term as General symposium Chair. We are pleased to have Kevin back again for another year.

Kevin is the vice-president and a founding partner of Signature Automation, a Dallas-Texas based automation consulting firm that is dedicated to providing quality and reliable automation solutions and offers planning, assessments, programming, training, commissioning, documentation and project management services.

Prior to forming Signature Automation, Kevin was an automation project manager with CDM Smith for over eight years. Prior to working at CDM Smith, he also worked at Westin Engineering and Texas Eastern Pipeline as a systems specialist. Within the ISA, Kevin has been heavily involved with several standards committees, most notably ISA18, ISA101, ISA105 and ISA106.

Joe Provenzano returns as Program Chair

We are delighted to announce that industry veteran Joe Provenzano will again be our program committee chair for the 2015 WWAC Symposium.



Since the start of his career in 1957, Joe has been involved in the automation, instrumentation and control sector for over 50 years. He has worked for companies large and small, and been involved in positions ranging from hands-on technical roles to being part of executive management teams.

Joe began his career with Sperry Gyroscope, where he started as an electronics test technician, and soon rose through the ranks to be manager of one of their naval electronics groups. He then moved onto ITT WorldCom for a short stint before joining Data Master Inc., a division of the Bristol Company. Joe ended up spending 29 years at Bristol where he became their VP of Systems Engineering. In 1994, Joe “retired” from Bristol to start what became a 15 year career as general manager for Aaron Associates – a Connecticut-based system integration firm. Since 2009, Joe has been working as a systems specialist and general manager for a number of small firms, and recently started KPRO Engineering Services.

About the 2015 Symposium Hotel

The 2015 ISA Water/Wastewater Symposium will be held at [Wyndham Lake Buena Vista Resort](#) in Orlando, FL. This resort offers luxury accommodations and is only steps from Downtown Disney's world-famous shopping, dining and entertainment. It is also situated on the Walt Disney World Resort and near the Universal Studio's theme parks.

We have negotiated a special \$89/night hotel rate for attendees. This rate is good from August 2 to 6, and is available for symposium attendees, speakers, exhibitors, and training course participants.

Wyndham Lake Buena Vista Resort

1850 Hotel Plaza Blvd,
Lake Buena Vista, Florida, 32830

(Located just outside of Orlando Florida,
and on-site at the Walt Disney World main gate!)

[Online Hotel Discounted Room Registration Link](#)

www.wyndhamlakebuenavista.com/
info@wyndhamlakebuenavista.com

Reservations: 1 407-828-4444

Symposium Hotel Rate: \$89 per night

The hotel is approximately 14 miles from [Orlando International Airport](#) (airport code: MCO).

There are several ways to get to the hotel. If you are driving, the hotel is not far from Interstate 4. For those traveling by air, the airport has a large number of [rental cars](#).

Shuttle bus and taxi service from the airport is available via Mears Transportation by visiting online at www.mearstransportation.com or by calling 1-800-223-3868. A one-way taxi trip from the airport to the hotel typically costs around \$35 USD.



2015 WWAC Symposium Hotel – Wyndham Resort

2015 WWAC Symposium Program Schedule Preview

Presented by the Water and Wastewater Industry Division of ISA, the WWAC Symposium helps professionals in the water and wastewater industry better apply SCADA, Instrumentation and Automation technology to the disinfection, distribution, collection and treatment of municipal water & wastewater.

The preliminary program schedule is as follows:

Monday – Tuesday, August 3-4, 2015

- Optional 2-day course on Asset Management and Enterprise Integration Using the ANSI/ISA95 Standard
- Optional 1-day course on Introduction to the Management of Alarm Systems
- Symposium Registration
- Local Treatment Plant Tour (Tues afternoon)

Wednesday, August 5, 2015

- Keynote speakers
- Presentations and Papers
- Light Breakfast, Coffee Breaks and Buffet Lunch Provided
- Supplier Showcase & Vendor Presentations
- Evening Reception

Thursday, August 6, 2015

- Invited Speaker
- Presentations and Papers
- Light Breakfast, Coffee Breaks and Buffet Lunch Provided
- Poster Session
- Supplier Showcase

Attendees at the symposium can earn up to 20 PDHs (professional development hours).



Provider
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ISA has been approved as an Authorized Provider by the International Association for Continuing Education and Training (IACET), 1760 Old Meadow Road, Suite 500, McLean, VA 22102; (703) 506-3275. In obtaining this approval, ISA has demonstrated that it complies with the ANSI/IACET 1-2007 Standard which is widely recognized as a standard of good practice internationally. As a result of their Authorized Provider membership status, ISA is authorized to offer IACET CEUs for its programs that qualify under the ANSI/IACET 1-2007 Standard.



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ISA Water/Wastewater
and Automatic Controls
Symposium August 4-6,
Orlando, FL.

Water is an essential natural resource that needs to be actively protected and preserved. To help accomplish this, Phoenix Contact has developed **effective and sustainable solutions** to manage water resources and ensure the availability of safe water for a growing global population.

Phoenix Contact offers a wide range of product and application solutions for secure, scalable industrial networks, remote connectivity and reliable power to ensure the availability and reliability of control and SCADA systems for **water management**.

Visit us at the symposium to learn more about our refreshingly simple solutions for water management.

Get more information at
www.phoenixcontact.com/water.



INSPIRING INNOVATIONS

Announcing the 2015 ISA Water/Wastewater Division Student Scholarships

By Michael Fedenyszen, 2015 Scholarship Chair

The ISA water/wastewater industry division (WWID) is pleased to announce the 2015 ISA WWID Student Scholarship Program. Eligible students can win up to \$2000 in scholarship to money to help them pursue higher education.

Students can apply by filling out the application form, accompanied by:

- 200-word essay on why they should win
- a copy of their academic transcript
- confirmation of enrollment form/letter

The application deadline is January 31, 2015.

The division is pleased to continue to providing up to \$2000 of scholarship money to encourage WWID members and their sons/daughters to pursue higher education. In addition, winners will receive a complementary 2-year student ISA membership.

Applications are due by email by January 31, 2015. Winners will be notified by February 28, 2015 via telephone and email, and will be required to provide a photo and short biography that can be used for publicity reasons. Scholarship money will be distributed by check and mailed after the winner is contacted and has supplied the required photo/bio.

Scholarships will be awarded at the sole discretion of the WWID scholarship committee, with preference being given to students enrolled in technical programs that lead to careers in the water/wastewater sector.

Download and view the student scholarship application form at www.isa.org/wwid.

Please email completed application form, along with 200 word essay, confirmation of enrollment and copy of academic transcript to:

scholarship@isawwsymposium.com

AND

mfedenyszen@vanderweil.com

All applications must be submitted by email (with PDF scans of documents). We do not accept submissions by postal mail.



**Water/Wastewater
Industry Division**

WWID Student Scholarship Last Year's 2014 Recipients

The ISA Water/Wastewater Industries Division is pleased to announce the winners of the 2014 WWID Student Scholarships. Open to college and university students, the water/wastewater division's scholarships are given out to promote higher learning. The 2014 recipients are Ben Lueders and Chris Waechter. Each will receive a \$1000 USD scholarship to help defray the costs of their education.



2014 ISA Water/Wastewater Industries Division Student Scholarship winner

Ben Lueders

McGill University
Montreal, Quebec, Canada



2014 ISA Water/Wastewater Industries Division Student Scholarship winner

Chris Waechter

Colorado School of Mines
Dolores, Colorado, USA

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Future Proof



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Water & Wastewater Division

Setting the Standard for Automation™

2015 WWID Student Scholarship

APPLICATION FORM

The ISA Water & Wastewater Division (WWID) is pleased to award up to \$2000 of scholarship money to encourage WWID members and their sons/daughters to pursue higher education. Students recommended by a WWID member may also apply. Winners will also receive a complementary 2-year student ISA membership, which includes a print subscription to ISA *InTech* magazine. Applications will be accepted via email through January 31, 2015. Winners will be notified by February 28, 2015 via telephone and email, and will be required to provide a digital photo, a 3-4 sentence biography, and a 1-2 sentence "thank-you note" that can be quoted for publicity purposes. Scholarship monies will be dispersed by check and mailed after the winners are selected and the required documentation is received. Scholarships will be awarded at the sole discretion of the WWID scholarship committee with preference being given to students enrolled in technical programs that lead to careers in the water/wastewater industry.

Eligibility (check one)

- ☐ WWID member, ISA Member # _____
- ☐ WWID student member, ISA Member # _____
- ☐ Parent/Guardian is a WWID member, Parent Name: _____ & ISA Member # _____
- ☐ WWID member recommendation (letter attached), Member Name: _____ & ISA Member # _____

Other criteria (check off each one)

- ☐ Currently attending 2-4 year university/college curriculum
- ☐ Confirmation of enrollment letter (or scan of student card) attached
- ☐ 200 word essay about "Why I should win the scholarship" attached
- ☐ Copy of previous year's academic transcript attached

Applicant's Name: _____
Program of Study: _____
Institute Name: _____
Institute Address: _____
Dean of Admissions Name: _____
Institute Phone: _____

Address While At School
Street: _____ Apt. _____
City: _____
State: _____
Zip Code: _____ Country: _____
Phone: _____
e-Mail: _____

Home Address
Street: _____ Apt. _____
City: _____
State: _____
Zip Code: _____ Country: _____
Phone: _____
Email: _____

Applications must be submitted as scanned PDFs and emailed to the scholarship committee at:
scholarship@isawwsymposium.com AND mfedenyszen@vanderweil.com

APPLICATIONS MUST BE RECEIVED BY JANUARY 31, 2015

www.isa.org/wwid

ISA Bookstore has WEF Automation Book:

By Graham Nasby, WWID Director

As part of the partnership between our ISA Water/Wastewater Division and the AIT-committee of the WEF, we are pleased to announce that one of WEF's newest books on wastewater plant automation is now available in the ISA's online bookstore:

www.isa.org/books/

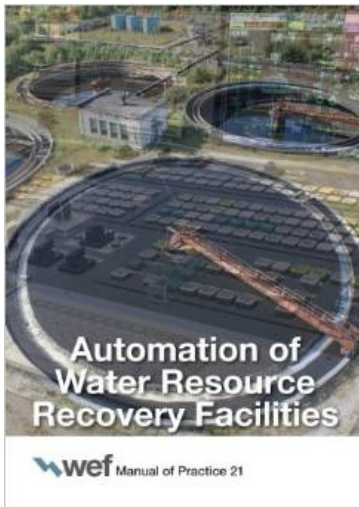
Automation of Water Resource Recovery Facilities, 4th Edition, Manual of Practice 21

- **Paperback:** 722 pages
- **Publisher:** Water Environment Federation; 4th edition edition (June 20 2013)
- **Language:** English
- **ISBN-10:** 1572782757
- **ISBN-13:** 978-1572782754
- **Product Dimensions:** 17.8 x 3.7 x 25.4 cm
- **Shipping Weight:** 1.2 Kg
- **ISA Price:** \$155 USD

Book Synopsis:

As automation continues to be a growing component of the water industry, new technologies and applications are constantly being developed and are producing great benefits. This manual will introduce the reader to the technological advancement and present the reader with the elements and standards of a complete automation design. Ideal for designers, utility managers, and operators. Table of contents Chapter 1:

Introduction to Automation of Water Resource Recovery Facilities Chapter 2: The Business Case for Automation Chapter 3: Complete Automation Design Chapter 4: Process and Instrumentation Diagram Chapter 5: Process Control Narratives Chapter 6: Specifications Chapter 7: Process Control Strategies Chapter 8: General Instrument Characteristics Chapter 9: Sensors Chapter 10: Final Control Element Chapter 11: Communications and Connectivity Chapter 12: Physical and Cyber Security Chapter 13: Human-Machine Interfaces Chapter 14: Process Controllers Chapter 15: Maintenance and Troubleshooting Chapter 16: Control Systems Training



Partnerships with WEF, FWEA, FSAWWA, ITA and OCU Renewed for 2015

By Graham Nasby, WWID Director

I am pleased to announce that we will again be partnering with various other organizations to put on our 2015 ISA Water/Wastewater and Automatic Controls Symposium.

Our 2015 technical co-sponsors will again be:

- WEF Automation and Information Technology Committee, Water Environment Federation (WEF AIT)
- Florida Section of the American Water Works Association (FSAWWA)
- Florida Water Environment Association (FWEA)
- Instrumentation Testing Association (ITA)

Part of these partnerships means discounted symposium rates for AWWA, WEF, FSAWWA, FWEA and ITA members. Members of these organizations are able to register at a discounted rate compared to the normal list price. (ISA members also get a discount as well.)

We will again be offering a tour of a local water treatment plant as part of the 2015 WWAC Symposium. Note: An announcement about which facility we will be touring will be made closer to the symposium.

We look forward to reporting more details about these partnerships in the next issue of this newsletter.



ISA PUBLISHING

Collaborative Process Automation Systems

Our friends at ISA headquarters have a very handy reference book about how to develop collaborative automation systems. Below is an overview:

Collaborative Process Automation Systems

Author: Martin Hollender

Copyright 2010

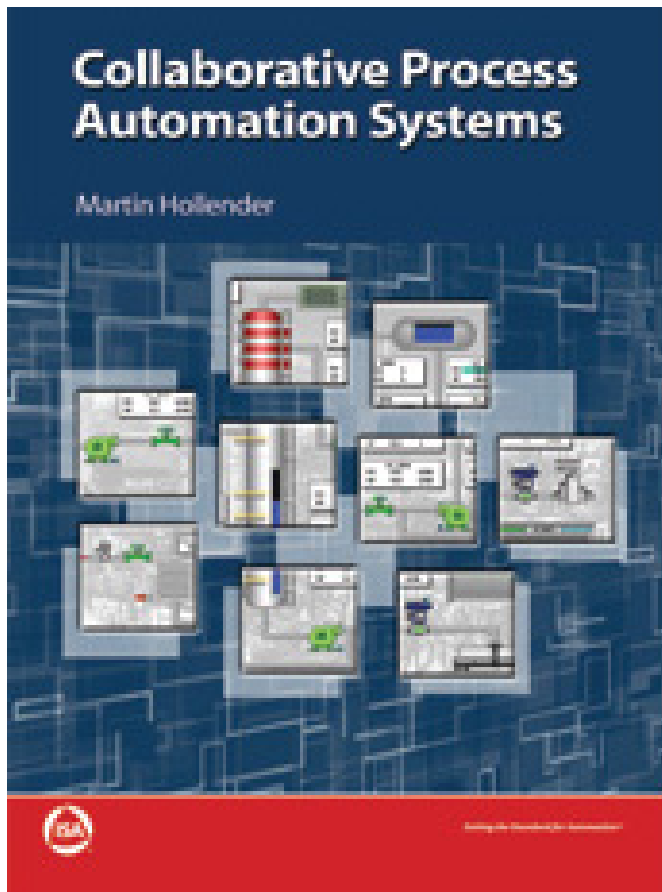
Length: 420 pages

List price \$99.00 USD

ISA Member Price: \$79.00 USD

Providing a comprehensive overview of the state-of-the-art in Collaborative Process Automation Systems (CPAS), this book discusses topics such as engineering, security, enterprise connectivity, advanced process control, plant asset management, and operator efficiency. Collaborating with other industry experts, the author covers the system architecture and infrastructure required for a CPAS, as well as important standards like OPC and the ISA-95 series of standards. This in-depth reference focuses on the differences between a CPAS and traditional automation systems. Implications on modern automation systems are outlined in theory and practice. This book is ideal for industrial engineers, as well as graduate students in control and automation. –

To order a copy, go to www.isa.org/books/



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wastewater

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TECHNICAL ARTICLE

Practical Cybersecurity Guidance for Water Utilities

By Don Dickinson, Phoenix Contact

“Everybody talks about the weather, but nobody does anything about it” is a quote attributed to Mark Twain. Sometimes it seems the same could be said about cybersecurity. Over the last few years there has been much discussion regarding mitigation of cyber threats to critical infrastructure including water and wastewater systems.

Despite the copious amount of conversation on improving a utility’s security profile, it can be difficult for asset owners and operators to know how to tackle the daunting task of protecting critical infrastructure that is essential to the national and economic security of the United States. Fortunately there now are resources available that provide a clearer path for managing cyber risks to critical infrastructure – including general guidance from ISA in the form of the ISA99 security standards, as well as specific guidance developed for the municipal water sector by the American Water Works Association (AWWA) that is intended to provide practical and actionable guidance for the water sector.

Protecting Critical Infrastructure

A key component in protecting critical infrastructure is protecting the control and supervisory control and data acquisition (SCADA) systems used to monitor and control plant processes from cyber-events, both intended and unintended. This need is evidenced by the issuance in February 2013 of US Presidential Executive Order (EO-13636) – *Improving Critical Infrastructure Cybersecurity*¹ that directed the National Institute of Standards and Technology (NIST) to develop a cybersecurity framework to reduce risk to critical infrastructure.

The intent of the framework was to provide critical infrastructure owners and operators a flexible and repeatable approach to meeting baseline cybersecurity measures and controls. The final version of the framework was released in February 2014 as directed by EO-13636. As a result, the DHS and sector-specific agencies have begun creating voluntary programs to assist owners and operators of critical infrastructure in the US in the adoption of the framework and adapting it to the unique environments of their sector. Other countries have adopted similar measures in varying degrees.

NIST Cybersecurity Framework

In February 2014, NIST released its “Framework for Improving Critical Infrastructure Cybersecurity Version 1.0”² (Framework). NIST also released a companion “Roadmap” that outlines NIST’s next steps with the Framework and identifies key areas of development, alignment, and collaboration to increase its value to users. The Framework

and Roadmap are available as a download from the NIST Framework web site (www.nist.gov/cyberframework).

The Framework is a voluntary, risk-based approach for managing cybersecurity risks for critical infrastructure. It references industry standards and best practices to help organizations manage cybersecurity risks. As noted in the Framework, “The use of existing and emerging standards (such as ISA99) will enable economies of scale and drive the development of effective products, services, and practices that meet identified market needs.”³ The Framework is not meant to replace an existing program but can be used as the foundation for a new cybersecurity program or as a means to improve an existing program.

The Framework consists of three parts: Framework Core, Implementation Tiers and Framework Profile as shown in figure 1.

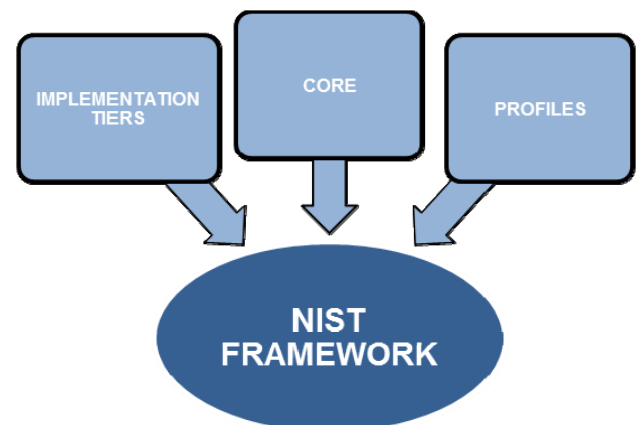


Figure 1: NIST Framework

The **Framework Core** is a set of cybersecurity activities, desired outcomes, and applicable references common across all critical infrastructure sectors that are segmented into five functions as shown in Figure 2. These functions organize basic cybersecurity activities at their highest level. The five functions are: *Identify*, *Protect*, *Detect*, *Respond*, and *Recover*.

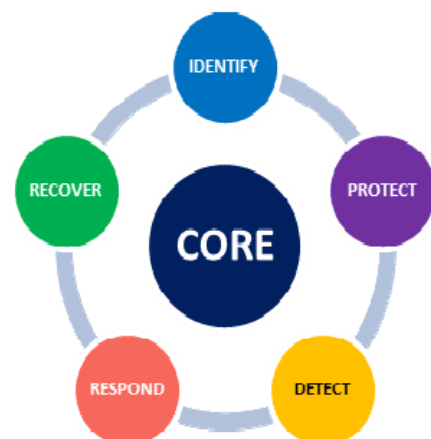


Figure 2: Basic Cybersecurity Functions

Each function is broken down into *Categories* that define groups of cybersecurity outcomes. The *Categories* are further divided into *Subcategories* that define specific outcomes of technical and/or management activities. Each subcategory is then matched to Information References such as standards, guidelines and best practices. Figure 3 below shows how a Function (Identify) is broken down into various Categories (Asset Management for this example). Categories are broken down into Subcategories (Physical devices and systems inventoried) leading to specific Informative References such as the ISA-62443 standard. Additionally, the specific section of the Informative Reference associated with the subcategory is provided to ensure the content most relevant to that subcategory is clearly identified.

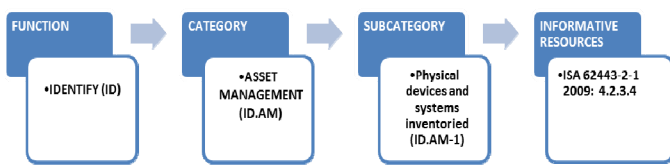


Figure 3: Linking Cybersecurity Function to Informative Resources

The Information Resources listed in the Framework represent the most frequently referenced cross-sector guidance at the time of the Framework’s development. There may be newer, sector-specific guidance that is not listed as an Information Resource. One example is the AWWA Guidance previously referenced and discussed later in this article.

The *Framework Implementation Tiers* characterize the organization’s risk management practices as defined by one of four tiers with Tier 1 having the least amount of risk management and Tier 4 the highest. Each organization must determine which tier is appropriate for them to work towards given the organization’s unique goals, feasibility of implementation, and acceptable level of cybersecurity risk. A brief description of each tier follows.

- Tier 1: **Partial** – Cybersecurity risk management practices are not formalized; limited awareness of cybersecurity risk at organizational level; cybersecurity risk is managed in an ad hoc manner
- Tier 2: **Risk Informed** – Risk management practices are approved by management but not established as policy throughout the organization; informal prioritization of cybersecurity activities; risk-informed, management-approved processes and procedures in place, and staff has adequate resources to perform cybersecurity duties
- Tier 3: **Repeatable** – Risk management practices are formally approved and expressed as policy; organizational practices are regularly updated as needed to meet business/mission requirements and a changing threat and technology landscape; risk-

informed policies, processes, and procedures are defined, implemented as intended, and reviewed; personnel possess knowledge and skills to perform roles

- Tier 4: **Adaptive** – Organization adapts cybersecurity practices through a process of continuous improvement incorporating advanced cybersecurity technologies and practices; organization-wide approach to managing cybersecurity risk using risk-informed policies, processes, and procedures; cybersecurity risk management is part of the organizational culture

The *Framework Profile* helps an organization define a roadmap for moving from a “current” profile that defines current risk management practices, to a “desired” profile that defines the outcomes needed to achieve the desired cybersecurity risk management goals. A comparison of the current profile and the desired profile provides a gap analysis that can be used to establish a plan defining actions required to meet organizational goals, and prioritization of activities to ensure cost-effective allocation of resources.

The Framework addresses the broad security needs of all critical infrastructure sectors including the Water & Wastewater Systems sector; however, as noted in the Framework, it is not industry-specific. Sector-specific guidance is intended to aid in the adoption of the Framework while providing guidance that is directed to the unique requirements of that sector. AWWA has developed cybersecurity guidance to meet the unique needs of the Water and Wastewater Systems sector. As with the Framework, the AWWA guidance also references existing standards including ISA99.

AWWA Cybersecurity Guidance & Tool

Concurrent with the development of the NIST Framework the American Water Works Association (AWWA) initiated the development of cybersecurity guidance that would specifically address the requirements of protecting process control systems (PCS) used by water utility owners and operators to control water processes. The goal was to provide guidance that would be both practical and actionable. The final versions of the AWWA Cybersecurity Guidance & Tool were released in February 2014.

The AWWA Guidance and Tool are important resources for the water sector because they provide a voluntary, sector-specific approach for adopting the NIST Cybersecurity Framework as expressed by the Water Sector Coordinating Council (WSCC).⁴ This is an important development. As a result of the WSCC’s endorsement, the AWWA Cybersecurity Guidance and Tool will be the focal point of cybersecurity activities for the water sector relating to the NIST Framework moving forward.

The AWWA Guidance consists of two parts; a document titled “Process Control System Security Guidance for the Water Sector”, and a web-based “Cybersecurity Tool”. Both can be accessed at the AWWA web site (www.awwa.org/cybersecurity). The document is a free download. The Cybersecurity Tool requires a login to access. Registering a login username and password is free and you do not have to be a member of AWWA to register for access.

The Process Control System Security Guidance for the Water Sector (PCS Guidance) document outlines key cybersecurity practices and controls that are the basis for the Cybersecurity Tool. The cybersecurity practices are a set of recommendations for improving PCS security for water utilities. These practices are intended to be practical and actionable while establishing the foundation for a more comprehensive security plan.

The recommended practices are further defined by a set of 82 cybersecurity controls that provide more detailed measures for implementing the recommended practices. The Cybersecurity Tool was developed to simplify implementation of the cybersecurity controls by directly linking each control to one of the referenced security standards. Which controls are relevant to a user is determined by the use case scenarios selected in the Cybersecurity Tool.

A use case characterizes the manner in which a utility has designed and configured their PCS, and the connections between the PCS and external sources. Each use case represents a different type and degree of cybersecurity risk. Based on the use case scenarios selected in the online tool, a report is generated documenting the appropriate controls and priorities, and the specific section of the relevant standards that the user can reference for more detailed information. The report can be downloaded for future reference. Figure 4 illustrates the process employed by the Cybersecurity Tool to link the various use case scenarios to specific standards.

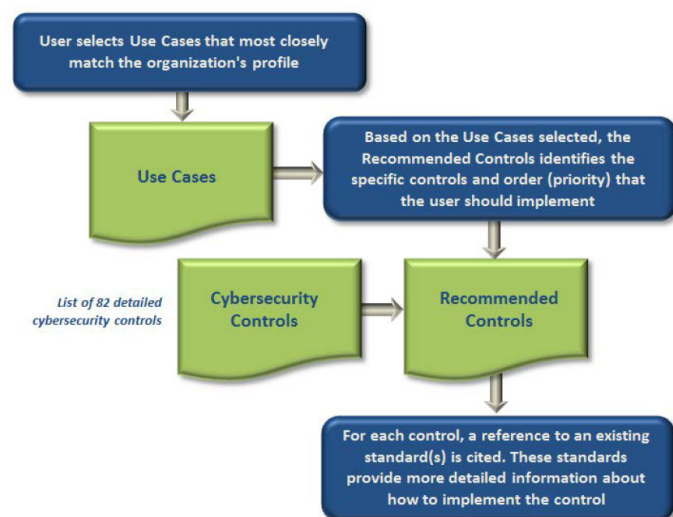


Figure 4: AWWA Cybersecurity Guidance Tool

Both the NIST Framework and the AWWA Guidance reference the various standards, best practices and guidance that provide cybersecurity guidance to critical infrastructure sectors. As a result, owners and operators of water and wastewater operations now have a clearer understanding of the available resources for cybersecurity guidance when developing a security plan for their organization.

Developing a Comprehensive Security Plan

Because there are no specific directives for securing industrial control systems in the water sector the NIST Framework and AWWA Guidance are useful resources that identify relevant standards for cybersecurity. It is important to remember that the various standards are not mutually exclusive but complement one another.

One standard is likely to provide more detailed guidance than another on a particular aspect of cybersecurity. As a result, all relevant security standards should be considered when developing and refining a security plan. One of the key standards referenced in both the NIST Framework and the AWWA Guidance is ANSI/ISA-99 (62443) Security for Industrial Automation and Control Systems. The multipart standard is well suited for the development of a comprehensive security plan for a water utility.

ISA99 (62443) Security for Industrial Automation and Control Systems

ISA-99 is a multipart standard for industrial automation and control systems (IACS) security. The ISA-99 standard provides guidance for a wide range of entities including those who design, implement or managing control systems as well as users, system integrators, security practitioners and, control systems manufacturers and vendors. The purpose of the standard is to “improve the confidentiality, integrity and availability of components or systems used for manufacturing or control, and provides criteria for procuring and implementing secure control systems.”⁵

The various ISA standards were originally released with designations of ISA-99.xx.yy, and these designations are still in common use. More recently, after the ISA99 committee’s work was adopted by the International Electrotechnical Commission (IEC) there was a decision to harmonize the numbering of ISA and IEC standards. The ISA work products are being renumbered from ISA-99.xx.yy to ISA-62443-x-y. The new designations will appear as each document is released or re-released.

Table 1 lists the key work products that have been released as standards. More detailed information about the ISA99 committee’s work products is available at the ISA web site (www.isa.org).

| Area of Focus | Target Audience | Designation | Title |
|-------------------------|--|---------------------------------------|---|
| General | All | ISA/IEC-62443-1-1 (99.01.01) - 2007 | Terminology, Concepts and Models |
| Policies and Procedures | Asset Owners | ISA/IEC - 62443-2-1 (99.02.01) - 2009 | Establishing an Industrial Automation and Control System Security Program |
| System | System Integrators, Asset Owners, Product Suppliers, Service Providers | ISA/IEC - 62443-3-3 (99.03.03) - 2013 | System Security Requirements and Security Levels |

Table 1: Key ISA/IEC-62443 Standards Currently Available

As noted in the table, the ISA/IEC-62443 standards each have an area of focus and intended audience. There is a fourth area of focus, *Components* with standards under development. Standards in the *Components* category will address technical requirements for the development of secure IACS products. Manufacturers of IACS products and solutions are the primary target audience for these work products; however, asset owners and system integrators can benefit from these work products when specifying and procuring IACS products and solutions.

ISA/IEC-62443-1-1 (99.01.01) - 2007 Terminology, Concepts and Models⁶

This standard describes the basic concepts and models relating to cybersecurity and serves as the basis for the ISA-62443 series. It focuses primarily on industrial automation, and control and SCADA systems used in critical infrastructure industries such as water and wastewater systems. In addition to defining key concepts and terminology the standard provides a series of models that can be used in the design of a security program. These control and SCADA system models are used to identify security needs at a level of detail necessary to address security issues with a common understanding of the framework and vocabulary.

ISA/IEC -62443-2-1 (99.02.01) - 2009 Establishing an Industrial Automation and Control System Security Program⁷

As noted previously, the target audiences for this standard are asset owners and operators responsible for establishing and managing a cybersecurity program for IACS. This standard describes the elements contained in a cyber-security management system (CSMS) for use in the IACS environment and provides guidance on how to develop those elements.

These elements are primarily related to policy, procedures, practice and personnel and are grouped into three main categories:

- Risk analysis
- Addressing risk with the CSMS
- Monitoring and improving the CSMS

As noted in the standard, “It is not the intent of the standard to specify a particular sequential process for identifying and addressing risk that incorporates these elements. Thus, an organization will create such a process in accordance with its culture, organization, and the current status of its cyber security activities.”⁸ However, to assist organizations with application of the standard an example of a process for identifying and addressing risk is provided as well as a step-by-step guide that an organization can reference as they can begin to establish a CSMS.

ISA/IEC -62443-3-3 (99.03.03) - 2013 System Security Requirements and Security Levels

The latest ISA99 work product to be released as a standard is ANSI/ISA-62443-3-3-2013 (August 2013).⁹ The standard complements the other ISA-62443 work products by providing more detailed guidance on technical requirements for IACS security. The standard is useful in evaluating system design, and the suitability of products and services in meeting the asset owner’s target control system security levels.

Summary

US Presidential Executive Order 13636 – *Improving Critical Infrastructure Cybersecurity* recognizes that the cyber threat to critical infrastructure, including the Water and Wastewater Systems sector, continues to grow and represents one of the most serious national security challenges for the United States. A comprehensive cybersecurity plan is fundamental to ensuring the future availability and reliability of water and wastewater systems. There is a wide range of cyber guidance available for asset owners and operators as referenced by the NIST Framework and AWWA Guidance, including the ISA/IEC-62443 standard for Industrial Automation and Control Systems Security. ISA/IEC-62443 provides guidance for the establishment of a cybersecurity management system that is the foundation for a comprehensive security program for a water utility.

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⁹ ISA/IEC-62443-3-3 (99.03.03-2013) Security for Industrial Automation and Control Systems, Part 3-3: System Security Requirements and Security Levels. August 2013.

ABOUT THE AUTHOR:


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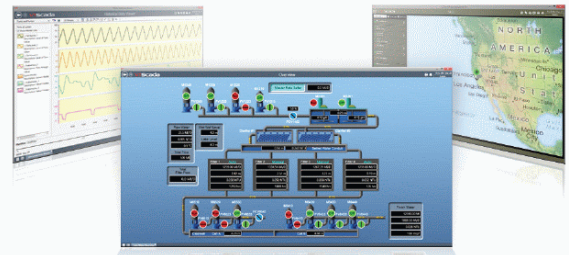
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ASSOCIATION NEWS

The Gift – ISA 2014 Fall leaders Meeting

By Dr. Peggie Koon, ISA President



It seems like just yesterday that we were all very much engaged in the ISA 2014 Fall Leaders Meeting. In case you missed it, this year's event was held in Kansas City, Missouri at the Marriott downtown. And I personally felt like I was in the midst of what author Gary Harpst calls the Six Disciplines Methodology. I have attached a diagram from his site just in case you have not read his book, *Six Disciplines Execution Revolution*. To understand why I felt this way, you have to understand the methodology. Let's take a look at the "steps" of the Six Disciplines Methodology and compare it to what we have done this year and what happened at the ISA 2014 Fall Leaders Meeting (FLM).



Figure 1 – Strategy: Decide What is Important

We began the process of developing a shared vision and strategy back in January at the ISA Executive Summit in Greensboro, NC. And we have communicated the vision and five strategic goals repeatedly throughout this year. Like the Summer Leaders Meeting, this year's FLM was laser focused on the five goals, making sure those leaders who were working on the goals had an opportunity to share their achievements to date with their colleagues, and bringing folks who were new to the process along via visioning and brainstorming sessions.

Step 2 – Plan: Set Goals that Lead

While all of the FLM sessions were informative, from my perspective, some of the best sessions were those that included panels and/or engagement. Four of my favorites were the Leader Continuity Session, the Strategic Goal Report out session (in the form of a panel discussion), the Microsite "How To" Session, and the Wrap-Up Breakfast, which included a panel of members of the Automation Advisory Council. All four of these sessions were designed to focus on the goals and to "lead" attendees into engaging discussions

and activities that both informed and helped facilitate execution of our plan.

Step 3 – Organize: Align Systems

Geographic, operational, and technical assemblies, along with ISA departments and divisions held meetings focused on making sure their activities were aligned with the Society's strategic goals. As the groups began to develop lists of initiatives for 2015, they asked themselves the question: Are we aligned with the goals? These groups stayed focused and began to think of ways to collaborate with other groups in the Society to achieve specific tasks.

Step 4- Execute: Work the Plan

It was so exciting to hear volunteer leaders and members of staff talk about what they are doing—how they are executing the plan. During our panel discussions and meetings we received updates about the following "executed" initiatives:

- Acquisition of automation.com – We talked about Automation.com and what the acquisition will mean to the Society from brand, digital offering, marketing and sales perspectives. Pat Gouhin, ISA CEO and Executive Director, and Terry Ives, Mergers & Acquisition Taskforce Chair, told the Pubs group about the acquisition of Automation.com and the opportunities for revenue growth in marketing and sales, expanded content delivery and cool delivery options the acquisition brings.
- PCS Mega-Symposium – Ken Belteau, ISA 2015 VP-elect, Automation & Technology, told us how the recent Process Control and Safety mega-symposium in Houston focused on cybersecurity, coolest delivery, content, and advocacy.
- Data-Driven Sponsorships -- Jennifer Infantino Halsey, ISA's Manager, Marketing, Communications, and Corporate Partnerships, shared how her team uses data to grow sponsorships, increasing our ability to sell our products and services.
- Cybersecurity -- Eric Cosman, ISA VP of Standards and Practices, talked about what's happening in cybersecurity with the IEC62443 standards series and with cybersecurity "curriculum" development to enhance ISA's ability to provide workforce development/training courses specific to the field.
- Coolest Delivery & App Development -- Dalton Wilson, ISA's Manager of Education Services, talked about using gaming technology to provide simulated lab/hands-on training to augment our online training offering. Susan Colwell, ISA's Manager, Publications Development, talked about the existing iPad and Android InTech+ Plus App, the next generation of these apps, and more. Tony Fragnito, ISA's Chief Financial Officer, led a discussion of our website's new search functionality and fielded questions related to issues with the site. Billy Bennett,

CEO, Pyramid ODI and member of the ISA Automation Advisory Council, talked about how very important it is for ISA to remain relevant to next-gen automation engineers via focus on coolest content delivery—not just in terms of using technology as a cool delivery mechanism, but in terms of on-demand, on-the-go availability and accessibility.

- **Advocacy of Automation as a Profession** -- Terry Ives, Chair of the Automation Federation and past President of ISA, explained how the Automation Federation is helping engineering societies develop competency models for their respective engineering disciplines modeled after the Automation Competency Model. Terry also talked about the work being done to develop automation curricula for community colleges and the collaborative effort with the US government and Cleveland Community College. And Peter Martin, VP & Fellow, Schneider Electric Company, and member of the ISA Automation Advisory Council, talked about ISA's opportunity to utilize its pool of retired automation professionals to provide real mentoring to the next generation of automation professionals.
- **Content Delivery** -- Shari Worthington, ISA VP-elect, Publications, shared her content workflow strategy with the group, explaining how we are developing content, then re-purposing and delivering it across multiple channels from online/web, to mobile phones, to books, to e-books, to apps, to webinars, to magazines, newsletters, symposia. ISA's content is being optimally delivered to automation professionals when and how they want to consume it.
- **Shale Gas Initiative** – Nelson Norden, Director Global Business Development at Emerson LLLP and member of the Automation Advisory Council, engaged in a very informative session about the shale opportunity, explaining that the opportunity is not just in shale gas but also in shale oil and liquids. Pat Gouhin explained that ISA staff has budgeted a new dedicated project management resource to continually investigate and grow the opportunity for ISA in 2015.

Step 5 – Innovate: Innovate Purposefully

The entire Fall Leaders Meeting was infused with purposeful innovation. In fact, some sessions, which had previously been held as traditional report outs, were purposefully and innovatively designed to infuse levels of collaboration and engagement we had not previously experienced in the past. One of the most innovative sessions was called Leader Continuity, led by Billy Bennett. The session was designed to help incoming office holders engage with current office holders in an effort to ensure there is continuity in the “hand-off” and to encourage communication and collaboration across the “offices.” Billy used the drawing in Figure 2 as a template to facilitate the session.

Several leaders requested that we hold this session again at the next Fall Leaders Meeting because they felt it was very much needed and very beneficial.

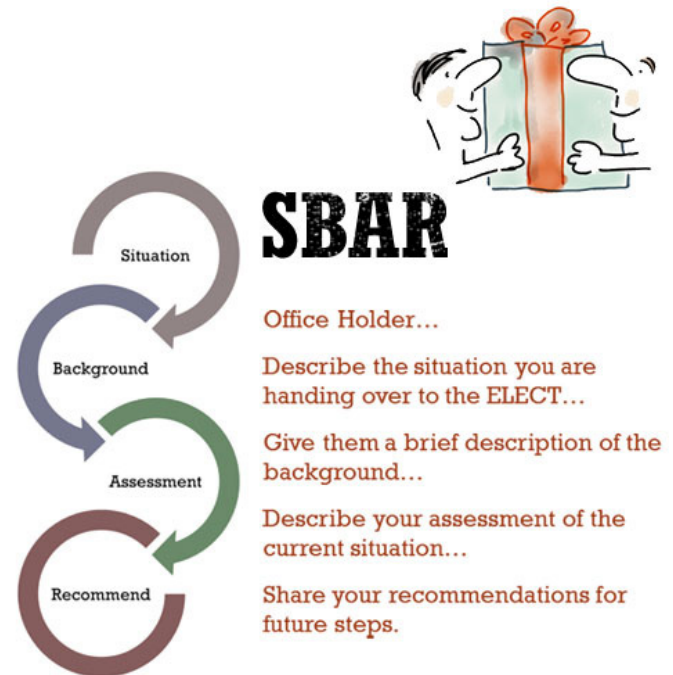


Figure 2 – SBAR method of innovating purposely

Step 6 – Learn: Step Back

As I prepared for the 2014 Council of Society Delegates Meeting, I stepped back to look at all that our Society accomplished in 2014. I wanted our membership to hear my view of where we were in 2013 and how far we had come in 2014. I gave a presentation that reviewed our efforts to operate, collaborate, and innovate successfully. And I explained the importance of identifying the vision, the drags, and the partnerships that facilitate that success. I talked about the change in Governance Structure in 2014 that identified the Executive Board as the body within ISA that sets strategic direction. And I reviewed the purposeful innovation at the Executive Summit and the Summer Leaders Meeting: two strategic meetings that laid the foundation for a more strategic ISA, an ISA with a shared vision, shared goals, and a shared strategic plan that engaged and inspired people to lead change. (To review an overview of my presentation in pdf format, [click here](#). To access a video of the presentation, [click here](#).)

In the presentation, I highlighted the major initiatives that have been accomplished related to the five strategic goals and emphasized the important role that the Automation Federation has played and will continue to play as we seek new partnerships in the US and around the globe to help us realize our vision and achieve our goals.

Jim Keaveney, 2014 Treasurer and 2015 President-elect Secretary, followed with a presentation on ISA 2014 financials. For me the most exciting part of his presentation

was its alignment with ISA's strategic goals. ISA's 2015 budget reflects support for specific initiatives related to the Society's five strategic goals. How cool is that?!

Finally, Terry Ives, Chair of the Automation Federation, recapped the work being done by AF and the Automation Standards Compliance Institute.

So why is the ISA 2014 Leader Meeting being referred to as the Gift?

Have you ever noticed that people often use the words “**gift**” and “**present**” interchangeably? By now you know how much I love to use Merriam Webster's definitions in these articles. Just for fun, let's look at the definitions:

Gift: *noun* \ˈgift\ something that is given to another person or to a group or organization

Present: *noun* \ˈpre-zənt\ something [presented](#) : [gift](#)

And the verb “present” means: to give something to someone in a formal way or in a ceremony

: to formally talk about (something you have written, studied, etc.) to a group of people

: to make (something) available to be used or considered

The ISA 2014 Fall Leaders Meeting was a **gift**. The meeting was something that ISA leaders gave to the membership and other leaders. At FLM we **presented**—talked about our shared vision, strategy, and strategic goals, both formally and socially to groups of people who attended, who were **present** at the meeting. And we made portions of these conversations and presentations available and accessible to others via teleconference, WebEx, and/or live streaming video. We also **presented** awards at the A&T and I&S luncheon, the Pubs luncheon, and the Honors & Awards Gala to recognize ISA members and members of the automation community for their excellent service and contributions to ISA and the automation profession.

Yes, the 2014 Fall Leaders Meeting was spectacular! It was informative, fun, engaging and inspiring. Those of us who were **present** graciously received this wonderful **gift** that was a palatable combination of information packed presentations, facilitated sessions, panel discussions, networking, workshops, business meetings, fellowship, food, engagement, a spectacular Honors & Awards Gala, and more!

The Fall Leaders Meeting is over...What now?

Shared Vision -- ISA will be the premier society for automation by serving the needs of the entire automation professional community.

- *Our success will be indicated by growth in membership and users and a lowering in the average age of our audience, reflecting a younger*

average age more representative of automation professionals today.

- *We will do this by focusing on 5 strategic game-changing goals.*

At the end of my presentation, I mentioned that while we have accomplished much this year, we cannot simply rest on our past laurels, because there is much to do. We must **live in the present, learn from the past, and plan for the future.**

So, I leave you with a quotation from the book, **The Present**, by Spencer Johnson, that is applicable in your service to ISA, your work and your life:

“No one can predict or control the future. However, the more clearly you imagine what you want to see happen, plan for it, and do something today to help it happen, the less anxious you are in the present, and the more the future is known to you.”

I am so very proud of the progress all of YOU are making now in 2014 to achieve ISA's five strategic goals. And because we have a shared vision with shared goals I know that ISA's future is bright and filled with opportunity.

Thank you for the wonderful gift!

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In an effort to provide the latest news and information relating to instrumentation and control systems in water and wastewater management, the Water and Wastewater Industry Division has created a LinkedIn group. We invite anyone affiliated with or interested in the water and/or wastewater industries to join the group and participate in the dialog.

You may use the following link to join the group <http://www.linkedin.com/groupRegistration?gid=2031271>



About LinkedIn

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There are already many ISA members and automation professionals on LinkedIn, as well as several other ISA-related groups. If you'd like to learn more about LinkedIn, the article "100+ Ways to Use LinkedIn" at the website www.linkedintelligence.com/smart-ways-to-use-linkedin/ provides many different perspectives on how the site can be leveraged. We hope you'll join us there and network with other ISA, water, and wastewater professionals.

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Call for Newsletter Articles

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We are always on the lookout for good articles, and we welcome both solicited and unsolicited submissions.

Article submissions should be 500-2000 words in length and be written for a general audience. While it is understood that the articles are technical in nature, the use of technical jargon and/or unexplained acronyms should be avoided. We actively encourage authors to include several photos and/or figures to go along with their article.

We actively welcome articles from all of our members. However, we do ask that articles be non-commercial in nature wherever possible. One or two mentions of company and/or product names for the purposes of identification is acceptable, but the focus of the article should be technical content and not just sales literature. If you are unsure of whether your article idea is workable, please contact our newsletter editor for more information – we are here to help.

Some examples of the types of articles we are looking for include:

- Explanatory/teaching articles that are meant to introduce or explain a technical aspect of automation and/or instrumentation in the water/wastewater sector.
- Biographical stories about personalities and/or leaders in the water/wastewater sector.
- Case Studies about plant upgrades and/or the application of new technologies and techniques. This type of article must include at least two photos along with the article text.
- Pictorial Case Studies about a plant upgrade consisting of 4-6 photos plus a brief 200-500 word description of the project undertaken. The article should ideally include one to two paragraphs about lessons learned and/or advice for other automation professionals.
- Historical reflections on changes in technology pertaining to specific aspects of instrumentation or automation, and how these changes point to the future.
- Discussions about changes in the water/wastewater sector and how these affect the automation professionals.

Once we receive a submission, we will work with you to edit it so it is suitable for publication in the newsletter.

Article submissions can be sent to the WWID newsletter editor Graham Nasby at graham.nasby@eramosa.com.

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- Summer Issue – published in August/September
- Fall Issue – published in October/November

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Per year (4 issues):

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The ISA Water/Wastewater Industry Division is run on a non-profit basis for the benefit of its members. Monies raised from the sale of advertising in the newsletter are used to help offset the cost of division programming and events. Like its parent organization, the ISA, the WWID is a non-profit member-driven organization.

For more information, or to discuss other advertisement sizes not outlined above, please contact the WWID newsletter editor Graham Nasby at graham.nasby@eramosa.com.

Optimizing the Water Lifecycle with Real-Time Data

Cities may be diverse, but they all have one thing in common: they're looking to be more efficient and sustainable. For water utilities, this involves better management of their water and wastewater operations.

MAKING SMARTER DECISIONS

Real-time operations data management systems (ODMS) can help by providing an accurate picture of activities involved in water management that generate an environmental footprint. By acquiring and using more accurate data, municipal leaders can make smarter decisions and avoid making utility management a guessing game.

Appropriate use of software can help reduce the amount of water being consumed, optimize the water lifecycle and

improve overall sustainability. Already, many municipalities are using ODMS to better manage their water and wastewater operations.

SYSTEM INTEGRATION

An operations data management system is like a highway that gets you from Point A to Point B; the vehicle you drive (the applications or reports built on the infrastructure) is up to you. This system integrates and manages in real time the vast amounts of data generated from water and wastewater processes, and can help detect issues such as water leakage, water quality, overflows, energy costs, and upsets in the process.

An ODMS that is vendor-agnostic— which means it has interfaces that can talk to different software and hardware systems from different vendors — can integrate all of this data, so a utilities manager doesn't have to log into a multitude of systems to get piecemeal data. An ODMS provides one version of the truth and the data can be stored indefinitely. Real-time, accurate data is critical to operational visibility and informed decision making. Getting visibility across business processes — across the entire water and wastewater lifecycle — can save money, help the environment, and even prevent damage from flooding.

MANAGING WATER LOSS AND LEAKS IN HALIFAX

Halifax Water, for example, is using an ODMS to manage its water and wastewater business. Previously, one of its biggest problems was water loss and leakage. The municipality, which serves a population of about 325,000, has saved \$600,000 a year by reducing water loss and leakage.

DETERMINING THE BUSINESS CASE FOR ODMS

An ODMS costs money, but municipalities should consider the total cost of ownership and the return on investment.

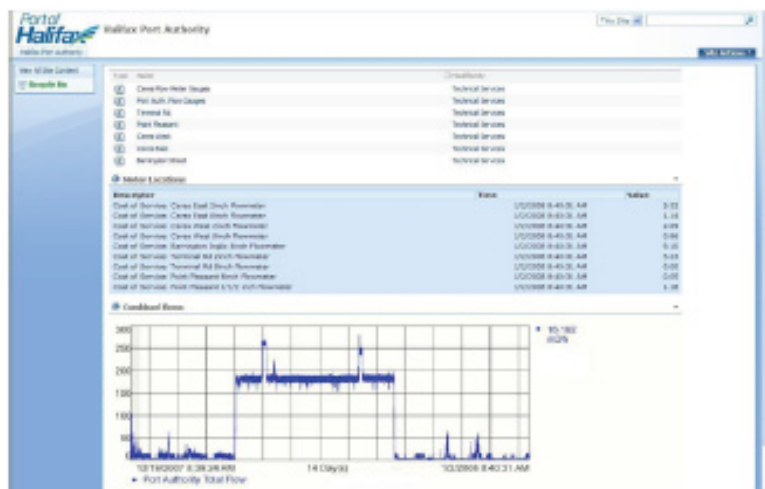
If simply relying on custom-built or one-off software solutions that don't talk to each other or are cumbersome to retrieve information, it becomes difficult, if not impossible, to see what's happening across operations and to make informed decisions. An ODMS should provide easy, instantaneous access to data without any need for programming. By tying together all of its operations systems from different vendors across facilities and even lines of business, a municipality can use one toolset to address multiple issues.

BENEFITS

Halifax Water user of PI System has realized significant savings and efficiency gains through its use of the PI System and improved the quality and scope of its services to customers. Its efforts have garnered several regional and national awards for sustainability excellence. "The PI System has changed the way we do business here," MacDonald says.

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OSIsoft delivers the PI System, the industry standard in enterprise infrastructure for management of real-time data and events. With over 10,000 customer installations in more than 110 countries spanning the globe, the OSIsoft PI System is used in manufacturing, energy, utilities, life sciences, data centers, facilities, and the process industries. This global installed base relies upon the OSIsoft PI System to safeguard data and deliver enterprise-wide visibility into operational, manufacturing, and business data. The PI System enables users to manage assets, mitigate risks, comply with regulations, improve processes, drive innovation, make business decisions in real time, and identify competitive business and market opportunities.



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Monday, Dec 1, 2014, 2:30 to 4:00 pm

Earn CEUs/PDHs:

Monday to Wednesday Workshops and Technical Sessions will be Offered

Young Professionals Events:

Luncheon, Water Bowl, and Fresh Ideas Poster Session

Water For People Fundraising Events:

Duck Race and Exhibitor's Raffle Fundraiser

Roy Likins Fundraising Events:

Poker Night and Golf Tournament



Attendee Registration Opens
on August 1st

FOR MORE INFORMATION:
<http://fsawwa.org/2014fallconference>

Nov. 30 – Dec. 4, 2014 • Omni Orlando Resort at ChampionsGate

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www.newwater.us/UOTF

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2015 Symposium Details

Date: August 4-6, 2015
Location: Orlando, Florida, USA
Venue: Wyndham Lake Buena Vista Resort
General Symposium Chair: Kevin Patel, PE, MBA
Website: www.isawwsymposium.com

2016 Symposium Date – Save the Date

Date: August 2-4, 2016
Location: Orlando, Florida, USA
Venue: Wyndham Lake Buena Vista Resort

About the ISA Water/Wastewater Division

The ISA Water and Wastewater Industry Division (WWID) is concerned with all aspects of instrumentation and automated-control related to commercial and public systems associated with water and wastewater management. Membership in the WWID provides the latest news and information relating to instrumentation and control systems in water and wastewater management, including water processing and distribution, as well as wastewater collection and treatment. The division holds the annual ISA Water/Wastewater and Automatic Controls Symposium each summer, which features presentations by industry practitioners and published proceedings. For more information see www.isa.org/wwid/

About the ISA

Founded in 1945, the International Society of Automation is a leading, global, nonprofit organization that is setting the standard for automation by helping over 30,000 worldwide members and other professionals solve difficult technical problems, while enhancing their leadership and personal career capabilities. Based in Research Triangle Park, North Carolina, ISA develops standards; certifies industry professionals; provides education and training; publishes books and technical articles; and hosts conferences and exhibitions for automation professionals. For more information see www.isa.org



2015 Water / Wastewater and Automatic Controls Symposium

August 4-6, 2015.....Wyndham Lake Buena Vista Resort.....Lake Buena Vista, Florida, USA

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

Technical Co-Sponsors: WEF Automation and Info Tech Committee, the Florida AWWA Section, Florida Water Environment Association, ISA Tampa Bay Section, and Instrumentation Testing Association



Sponsorship and Exhibitor Opportunities



Setting the Standard for Automation™

ABOUT THE SYMPOSIUM

Presented by the ISA Water and Wastewater Industries Division, in collaboration with WEF Automation and Info Tech Committee, the Florida AWWA Section, Florida Water Environment Association, and Instrumentation Testing Association, the WWAC symposium helps professionals in the water and wastewater sectors understand how instrumentation, SCADA (supervisory control and data acquisition), and automatic control applications are vital to the treatment and distribution of water; the collection and treatment of wastewater; and the management of stormwater. The symposium also provides an excellent opportunity to gain valuable technical information, networking, professional development, and continuing education credits (CEUs and PDHs).

This 3-day symposium is focused on the challenges associated with automation and instrumentation in the water and wastewater sectors. It features 2 full days of presentations (two speaking tracks), a tour of a local water/wastewater facility, a general reception, networking events, a poster session, and a supplier showcase.



- **2 full days of speakers/presentations**
- **Track 1 – Instrumentation, System Integration, Automation, Plant Case Studies, New Technologies, Process Optimization**
- **Track 2 – Future of Automation, HMI, Human Factors, Alarm Management**
- **Two Optional ISA Training Courses before the symposium**
- **Plant Tour of a local Water/Wastewater Facility**
- **Trade Show, Reception & Networking Event**
- **Affordable Professional Development for Plant Operations/ Maintenance Staff, Plant Managers, Plant Designers, Engineers, System Integrators**
- **CEUs – Continuing Education Units**
- **PDHs – Professional Development Hours**

ATTENDEE PROFILE

The symposium is targeted at anyone involved with automation, instrumentation, and/or control systems in the water/wastewater sectors. Attendees typically range from plant operators, maintenance, and technical personnel to engineers, programmers and system integrators.

Meet and network with professionals who are responsible for the automation, instrumentation and operating aspects of water and wastewater facilities across North America. According to a recent US EPA study there are over 16,000 publicly-owned water plants across the USA, and another 21,000+ wastewater treatment plants throughout the country.

This symposium focuses on bringing together individuals who are looking for technical solutions to their water and wastewater challenges. They are looking for products, services, and partners they can trust to make their jobs easier.

SCHEDULE OF EVENTS

Monday - Tuesday, August 3-4, 2015

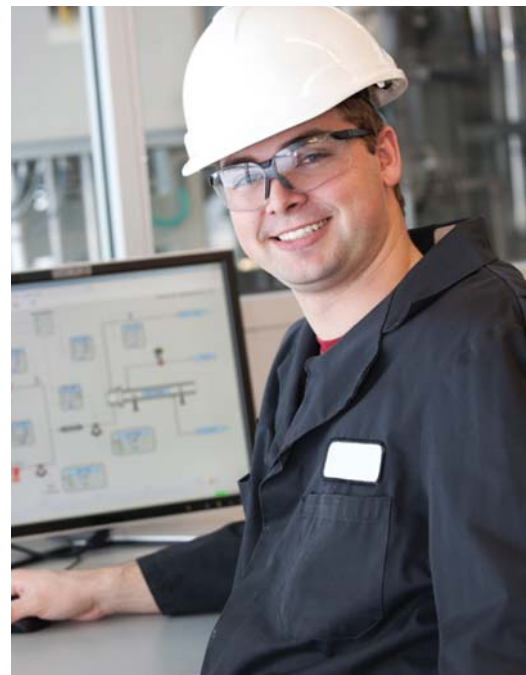
- Optional full-day training courses
- Symposium Registration
- Local Water/Wastewater Plant Tour (late afternoon Tuesday)

Wednesday, August 5, 2015

- Keynote Speaker
- Presentations and Papers
- Light Breakfast, Coffee Breaks and Buffet Lunch Provided
- Supplier Showcase & Vendor Presentations
- Evening Reception

Thursday, August 6, 2015

- Invited Speaker
- Presentations and Papers
- Light Breakfast, Coffee Breaks and Buffet Lunch Provided
- Poster Session
- Supplier Showcase



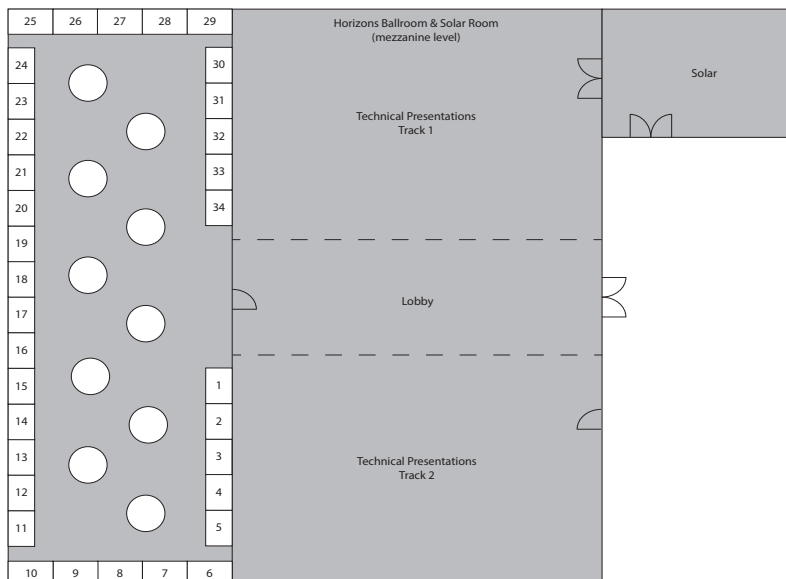
SPONSORSHIP OPPORTUNITIES

| Sponsorship Level | Platinum \$3000 | Gold \$1500 | Silver \$500 |
|---|--------------------|-------------|--------------|
| General Information | | | |
| Number of Sponsorship Opportunities | 5 | 10 | 20 |
| Number of Full Conference Passes | 2 | 1 | -- |
| Cost of Exhibitor Booth - comes with 2 additional vendor passes (Note: Regular cost of an exhibitor booth with 2 passes is \$875) | Included | Add \$500 | Add \$700 |
| On-site Visibility | | | |
| Logo on signage near registration desk, speakers room and hallways | Top Tier | Middle Tier | Lower Tier |
| Company logo in the 16 page Symposium Program Booklet | Large | Medium | Small |
| Advertisement in the 16 page Symposium Program Booklet | 1/2 page | 1/4 page | 1/8 page |
| Symposium Website | | | |
| Logo with web link on Symposium website | Top Tier | Middle Tier | Lower Tier |
| Logo in online Symposium program | Large | Medium | Small |
| Pre-Event Visibility | | | |
| Logo in pre-event emails to 2000+ prospective customers Emails to announce: Early-bird registration, Keynote, Invited Speakers, Sponsor Announcements, Seminar Schedule, Advance Program, Early-bird registration reminder, Tour Information, Onsite program, etc. | 8 emails | 4 emails | 2 emails |
| Logo in 16 page Symposium Advance Program | Large | Medium | Small |
| Advertisement in Symposium Advance Program | 1/2 page | 1/4 page | 1/8 page |
| Post Event Visibility | | | |
| Company and logo listed in post-event email to attendees | Yes | Yes | Yes |
| Logo in post-event email announcing proceedings | Large | Medium | -- |
| Company logo and link retained on WWAC 2014 website | Yes | Yes | Yes |
| ISA Water / Wastewater Newsletter - published quarterly | | | |
| Company name and logo in 2 newsletters prior to event | Yes | Yes | Yes |
| Advertisements in 2 newsletters before and 1 newsletter after | Full Page | 1/2 page | 1/4 page |

EXHIBITOR OPPORTUNITIES

Exhibitor tables are priced at \$875 each which includes:

- one six foot table with skirting, 2 chairs, duplex electrical outlet
- two vendor passes, which include ID badges and full conference access
- additional vendor passes can be purchased for \$200/each
- breakfasts, coffee breaks, and lunches on Aug. 5 & 6
- admission to the general reception with cash bar on the evening of Aug. 5th
- exhibit room hours: Aug. 5 & 6 (8:00am-5:00pm), and during Aug. 5th evening reception
- exhibit setup: Aug. 4 (6:00pm-9:00pm); exhibit take down Aug. 6 (5:00pm-8:00pm)



Why sponsor the WWAC

Build and maintain brand recognition by being a sponsor for the 2015 ISA Water/ Wastewater and Automatic Controls (WWAC) Symposium. This focused event allows you to reach out to both the water and wastewater sectors with one integrated message.

Advantages of sponsorship include:

- *Pre and post event visibility*
- *Exposure in the quarterly ISA water/wastewater newsletter*
- *Advertising in symposium programs*
- *Sponsor profiles on symposium website*
- *Visibility in symposium-related emails to attendees and ISA membership*

Why exhibit at WWAC

Exhibiting at the 2015 ISA Water/ Wastewater and Automatic Controls Symposium (WWAC) puts you face-to-face with a variety of industry professionals searching for your products, services, and insights. Use this focused event to build key business alliances and meet new prospects.

Network with the operators, maintenance managers and facility owners who are responsible for the smooth operation of water/wastewater facilities, as well as the engineers, technicians and programmers who build and develop automated plants.

2015 Water / Wastewater and Automatic Controls Symposium

Founded in 1945, the International Society of Automation is a leading, global, nonprofit organization that is setting the standard for automation by helping over 30,000 worldwide members and other professionals solve difficult technical problems, while enhancing their leadership and personal career capabilities. Based in Research Triangle Park, North Carolina, ISA develops standards; certifies industry professionals; provides education and training; publishes books and technical articles; and hosts conferences and exhibitions for automation professionals.



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www.isa.org

For more information visit:
www.isawwsymposium.com



WWAC
Symposium2015

4-6 August 2015
Orlando, FL USA

Sponsorship and Exhibit Space Contract

International Society of Automation

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E-MAIL info@isa.org
www.isa.org

2015 ISA Water / Wastewater and Automatic Controls (WWAC) Symposium

4-6 August 2015 • Wyndham Lake Buena Vista Resort • 1850 Hotel Plaza Blvd, Lake Buena Vista, FL, USA

Instructions: Review the Sponsorship & Exhibitor Prospectus. Complete this form, Sign it, and Fax it ISA headquarters at +1 (919)-549-8288

1. Applicant Information

Company Name: _____

Street Address: _____

City: _____ State/Province: _____ Country: _____

Phone: _____ Fax: _____ Postal Code: _____

Contact Person: _____ Position: _____

ISA Member # (if applicable): _____ Email: _____

2. Sponsorship Opportunities (check all that apply)

☐ **Platinum Level**\$3000

includes 2 full conference passes
includes 1 exhibitor table with two vendor passes

☐ **Gold Level**.....\$1500

includes 1 full conference pass

☐ **Silver Level**\$500

☐ **Breakfast Sponsor**\$750

Names of Conference Attendees

☐ 1: _____ Add \$400 if not Platinum/Gold sponsor

☐ 2: _____ Add \$400 if not Platinum sponsor

☐ 3: _____ Add \$400

3. Exhibitor Opportunities (Table-Top Exhibits)

Do you wish to exhibit at the symposium? YES ____ NO ____

An Exhibit Table includes a 6' skirted table, two chairs, duplex outlet, and two vendor passes.

☐ **Regular Price**.....\$875

☐ Price for Platinum Sponsors.....N/A, included

☐ Price for Gold Sponsors.....\$500

☐ Price for Silver Sponsors.....\$700

Preferred Exhibit Table Location: _____

ISA reserves the right to assign comparable space if the preferred location is not available

Names for Vendor Passes

☐ 1: _____ Included with exhibit table

☐ 2: _____ Included with exhibit table

☐ 3: _____ Add \$200

4. Acceptance of Terms and Conditions

Contract terms and conditions are on the reverse of this page. These rules and regulations are incorporated by reference into this contract, and by executing this agreement the sponsor/exhibitor agrees to be bound thereby as if same had been set forth fully herein.

Authorized Signature: _____ Print Name: _____ Position: _____

Technologies and/or products to be displayed/promoted: _____

For exhibitors: We request that, if possible, space assignment near the following potential exhibitors be avoided: _____

5. Payment for Sponsorship/Exhibiting

Total Amount: _____ **US Dollars** (from sections 2 and 3)

Payment in US currency only.

Full payment required with application.

Make check or money order payable to ISA.

Call ISA Customer Services for wire transfer information.

www.isawwsymposium.com

To pay by credit card, complete the following:

Charge: ☐ Visa ☐ Mastercard ☐ Amex ☐ Discover

Charge Account Number: _____

Expiry Date: _____

Signature: _____

Exhibit Space Contract Terms and Conditions

- 1. APPLICATIONS.** Applications for exhibit space must be made on the form printed on the reverse hereof, completed as requested, and accompanied by the required payment.

Products and services to be displayed must be specified on the application.

ISA reserves the absolute right to decline any application for space if, in ISA's judgment, the products or services to be shown or demonstrated are unrelated to the scientific and educational purposes of the Conference. This application becomes a contract only when accepted by ISA by notifying applicant of the assignment of a specified exhibit table.

- 2. EXHIBIT SPACE AND FLOOR PLAN.** Exhibit table-top space includes 6ft table, 2 chairs, one trash can, and duplex outlet. No rent allowance will be made if standard equipment is not desired. The exhibit floor plan for this Exhibition will normally be maintained as initially offered. ISA reserves the right to modify the plan to the extent necessary for the best interests of the Exhibitors and ISA or to correct inaccuracies or errors. ISA also reserves the right to modify the plan to the extent necessary for the best interests of the Exhibition.
- 3. SPACE ASSIGNMENT.** Space available will be allocated on a first come basis.
- 4. EXHIBIT SPACE PAYMENT SCHEDULE.** 100% of total exhibit fee must be paid with application.
- 5. CANCELLATION.** An Applicant may cancel the contract by giving written notice of cancellation received by ISA on or before 2 months ahead of conference start date. Upon receipt of a timely notice of cancellation, ISA will refund the exhibit table fee previously paid by Applicant. Applicant agrees that any cancellation after 2 months ahead of conference start date, withdrawal from the event, or failure to show at the event is a material breach of this agreement and ISA will retain the entire exhibit fee paid by Applicant in such event. Applicant agrees that the amount of the exhibit fee is a reasonable measure of the damages to ISA in the event of such breach. ISA agrees that the retention of the fee is Applicant's sole liability in the event of such breach. All notices of cancellation must be delivered to ISA before 2 months ahead of conference start date. No notice is effective unless submitted to ISA in a manner in which proof of receipt by the deadline can be shown, such as certified mail with a return receipt, courier with signed receipt, or an acknowledged e-mail from ISA.
- 6. SUBLETTING EXHIBIT SPACE.** No Applicant shall assign, sublet or apportion the whole or any part of the space allotted. Applicant may not display equipment or materials from other than its own firm or joint Applicants' firms in said space, without the consent of ISA.
- 7. INDEMNITY AND LIMITATION ON LIABILITY.** Applicant covenants and agrees to hold and save harmless ISA; the owners, operators, and managers of the Exhibit Facility; and the respective officers, agents and employees of each (collectively referred to as Exhibit Management) from any and all claims of liability, damage, or expense resulting from any injury to or death of any person, including Applicant's employees,

agents, and contractors, occurring within Applicant's exhibit table or resulting directly or indirectly from any act or omission of Applicant or any loss of, damage to, or theft of any property. An omission of Applicant includes any failure of Applicant to comply with any of the terms and conditions of this Contract; any of the Conference and Exhibit Rules and Regulations; any Rules and Regulations of the Exhibit Facility; and any laws of the City of the conference location. Applicant agrees to indemnify each and every member of the Exhibit Management group for any and all costs and liabilities incurred in defense of any such claim, including all expenses, attorney's fees, and any judgments awarded or settlement amounts agreed to. It is agreed that ISA Exhibit Management shall not be responsible for any loss, damage, or theft of any property of any persons, including the Exhibitor and its employees, agents, and contractors, while in transit to or from the Exhibit Facility, while in the Exhibit Facility, or otherwise.

Except for cancellations and withdrawals permitted by Paragraph 5 above, the Applicant is responsible for total rent for exhibit space irrespective of any reason for such cancellation and withdrawal, including cancellation and withdrawal by the Applicant because of failure of product showcase to arrive for any reason or cancellation by the Sponsors as the result of action by the Exhibit Facility Management or the result of strikes, lock-outs, act of God, inability to obtain labor or materials, government action of whatsoever nature, war, civil disturbance, fire, unavoidable casualty or other causes, whether similar or dissimilar, beyond the control of ISA. In the event of cancellation by ISA as a result of the aforesaid causes, the Applicant expressly waives such liability and releases ISA of and from all claims for damages and agrees ISA shall have no obligation to Applicant.

Applicant is a licensee of exhibit only and not an agent, employee, partner or joint venturer of or with ISA. Applicant agrees that it is solely responsible for its costs of doing business and agrees to hold ISA harmless from any obligations incurred by the Applicant as a result of contracting for any goods or services connected with the Exhibitor or with the Exhibit Facility, service contractors, or other persons or companies and to indemnify ISA for any costs or liabilities incurred in defending any such claims against ISA, including attorneys' fees, expenses, and any judgments awarded or settlement amounts agreed to.

- 8. GOVERNING DOCUMENTS AND LAWS.** Applicant expressly understands and agrees to be bound by all terms and conditions and rules and regulations contained in this Exhibit Space Contract, the Exhibit Space Rules and Regulations, including any amendments which may be issued; the master lease between ISA and the Exhibit Facility; and the Exhibit Facility Rules and Regulations, copies or pertinent extracts of which are attached and/or available for inspection at ISA during normal business hours. Applicant also agrees to be bound by any deadlines or policies stated in the Exhibitor information which will be provided by ISA.

Such documents are made an integral part of this Contract by reference as if set forth in full in the Contract. Applicant is further charged with the knowledge of, and agrees to comply with, all local, state

and federal laws, regulations, and codes pertaining to health and safety and promotions, marketing, and advertising, including activities requiring copyright licenses or permission and constituting a lottery, applicable to Applicant's Exhibit.

Compliance is Applicant's sole responsibility. This Contract will be interpreted and governed by the laws of North Carolina applicable to contracts signed and be wholly performed within North Carolina.

- 9. EXHIBITOR EVENT CONFLICTS.** Exhibitor will not schedule any receptions, hospitality suites, social functions, exhibits, product demonstrations, technical seminars, training sessions, or other event or function for attendees (or potential attendees) outside of the exhibit facility during the Conference and Exhibit activity hours.
- 10. SURRENDER OF SPACE.** If not cancelled as provided in this contract, Applicant's license for the exhibit space expires at the earlier deadline for move-out or actual vacation of the exhibit space. Applicant will surrender the space occupied by Applicant at the expiration of the license in the same condition as it was at the commencement of occupation. Applicant assumes sole and total responsibility for any damage to the Exhibit Facility due to construction, use, or dismantlement of Applicant's Exhibit and will reimburse ISA for any charges assessed by Exhibit Facility caused by Applicant paid by ISA, including charges for failing to vacate the premises in a timely manner.
- 11. VIOLATIONS.** The interpretation and application of these Terms and Conditions and documents incorporated by reference are the sole responsibility of ISA. Violation by Applicant of these Terms and Conditions shall subject the Applicant to cancellation of its contract to occupy exhibit table and to retention by ISA of all moneys paid. Upon due notice to Applicant of such cancellation, ISA will have the right to take possession of the Applicant's space, remove all persons and properties of the Applicant, and hold the Applicant accountable for all risks and expenses incurred as a result of such re-entry and removal.

ISA reserves the right to restrict exhibits which become objectionable because of noise, operational methods, rules violations, or any other reason and may prohibit or evict any Exhibit, which in ISA's sole opinion, may detract from the general character of the Exhibition as a whole. In the event of such restriction or eviction, ISA will not be liable for any refunds or expenses of Applicant.

If ISA must engage an attorney to collect any amounts due under this Agreement, Applicant agrees to pay all reasonable attorneys' fees and expenses incurred by ISA.
- 12. AMENDMENTS.** If any unforeseen event renders it necessary, ISA may amend these Terms and Conditions and those documents included by reference. All amendments will be published and mailed to each Applicant who shall be bound thereby. Any other changes in the terms and conditions and rules and regulations must be in writing and signed by both parties.