



Water/Wastewater Industry Division

Setting the Standard for Automation™

Calendar of WWID Events

- March 6-8, 2020 **ISA Spring Leadership Summit**
Austin, Texas, USA
- Aug 4-6, 2020 **2020 ISA Energy and Water Automation Conference**
San Antonio, Texas, USA
- Oct 23-26, 2020 **ISA Annual Leadership Conference**
San Juan, Puerto Rico, USA

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Newsletter Fall-Winter 2019

Director's Welcome

Pavol Segedy, HDR Inc.



Welcome to our Fall-Winter 2019 newsletter! For the past 2 years I have had the privilege of serving you as the division's director. My goals were to understand what the members wanted from the division and collaborate with other water associations such as American

Water Works Association (AWWA) and Water Environment Federation (WEF).

On January 1, 2020 our new WWID Director will be Don Dickinson. For the past few years, Don has been very active in our division and has held several positions, including being our general symposium chair for 2018 as well as director-elect for 2018-2019. I wish Don all the best as he continues to lead our division in my footsteps.

Do you have a favorite hobby or sport? Soccer, hockey, tennis, running, hiking, etc.? All of these things have a common element. In everything we do, we are as effective as our follow through effort. In Soccer, it's all about completing your strike with the ball. In hockey, it's all about completing your swing through the puck. In running, it's all about how you cool down and stretch at the end of each race or workout. If you don't follow through properly, over time the negative effects will accumulate and can do irreversible damage. A key to success is to always follow through and complete what you start. This also holds true for our work as... **(continued on page 2)**

Newsletter Editor's Welcome

Graham Nasby, City of Guelph Water Services



As our year of 2019 draws to a close and we move into 2020, one cannot help to take a look at how we did. In 2019, we tried something new. The year of 2019 brought us the first full year of ISA's new Executive Director, a new ISA Executive board, and several new ISA staff members – this all lead several changes and new directions for ISA.

In 2019, the ISA tried using a new format for its annual conferences. Instead of focused events, the ISA's staff planning team migrated to a larger event formats with a stronger focus on cross-industry collaboration. Gone was our old municipal water specific ISA Water/Wastewater and Automatic Controls Symposium, and instead ISA developed a new energy and water conference. Called the 2019 ISA Water & Energy Automation Conference, the staff and volunteer team worked hard to present this new format to the automation community in August 2019. Read all about in the report by conference chair Manoj Yegnaraman in this newsletter.

The ISA is also trying a new content-focused strategy when it comes to providing services to its members and the wider automation community. ISA's technical divisions, of which the WWID is one, have been asked to be one of ISA's driving forces for developing high quality technical content. Drawing on our experience with running ... **(continued on page 2)**

WWID Director's Message (continued from Page 1)

...volunteers as we carry out the business of our organization through our engagement and our service.

Our organization is only as good as our volunteers and how well we follow through on our commitment to our members. We may be volunteering our time, but we have taken on the job of supporting our organization and each other through our shared goals and shared responsibilities. We are fortunate within ISA and WWID to have great people who give huge amounts of their time for the benefit of others. Our division performs critical functions for many local, state, national and global automation projects every day!

In closing, please keep giving your time and energy to our Society. Thank you to all of our great volunteers who give so much of themselves for the benefits of others. I am really proud and honored to have had the opportunity to work for you as your director during this past 2 years. It has been quite an experience. I truly look forward to my new role next year, but will still be around. The ISA water/wastewater division has been a great for my career, and I hope you will consider enriching your career by getting involved with the volunteer technical associations and follow through.

Thank you to all of our division members for putting your trust in ISA!

Warmest Regards

Pavol Segedy, PE
HDR, Inc.
WWID Director 2018-2019
Pavol.segedy@segedyfam.com



**Water/Wastewater
Industry Division**

Newsletter Editor's Welcome (continued from Page 1)

...high quality technical conferences, publishing our newsletter, participating in industry committees, and being involved with industry events, the WWID is well positioned to fulfil this new content-focused mandate as we server our members and the large municipal water community. We are in for an exciting year ahead.

As you read through this newsletter, I encourage you to find out about how our Water/Wastewater division is involved with the water community. We are always looking for more volunteer. Why not come and join the fun?

Warmest Regards,

Graham Nasby, P.Eng.
Newsletter Editor
graham.nasby@guelph.ca





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WWID NEWS

Director-Elect's Message

Don Dickinson, Phoenix Contact USA



The Water & Wastewater Industries Division (WWID) was well represented at the Awards Gala during the recent 2019 ISA Annual Leadership Conference held in San Diego. WWID members took home awards for Volunteer Leader of the Year, and Technical Paper of the Year. And, WWID Director

Pavol Segedy accepted the Division of the Year Award on behalf of WWID members. The awards are a testament to the hard work and dedication of our members. As the incoming WWID Director, I am proud of our division's past successes, but realize this is no time to rest on our laurels. Now is a good time to be thinking how WWID members can assist in "setting the standard for automation" for our industry in 2020.

ISA is a member-driven organization. Your support is essential in helping ISA achieve its strategic vision of creating a better world through automation. In other words, get involved! Serve as a member of a standards committee, be an active participant in your local member section, take a leadership role in the division, or just post an article of interest on the WWID LinkedIn Group site. Your involvement supports ISA, our division, and our industry but, ultimately, it supports you. ISA offers many opportunities for development of leadership and professional skills. I challenge you to take full advantage of those opportunities in coming year.

I also ask for your input on how the WWID division leaders can improve your member experience. We welcome any suggestions that might enhance the value you receive from your division membership. By doing so, we will be able to continue the level of excellence our members have achieved in 2019.

I look forward to serving you and the Water & Wastewater Industries Division as Director in 2020. Thanks in advance for your support and participation in the coming year.

Warmest Regards,

Don Dickinson

Phoenix Contact USA

WWID Director-elect

ddickinson@phoenixcon.com

About Don Dickinson

Don Dickinson has over 30 years of sales, marketing and product application experience in Industrial Controls and Automation, involving a wide range of products and technologies in various industry segments. Don is the Senior Business Development Manager – Water Sector, Phoenix Contact USA. He is the past chair of the NC AWWA-WEA Automation Committee and the current chair of the Automation Security subcommittee.

WWID NEWS

WWID was at ISA's 2019 Annual Leadership Conference in San Diego, California

By WWID Committee

The Water/Wastewater division was pleased to be at the ISA's 2019 Annual Leadership Conference, which was recently held from Oct 25-29, 2019 in San Diego, California, USA. At the meeting, WWID members participated in standards committee meetings for ISA112 (SCADA Systems), ISA18 (alarm management) and ISA101 (HMI Design), as well as being actively involved in several governance functions of the ISA.

At the ISA's annual Awards Gala on the Saturday, the ISA Water/Wastewater division was extremely well represented this year. Don Dickinson, who was the past-chair of the 2018 ISA Water/Wastewater and Automatic Controls Symposium, received the ISA's highest volunteer leader award as the "Volunteer Leader of the Year" at the society level. Brian Mast, received the ISA's "Technical Paper of the Year" award for his paper "Summary of the King County, Washington, West Point WWTP Flood of 2017" which he presented at the same conference. The ISA's "Division of the Year" award was also awarded to the Water/Wastewater Division. Longtime WWID volunteers Bryan Sinkler and Don Dickinson also received commendations from the WWID itself, and outgoing WWID director Pavol Segedy received a commemorative plaque thanking him for his service.

As always, the ISA's Annual Leadership Conference (ALC) included several motivational speakers and a number of technical speakers who highlighted up and coming technology trends. Of particular interest was Don Bartusiack's talk about the upcoming Open Process Automation standard, which is being developed jointly by the Open Group and ISA.

The conference also provided a chance for ISA's many volunteer leaders to reconnect with old friends and reach out to new folks who are just getting started with the ISA. The WWID looks forward to a bright year ahead!



Photo from opening session of the 2019 ISA Annual Leadership Conference in San Diego, California, USA

ISA CONFERENCES

Report on 2019 ISA Energy & Water Automation Conference (EWAC)

From Manoj Yegnaraman, EWAC2019 conference chair

Thank you for those who were able to attend our 2019 ISA Energy and Water Automation Conference (EWAC) - <https://isaautomation.isa.org/ewac2019/>. For those who couldn't attend, we missed you!

Overall, I felt like we had a great program this year. Our attendees, sponsors, exhibitors, speakers, partners, program review committee, ISA staff, and Division volunteers certainly made it a successful event. I also extend my appreciation to staff at the Omni Orlando Resort at Championsgate, Florida, USA for hosting this event.

Our program for this year kicked off with a 2-day training program on Aug 5 and Aug 6. There were a total of four instructor-led 1-day training courses focusing on SCADA Systems Integration, Alarm Management, Project Management and Cyber-Physical Security. There were a total of 40 students, and each participant was provided with Continuing Education Units (CEUs) for their training courses.

The conference had several networking opportunities throughout the day and during the end of each day. A speaker's dinner, along with transportation, was arranged for the keynote and technical presentation speakers at Charley's Steak House on Aug 6th.

Following the training, we had two full days of technical program. Each day started with one or two keynote presentations, which were plenary sessions. On day 1 of our technical program, Tom DeLaura provided his opening keynote on Asset Management, and Dean Ford provided his keynote presentation on Automation Maturity. The keynotes set the stage for our technical program, and there were several good questions and discussions between the attendees and speakers. The best part was towards the end of the keynote session when Tom and Dean got back on stage together to engage with the attendees and provided their big picture thoughts and views on the keynote topics. On day 2 of our technical program, Mark Delfunt provided his highly engaging keynote presentation on Digitization Strategy.

On each day, the keynotes were followed by technical presentations that were split into the following 3 major tracks:

- SCADA, Alarm Management and Optimization
- Instrumentation/Communications
- Industrial Cybersecurity and Safety

Thanks to the efforts by our authors, co-authors and program review committee. The presentations were of high quality and provoked several good discussions during each Q & A session.

On behalf of WWID, we provided best paper and best presentation awards from our 2018 ISA Water/Wastewater and Automatic Controls Symposium during this conference.

We are currently in the process of reviewing feedback from attendees regarding our 2019 ISA EWAC and have already started planning our 2020 ISA EWAC! On behalf of our conference committee, I take this opportunity to thank everyone who was a part of our successful event. Looking forward to seeing you all next year!

Thanks,

Manoj Yegnaraman, PE
Chairman, 2019 ISA EWAC
Associate Vice President, Carollo Engineers, Inc.,



Logo from the 2019 ISA Energy & Water Automation Conference, recently held in Orlando, Florida USA



Photo of the on-site EWAC 2019 team in Orlando, Florida. From left to right: Hassan Ajami, Meagan, Xinsheng Lou, Kim Belinsky, Manoj Yegnaraman, Joe Provenzano, Mary Ramsay, Bill Furlow, and Josiah Long.

ISA CONFERENCES

Photos from the 2019 EWAC Conference

From Manoj Yegnaraman, EWAC2019 conference chair



We had a full house in the presentation room.



Dean Ford of Westin Technology Solutions addressing the crowd, talking about how organizations can leverage SCADA.



Group shot from the speakers dinner. Many thanks to Joe Provenzano for organizing this night-before tradition – now in its 20th year for our ISA water/wastewater division group.



The event featured fully catered lunches for all, and a chance to talk to our many sponsors and vendors.



A photo of the conference hotel: The OMNI Championsgate Resort hotel in Orlando, Florida, USA.



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Onsite Program



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Thanks our many sponsors and exhibitors.

WWID NEWS
WWID was at WEFTEC 2019
“Cybersecurity – It’s more than Just Compliance!”
By Pavol Segedy, WWID Director

As part of its partnership with WEF (Water Environment Federation), the WWID and WEF hold a joint ISA-WEF technical session at WEFTEC each year. This past year’s WEFTEC 2019 was held in Chicago from Sept 21-25, 2019

“Cybersecurity – It’s more than just compliance”

The joint ISA-WEF collaboration consisted of three sessions:

Cybersecurity Part 1: Hardware Perspectives

- **Mon Sept 22, 2019 – 5-6pm – Mobile Center Theater**
Speakers: Pavol Segedy (HDR Inc.), Rick Hidalgo (Signature Automation), David Brearley (HDR Inc.), Don Dickinson (Phoenix Contact USA)

Cybersecurity Part 2: Software Perspectives

- **Tues Sept 23, 2019 – 5-6pm – Mobile Center Theater**
Speakers: Pavol Segedy (HDR Inc.), Rick Hidalgo (Signature Automation), David Brearley (HDR Inc.), Don Dickinson (Phoenix Contact USA)

Cybersecurity Part 3: Bringing it all together

- **Wed, Sept 24, 2019 – 1-2pm – Innovation Pavilion**
Speakers: Pavol Segedy (HDR Inc.), Rick Hidalgo (Signature Automation), David Brearley (HDR Inc.), Don Dickinson (Phoenix Contact USA)

Presentation Details
Cybersecurity – Its’ more than just compliance

Cybersecurity is more than just compliance. It’s about protecting critical infrastructure. It’s about ensuring the availability and reliability of municipal water and wastewater systems. This session included presentations that informed attendees on the cyber threat landscape, and upcoming cybersecurity requirements per America’s Water Infrastructure Act of 2018. Useful resources from various industry groups for cybersecurity guidance and best practices were be highlighted. Additionally, attendees learned about the specific components of a comprehensive cybersecurity plan for protecting critical infrastructure.

MODERATOR:

Pavol Segedy, HDR, Inc.
& ISA WWID Director, Pavol.segedy@hdrinc.com

TITLE:

Cybersecurity Landscape of Control Systems: Yesterday & Today

AUTHOR:

Rick Hidalgo, Signature Automation, rhidalgo@sig-auto.com

TITLE:

Assessment – Delivering real value or just checking the box?

AUTHOR:

David Brearley, HDR, Inc., david.brearley@hdrinc.com

TITLE:

Resources for Developing a Cybersecurity Plan

AUTHOR:

Don Dickinson Phoenix Contact ddickinson@phoenixcon.com

The ISA WWID looks forward to continuing this annual tradition next year. The ISA Water/Wastewater Industry Division and the WEF Automation & Information Technology committee are pleased to have been continuing this annual tradition for the past 8 years, since 2012.



Photo of the 2019 WEFTEC Exhibitors Floor in Chicago, Illinois, USA. Each year, the annual WEFTEC conference welcomes over 1,200 exhibitors and 23,000 attendees.

About WEFTEC:

Presented by the Water Environment Federation (WEF), the Water Environment Federation’s Technical Exhibition and Conference (WEFTEC), is the largest conference of its kind in North America and offers water quality professionals from around the world with the best water quality education and training available today.

As the largest annual water quality exhibition in the world, the expansive show floor provides unparalleled access to the most cutting-edge technologies in the field. WEFTEC serves as a forum for domestic and international business opportunities; and promotes invaluable peer-to-peer networking among registrants. For more info visit www.wef.org

TECHNICAL ARTICLE

**Challenges of being an I&C Lead Engineer:
One Man's Opinion***By Mike Laspisa*

I enjoyed being an instrumentation and control (I&C) engineer and collaborating with all available resources in completing assignments, often asking for help from vendors or other engineers. That said, I have witnessed a decline in the quality of work in many areas of I&C engineering in the past 10 years. In my almost 40 years of experience in the I&C discipline, I have observed changes in instrumentation and control engineering and the shifting of engineering to vendor inside sales forces. This has affected the quality of measurement and control device specifications in the past 15-20 years. Also, reduced training budgets in engineering firms have resulted in younger I&C engineers who are not as knowledgeable as they should be to be effective. Some old work standards and methods seem to have gone by the wayside in today's engineering world.

I created a list of challenges that an I&C lead engineer faces that might help a younger engineer:

1. Proposal and budget preparation. This is sometimes frustrating, because the task "hourly factors" are not always known or transferrable from project to project and the time frame given is usually less than desirable. The "deliverables" should be identified, and for the most part can be selected from the work breakdown structure-based estimating forms.
2. Multitasking on one or more projects. Keep organized and make/update "to-do" lists either daily or weekly as necessary. Many fail at this and wind up with a lot of half- or almost-done tasks.
3. Working with the varying levels of client I&C involvement. Be open minded about the control system. Concentrate on the hardware and software functional requirements. The same is true for the I&C devices. Stay with quality manufacturers. Yes-cost is a factor. However, performance and installed life costs are more important than the lowest initial cost. It is also true that a project has a finite amount of funds, and sometimes sacrifices have to be made. Use client-approved vendors and plant standards when available, but be open to looking at new technology as well.
4. Resist the temptation to send out unchecked or incomplete work. There are many pressures, and we have to count on other team members to complete their assignments. We have to delegate but are also responsible for the end product. Know your team members' strengths and weaknesses. Provide extra monitoring and checking where required. It is tough to tell your boss or PM that you might miss a deadline. Maybe you can issue the document with holds or partial instrument bid packages if they are representative enough to get a bid and select the vendor.
5. Do not blindly accept the process data provided for measurement and control devices. Work with the process

department to make sure you are using good data. Good measurements, and properly sized final control devices, are the keys to good control loop performance and flexibility.

6. I&C device specifications are about more than just filling out datasheets. The end user is paying for engineering and experienced device specifiers. It is OK to review device applications and required accessories with your quality vendors. It is not OK to leave the majority of the fields blank or with an asterisk for «vendor to furnish». I have seen more than a few datasheets using this approach with missing or misleading information. The vendor can only work off the information provided on the datasheet without the benefit of a piping and instrumentation drawing or pipe specification.

7. Accurate reporting is a pain. Juggling hours sometimes is a necessity. Try to be fair to both without worrying about the last chargeable hour. It does not help anyone to make it just "look" like everything is on schedule or on budget.

8. Total quality improvement programs are about more than just taking 10 minutes to complete a checklist. Sometimes it seems that it is only an exercise done by lead engineers at the last minute. Interdisciplinary checks require time in the design schedule that is rarely taken into consideration.

9. Project teamwork includes the other disciplines. Work with the other leads. Be aware of their needs and how you are going to support them. We have a natural tie with electrical, but piping design also requires I&C input and review.

10. Speaking of electrical, on any given job the technical strengths of the electrical and I&C leads will vary. Work out the overlapping technical design issues: motor control (including local control device requirements and intelligent MCCs), power distribution, grounding, communication cabling, etc. If there are different opinions, get the discipline manager involved.

This article was previously published in the Sept/Oct 2018 issue of ISA InTech magazine. Reprinted with permission.

About the Author:

Mike Laspisa worked in the I&C discipline for more than 37 years before retiring in 2012. He started at an EPC firm learning the field and control devices while creating instrument indexes and project manuals. He advanced to specifying I&C devices and creating construction document packages/scopes and eventually moved to leading projects in a variety of industries. Laspisa was recognized by ISA as a 25-year senior member in 2009.

LEADERSHIP ARTICLE

ISA Volunteer Lessons Learned

By Jim Keaveney, 2016 ISA Society President

I would like to share the top two lessons I learned as an ISA leader and the top two reasons to become a volunteer leader.

Lesson 1: Volunteer leadership or a committee role is like work with one key difference-no one directly reports to you! Indirect influence and team building are the keys traits required to be an effective leader or committee member. Volunteers are not paid to behave in a certain way, but an effective team sets expectations and engagement guidelines. Failure to learn this lesson will earn an "F" for frustration. It is important to find the right fit for volunteers with different competencies and diverse perspectives to build a team culture of inclusion. At the board level, the composition should best reflect the type of society that we strive to become. Patrick Lencioni's book, *The Five Dysfunctions of a Team*, should be required reading for any association volunteer.

Lesson 2: It is all about trust; the foundation of any good team is exploring change and new approaches to old problems. Involving all in healthy discussions leads to higher quality results. With trust, team members are not afraid to be vulnerable and are willing to express their views and collaborate to resolve differences. Trust empowers us to help other volunteers become better team players and embrace change in the form of continuous improvement. A trust culture is the cornerstone of any organization, including ISA. I still cringe when I hear, "If it is not broken, why fix it?" President John Kennedy wisely noted that the best time to repair a roof is when it is not raining. It is rare that we have those light bulb "aha" moments, and we really need to drive improvement incrementally.

Trusting the various committees and task forces to do their jobs builds a strong organization. Board members or committee chairs need to stay focused on overall strategy and avoid micromanaging.

Volunteer leaders also need to trust and respect staff partners who hold the "institutional memory" of the organization. As volunteer leaders, we must hold ourselves-and each other-accountable to ensure that the volunteer-staff relationship is cohesive and collaborative. Drucker nailed it when he observed that culture eats strategy for breakfast. As volunteer leaders, we all need to contribute to a culture of trust, collaboration, and continuous improvement. *The Change Cycle* by Ann Salerno and Lille Brock is an excellent read on surviving and thriving during organizational change. The bottom line is that building and leading effective teams is always hard work.



My top two reasons for deciding to step up to a volunteer leadership role are:

Reason 1: Understanding and mastering the techniques to be an effective volunteer leader or committee member enhances skills you need to be successful on the job. The time commitment pays dividends in terms of developing a wider professional network for technical issues and professional guidance. Be sure that your company really understands these advantages, so it buys into supporting your time investment and commitments. Make no mistake about it, ISA welcomes and needs more new volunteers. There are many ways for you to contribute, including technical standards development, governance, and image and membership, to call out a few.

Reason 2: Contributing is what it is all about! We as automation professionals make the world a better place. As your professional organization, ISA helps make our world safer (cybersecurity, alarm management, safety instrumented systems) while increasing productivity (workforce development, standards best practices). Be proud of this fact, and make sure that your management, friends, and families all know that you are making a difference.

If I had to choose just two words to wrap things up, one would be *gratitude* for the opportunity to learn from so many in my volunteer leader role. The other would echo the call from Jean Luc Picard, the fictional Star Fleet officer from the Star Trek franchise, and challenge each of you to *engage!*

This article was previously published in the Jan/Feb 2018 issue of ISA InTech magazine. Reprinted with permission.

About the Author



Jim Keaveney was ISA president in 2016. He has been an active ISA member for more than 30 years and has served in numerous leadership positions, including society treasurer, finance committee chair, and District 2 vice president. Keaveney is the northeast regional manager for Emerson Automation Solutions.

WWID NEWS
**Thanks to our outgoing 2019 volunteer
WWID Board Members**

Director (2018-2019)

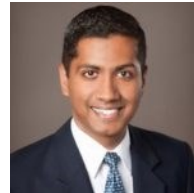
Pavol Segedy, PE
HDR Inc.
Raleigh, North Carolina, USA



Kevin Patel, PE, MBA
Signature Automation
Dallas, Texas, USA


**Director-elect
& Director (2020-2021)**

Don Dickinson
Phoenix Contact USA
Cary, North Carolina, USA


2019-2020 Conference Contact

Manoj Yegnaraman, PE
Carollo Engineers, Inc.
Dallas, Texas, USA


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**2019-2020 Assistant
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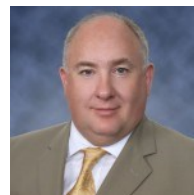
David Wilcoxson, PE
Stantec Consulting Inc.
Walnut Creek, California, USA


Committee Member

Steve Valdez
GE Energy Services
Paramus, New Jersey, USA


**Newsletter Editor
& Co-Chair, ISA112 SCADA
Systems Standards Committee**

Graham Nasby, P.Eng, PMP, CAP
City of Guelph Water Services
Guelph, Ontario, Canada


Committee Member

Derrick Stableford, P.Tech.(Eng)
Associated Engineering Inc.
Cochrane, Alberta, USA

WWID NEWS
Thanks to our 2019 WWID Committees
**Scholarship Committee Chair
& Asst. Newsletter Editor**
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- Thomas C. McAviney, I&C Engineering
- Wally Ingham, Volunteer

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- Pavol Segedy, PE – HDR Inc.
- David Wilcoxson, PE, LEED AP, ENV SP – Stantec Consulting

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peers



Water/Wastewater Industry Division

AUTO-QUIZ: BACK TO BASICS

PLC Analog Input Card Scaling Review

This automation industry quiz question comes from the ISA Certified Control Systems Technician (CCST) program. CCSTs calibrate, document, troubleshoot, and repair/replace instrumentation for systems that measure and control level, temperature, pressure, flow, and other process variables

Question:

The dead band of an instrument is:

- the band that prevents the instrument from being tampered with by unauthorized persons
- the range of valves for which the instrument gives inaccurate readings
- the size of the instrument indicated by the divisions on the scale of the instrument
- the range that an input signal may be changed on reversal of direction without an observable change in the output
- none of the above

Answer:

The correct answer is D. In process instrumentation, the dead band is the range through which an input signal may vary, upon reversal of direction, without initiating an observable change in output signal.

The Automation, Systems, and Instrumentation Dictionary adds these notes as further definition.

Note 1: There are separate and distinct input-output relationships for increasing and decreasing signals.

Note 2: Dead band produces phase lag between input and output.

Note 3: The instrumentation industry expresses dead band as a percentage of span.

Note 4: ANSI/ISA-51.1-1979, revised 1993, pertains to dead band.

Reference: The Automation, Systems and Instrumentation Dictionary, 4th Edition. Copyright ISA 2003. 582 pages.

ISA CAP and CCST certification programs provide a non-biased, third-party, objective assessment and confirmation of an automation professional's skills.

The CAP exam is focused on direction, definition, design, development/application, deployment, documentation, and support of systems, software, and equipment used in control systems, manufacturing information systems, systems integration, and operational consulting.

Certified Control System Technicians (CCSTs) calibrate, document, troubleshoot, and repair/replace instrumentation for systems that measure and control level, temperature, pressure, flow, and other process variables.

Question originally appeared in the AutoQuiz column of <http://automation.isa.org>. Reprinted with permission.



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SOCIETY NEWS

The Ball is in Your Court Now

By Paul Gruhn, 2019 ISA Society President

In May 2019, ISA leaders convened in North Carolina for the I have used this blog every month to inform you of the various resources and activities going on within the society that are available to benefit you and your employer. Our standards, books, journals, training, certificate and certification programs, conferences, licensure, divisions, sections, leader meetings, new vision/mission/values statements, affiliated organizations, and our new strategic objectives (along with associated goals and tactics) are all intended to increase your technical competence (i.e., your employability) and the operational performance of your company (e.g., safety, security, and profitability).

We have made great strides this year ranging from a surplus budget, membership growth, and getting all the volunteer leaders to row their collective boats in the same direction to achieve our collectively agreed-upon strategic objectives. It has taken a lot of work from a lot of people, and we are not “done” by any means.

It has been an honor serving as your 2019 society president and seeing the advancements we have made. While there will be various activities for me to remain involved in serving as your 2020 past president, your incoming 2020 president Eric Cosman will be leading the society in the coming year. New volunteers will be serving in various leadership roles. While we do have a professional staff, setting the strategic objectives of the society and leading many of our programs are activities performed by volunteers. If there is something you are not satisfied with, if you think there is something we should offer that we currently do not, or if you think the society could do something better, do not sit back on the sidelines and complain; step up to the plate, get involved, and help improve the situation.

I have used this quote from Teddy Roosevelt before, but it is worth mentioning again:

Every person owes part of their time and money to the business or industry in which they are engaged. No person has a moral right to withhold their support from an organization that is striving to improve conditions within their sphere.

If you are early in your career, get involved to build up your network of connections, learn from mentors, and advance your career faster than you would be able to do on your own. If you are more experienced, get involved to give back to your industry and mentor those entering the field.

Ninety-plus percent of members and volunteers I know of joined ISA and/or became volunteers because someone asked them to. Who have you suggested lately to join ISA to increase their knowledge and further their career? Who have you asked lately to come to a monthly meeting that you knew would be of interest to them? Who have you recruited lately to become a volunteer and put their career on fast track by

getting involved? This stuff does not just happen on its own; you need to drive it. It’s your society. The ball is in your court now.

Paul Gruhn
2019 ISA President

About Paul Gruhn



Paul Gruhn PE, CFSE, and ISA Life Fellow, is a Global Functional Safety Consultant with aeSolutions, a process safety, cybersecurity and automation consulting firm. As a globally recognized expert in process safety and safety instrumented systems, Gruhn has played a pivotal role in developing ISA safety

standards, training courses and publications. He serves as a Co-Chair and long-time member of the ISA 84 standard committee (on safety instrumented systems), and continues to develop and teach ISA courses on safety systems. He also developed the first commercial safety system modeling program. Gruhn has written two ISA textbooks, numerous chapters in other books and dozens of published articles. He earned a bachelor of science degree in mechanical engineering from Illinois Institute of Technology, is a licensed Professional Engineer (PE) in Texas, and both a Certified Functional Safety Expert (CFSE) and an ISA 84 Safety Instrumented Systems Expert.

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Call for Newsletter Articles

The WWID newsletter is published four times a year (winter, spring, summer, and fall) and reaches the WWID's over 1,600 members. Each issue is approximately 16-32 pages long, and is electronically printed in color PDF format. A notification email goes out to all WWID members and it is available for public download at www.isa.org/wwid/ and www.isawaterwastewater.com

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 are 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 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@grahamnasby.com.

WWID Newsletter Advertising

The WWID newsletter is an excellent way to announce new products and services to the water/wastewater automation community. With a distribution of 2,500+ professionals in the automation, instrumentation and SCADA fields, the WWID newsletter is an effective targeted advertising tool.

The WWID newsletter is published quarterly, on the following approximate publication schedule:

- Winter Issue – published in January/February
- Spring Issue – published in May/June
- Summer Issue – published in August/September
- Fall Issue – published in October/November

Advertising in the newsletter is offered in full page and quarter page formats. Advertisements can be purchased on a per issue basis or for four issues at a time. The newsletter itself is distributed as a full-color PDF, so both color and black/white artwork is acceptable.

The current advertising rates are as follows:

Per Issue:

- Full page, full color (7" x 9"): \$500
- Full page, full color, (8.5x11") , with bleed \$600
- Half page horizontal, full color (7"x4.5"): \$350
- Half page vertical, full color (3.5"x9"): \$350
- Quarter page, full color (3.5" W x 4.5" H): \$250

Per Year: Apply 20% discount if purchasing 4 ads at a time

Other sizes of advertisements are available, but are priced on an individual basis. Contact us for more information.

Please book advertising space as early as possible before the intended publication date. Artwork for advertisements should be submitted a minimum of two weeks prior to the publication date; earlier is always better than later. Artwork for advertisements can be submitted in EPS, PDF, PNG, JPG or GIF formats. EPS, PDF and PNG formats are preferred. Images should be at least 300dpi resolution if possible.

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@grahamnasby.com.



WWID Board Member Contacts

Director

Pavol Segedy, PE
HDR Inc.
Tel: (919) 427-5313
pavol.segedy@segedyfam.com

Director-elect

Don Dickinson
Phoenix Contact
Tel: (919) 633-0147
ddickonson@phoenixcon.com

2019 Symposium Contact

Manoj Yegnaraman, PE, CP/CE(Profibus)
Carollo Engineers Inc.
Tel: (972) 239-9949 ext. 44424
myegnaraman@carollo.com

2019 Assistant Symposium Contact

Hassan Ajami
PCI Detroit
Tel: 313-874-5877
hajami@pci-detroit.com

Secretary Treasurer

David Wilcoxson, PE
Stantec Consulting Inc.
Tel: (925) 627-4561
david.wilcoxson@stantec.com

Membership Chair

Juliana Wafer, PE
Signature Automation
Tel (210) 807-7343
jowafer@sig-auto.com

Program Chair

Joe Provenzano
KPRO Engineering Services
Tel: (203) 560-1816
provenzano2@comcast.net

Newsletter Editor

& Co-Chair, ISA112 SCADA Systems Standards Committee
Graham Nasby, P.Eng, PMP, CAP
City of Guelph Water Services
Tel: (519) 822-1260 ext. 2192
graham.nasby@grahamnasy.com

Scholarship Committee Chair

& Asst. Newsletter Editor

Kevin Patel, PE, MBA
Signature Automation
Tel (469) 619-1241
knpatel@sig-auto.com

Committee Member

David Hobart, P.Eng, CAP
Hobart Automation Engineering
Tel (802) 253-4634
dghobart@gmail.com

Student Scholarship Committee Members

Kevin Patel, Signature Automation (chair), knpatel@sig-auto.com
Sean McMillan, Jones & Carter, sean.mcmillan@jonescarter.com
Steve Valdez, General Electric, svaldez1210@gmail.com
Thomas C. McAviney, I&C Engineering, tcmcav@gmail.com
Wally Ingham, Volunteer, wally1234ingham@gmail.com

ISA Staff Contacts – Division Services

Andrea Holovach, Rachael McGuffin,
Karen Modrow, MaChelle Beason
ISA Headquarters, 67 T.W. Alexander Drive, PO Box 12277,
Research Triangle Park, North Carolina, 27709, USA
Tel: 1 (919) 990-9404
Fax: (919) 549-8288
divisions@isa.org

ISA Water/Wastewater Division Links:

Website: www.isa.org/wwid/
Website: www.isawaterwastewater.com
LinkedIn: <https://www.linkedin.com/groups/2031271/>
Facebook: <https://www.facebook.com/ISAWaterWastewater/>
WWID Blog: www.isawwsymposium.com/blog/

ISA Customer Service

ISA Headquarters - Raleigh, North Carolina, USA
Tel: 1 (919) 990-9404
Fax: (919) 549-8288
Email: info@isa.org

2020 ISA Conferences

2020 ISA IIoT & Smart Manufacturing Conference
April 15-16, 2020 – Galveston, Texas, USA

2020 ISA Analysis Division Symposium
April 26-30, 2020 – Long Beach, California, USA

2020 ISA Energy and Water Automation Conference
Aug 5-6, 2020 – San Antonio, Texas, USA

2020 ISA Digital Transformation in Deepwater Production Conf.
Sept 16-17, 2020 – Galveston, Texas, USA

2020 ISA Process Industry Conference (PIC)
Nov 18-19, 2020 – Houston, Texas, USA

About the ISA Water/Wastewater Division

The ISA Water / 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 actively supports ISA conferences and events that provide presentations and published proceedings of interest to the municipal water/wastewater sector. The division also publishes a quarterly newsletter, and has a scholarship program to encourage young people to pursue careers in the water/wastewater automation, instrumentation and SCADA field. For more information see www.isa.org/wwid/ or www.isawaterwastewater.com.



Water/Wastewater
Industry Division