



# September 2017 NEWSLETTER

*NITSL establishes a forum to provide leadership and strategic guidance for information technology in the nuclear industry*



## 2018 NITSL Conference

Mark your calendars for the 2018 NITSL conference hosted by NextEra at the Hilton Hotel in West Palm Beach Florida the week of **July 16 - 19**.

West Palm Beach has numerous attractions and things to do including shopping, fine dining, Broadway-quality shows, a world-renowned art museum and more.

West Palm is also within reach of smooth-sand beaches and enticing waterways. Downtown West Palm is home to four retail and entertainment districts; Clematis Street, City Place, Northwood Village and Antique Row.

The conference planning committee is working hard to get things moving for another great conference in 2018.

If you have any suggestions for the conference including recommendations for topics, presenters, training, or something new please forward your suggestions to your Standing Committee chair/co-chair of any NITSL Executive Committee member.

As conference information is finalized we will send additional communication and update the NITSL conference SharePoint site with details.



## Chairman's Corner

Dan Bierbrauer

I wanted to thank everyone for another rewarding NITSL conference in San Francisco. It's always nice to meet up with old friends, make new acquaintances and learn what's going on in the industry. I also wanted to thank both Larry Cerier (Chair) and Joe Verbout (Secretary) for their support on the NITSL Executive committee last year and welcome new EC Members Bill Wood (Vice-Chair) and Kelly Petock (Financial Officer).

During the conference we heard from leaders in the nuclear industry including PG&E, the NRC, INPO, NEI, INL, EPRI and from our own Standing Committees (Software QA, Cyber Security, Digital Systems, and Infrastructure & Applications).

In addition, we had multiple opportunities to interact with each other and our vendors.

Pictures and copies of all the presentations will be posted on our SharePoint site (sign in required). Our thanks again to Dan Holland, Susan Tremper and all the folks at PG&E for hosting our conference this year! I also wanted to acknowledge Eric Rahn (Excel Energy), who managed the CVENT event site for the conference and Michelle Vera (Exelon) who coordinated the vendor registration and booths.

On behalf of the Executive Committee, we look forward to another challenging year. Please feel free to contact any of us with issues, concerns, or interests. Remember that the value of NITSL comes from the engagement and information sharing of our members; please participate actively on the Standing Committee of your choice!



## NITSL Leadership Members

### Executive Committee

During the San Francisco conference, NITSL elected two new members to the Executive Committee; Bill Wood (Exelon) and Kelly Petock (Talen). The Executive Committee for 2017-2018 is in place and ready to serve.

Below is the Executive Committee membership (\*) with INPO sitting on the board.

- **\*Dan Bierbrauer** (Southern) - Chair & Workshop Committee Sponsor - [djbierbr@southernco.com](mailto:djbierbr@southernco.com)
- **\*Bill Wood** (Exelon) – Vice-Chair & Digital Committee Sponsor - [william.wood2@exelon.com](mailto:william.wood2@exelon.com)
- **\*Aaron Gregory** (Duke Energy) – Communications Officer & I&A Committee Sponsor - [aaron.gregory@duke-energy.com](mailto:aaron.gregory@duke-energy.com)
- **\*Kelly Petock** (Talen Energy) – Financial Officer & Cyber Security Committee Sponsor - [kelly.petock@talenergy.com](mailto:kelly.petock@talenergy.com)
- **\*Linda Torunski** (Entergy) – Secretary & SQA Committee Sponsor - [ltoruns@entergy.com](mailto:ltoruns@entergy.com)
- **Kim Corn** – INPO, Community of Practice, Topical Area Sponsor
- **Lem Grant** - INPO, Community of Practice, Topical Area Sponsor
- **Cathy Przyjemski** - NITSL Administrator - [cathy.przyjemski@nitsl.org](mailto:cathy.przyjemski@nitsl.org)

### 2017 - 2018 Executive Committee



Left to Right: Kelly Petock, Joe Verbout (outgoing), Bill Wood, Dan Bierbrauer, Aaron Gregory, Linda Torunski, Larry Cerier (outgoing)

## Standing Committee Leads

During the conference a new chair and co-chair was named for each standing committee. If you are interested in joining a standing committee and want to know how to get involved with monthly calls or meetings, please contact the appropriate chair/co-chair listed below.

### ➤ Cyber Security:

Chair - Scott Junkin (Southern)  
[sjunkin@southernco.com](mailto:sjunkin@southernco.com)

Co-chair - Lilile Winckowski (First Energy)  
[lmwinckowski@firstenergycorp.com](mailto:lmwinckowski@firstenergycorp.com)

### ➤ Digital Controls:

Chair - Gus Grosch (Duke Energy)  
[gustav.grosch@duke-energy.com](mailto:gustav.grosch@duke-energy.com)

Co-chair - Vacant

### ➤ Infrastructure & Applications:

Chair - Mike Peutl (Exelon)  
[michael.peutl@exeloncorp.com](mailto:michael.peutl@exeloncorp.com)

Co-chair - Jim Hill (Xcel)  
[james.hill@xenuclear.com](mailto:james.hill@xenuclear.com)

### ➤ Software Quality Assurance:

Chair - Lynne Valdez (APS)  
[p.lynne.valdez@aps.com](mailto:p.lynne.valdez@aps.com)

Co-chair - Amanda Engle (Exelon)  
[amanda.engle@exeloncorp.com](mailto:amanda.engle@exeloncorp.com)

## Executive Committee Update

### ➤ 2017 Conference Material

It was great to see everyone in San Francisco! We are glad people took advantage of the mobile app to share some great pics and feeds throughout the conference.

The link to the 2017 conference presentations can be found in the "NITSL Quick Links" menu on the member site.

We also want to thank you for completing the survey and providing feedback. We welcome all thoughts and suggestions so please contact a member of the EC with any comments, concerns or additional feedback about the conference or any other NITSL related items.



## ➤ Conference Training

The 2017 conference started out with a bang! We had dynamic training class with provocative material promoting much discussion.

In SQA the topic was in-use testing. This term is used in the ASME Nuclear Quality Assurance Standard (NQA-1) but can go by many different names in your organization. For example, an in-use test of process software might be accomplished with surveillance tests or cross channel comparisons.

You may be doing in-use testing under a different name. If it's a requirement for your program, make sure you take credit for the testing where appropriate.

What training would you like to have next year? Start thinking about it and let your EC chair know your thoughts/suggestions.

## ➤ Standing Committee Involvement

Standing Committee chairs/co-chairs will begin receiving invites to periodic monthly EC meetings to provide an update on their respective areas.

EC members will also be working with their respective SC chairs/co-chairs to update committee charters and core strategies in the NITSL Strategic Plan.

This is intended to improve communications with the EC/SC's, provide opportunities to share information across Standing Committees and improve the overall NITSL strategy and direction.

## ➤ Plant Digitalization Conference

Nuclear Energy Insider is hosting their 2nd annual nuclear plant digitalization conference on November 13-14 in Charlotte, NC. The aim of the conference is delivering competitive nuclear power through digital innovation. The conference will have industry speakers from utilities, vendors and advisory groups. There will be exhibition booths and new for this year, a Cyber Security Workshop. Nuclear Energy Insider is offering NITSL members a \$200 discount off the registration fee. When registering use the code NITSL200. Please visit their conference [website](#) for more information.



## Advisory Member Updates

### ➤ Mobile Work Management Deployment and Implementation Conference

August 8th and 9th brought Utilities and Vendors together at the EPRI complex in Charlotte, NC.

The purpose was to bring together utility personnel (users, PMs and IT) to discuss project initiation, lessons learned, implementation strategies, and future plans with a goal of collaborating as an industry and helping each other move forward with mWM technology.

To date there are (16) commercial nuclear sites that have implemented eWP, (7) sites that are in process of implementing, and many others who are interested. The utilities that have implemented mWM solutions have used the guidance as outlined in EPRI report 3002005363, Improving the Execution and Productivity of Maintenance with Electronic Work Packages: A Mobile Work Management Initiative.

Presentations by Southern Co, APS, Duke Energy, Ameren, PSEG, Exelon, & INL gave insight and lessons learned into their implementation or planned deployment. Some of the utilities are using commercial products while a couple has created their own systems. One key message is to get the business engaged early in the process.

Bruce Gordon, a long time NITSL member, included in his presentation the NEWPER (Nuclear Electronic Work Packages - Enterprise Requirements) initiative that was a joint effort between INL and NITSL which defined generic requirement that any utility can use for eWP.

EPRI discussed the advantages of deploying LTE over DAS (Distributed Antenna System) that provides better penetration/coverage at lower frequencies and reduces costs. Cost reduction is seen by not having to build out wireless infrastructure and the carrier handles network loading and infrastructure upgrades.

[Link](#) to EPRI site with the presentations will require EPRI Username & Password.

For more information contact Bruce Gordon, NITSL I&A Committee @ [Bruce.Gordon@aps.com](mailto:Bruce.Gordon@aps.com)



## Standing Committee updates

We welcome all of the new committee members and thank you for your input and participation. Please invite others in your organization who you feel would have an interest or add value to these groups. Each committee facilitates a monthly call to provide updates on activities and share operating experience at their utility. Feel free to contact any of the committee chairs/co-chairs for more information or visit our SharePoint site for call-in information.

We are looking for a volunteer to assist our Digital Controls standing committee. If anyone is interested in serving as a co-chair for the Digital Controls standing committee please contact Bill Wood @ [william.wood2@exelon.com](mailto:william.wood2@exelon.com) and/or Gus Grosch @ [gustav.grosch@duke-energy.com](mailto:gustav.grosch@duke-energy.com)

## Cyber Security Standing Committee

The NITSL Cyber Security Standing Committee (CSSC) selected 4 initiatives to work on throughout the year. Some of these initiatives are focused on providing utilities information prior to the full implementation dates coming up at the end of year. Initiative leaders are working on the development of scope for the initiatives, and laying out some milestones for the schedule.

- **Cyber Security Program benchmarking focused on cost, staffing, procedures** (Jim Shank [PSEG]/Ken Levandoski [Exelon])

The intent of this initiative is to identify the sites in the Top 10% (lowest) in terms of on-going total program costs and to identify the common elements of those program that enable those sites to achieve those results. To help with this initiative, CSSC members will be solicited to provide answers to a various number of survey questions around the on-going program costs, staffing, and CDA tasks.

The survey results and key learnings will be shared during the 2018 NITSL conference.

- **Develop Standard Cyber Security Metrics** (Mike Zavislak [TVA]/Brad Yeates [Southern]/Larry Carrier [Exelon])

The intent of this initiative will be to develop metrics that will help determine program health.

Standardized Metrics will also help in benchmarking and best practices.

- **Establishing a Standard Vulnerability Evaluation Process and sharing Evaluations** (Dewey Coulon [Entergy]/Jon Wilkins [Southern])

The intent of this initiative is to develop a standard Vulnerability Evaluation Process that can help utilities address the vulnerabilities provided by an ALNOTS screening process.

This initiative will also include a combined effort with the CSTF to work with the NRC on agreement for screening low consequence vulnerabilities, agreement on when patches are needed, and agreement on what corrective actions associated with vulnerability evaluations are required prior to Milestone 8.

- **Implementing Detect, Respond, and Eliminate (DRE) as it relates to the Significance Determination Process (SDP)** (Dave Neff [Exelon], Heather Pickard [TVA])

Scope is to prepare a template that can be used to demonstrate the ability to DRE a cyber threat.

Deliverable product was determined to be a living folder/library of examples and expanded guidance related how to demonstrate the ability to Detect/Respond/Eliminate a cyber vulnerability.

The goal is to have these examples ready for support of the Milestone 8 inspections.

Since the NITSL conference, the CSSC has also conducted two Technical Calls related to Cyber Security Incident response. Callaway provided an overview of their Incident Response Program that was developed with the assistance of a previous EP





employee. Exelon provided an overview of a recent unannounced cyber Security Incident Response Drill. Both provided some excellent discussions, and highlighted the importance of early and often communications when dealing with so many different departments.

## Software Quality Assurance Standing Committee

### ➤ Conference News

The 2017 NITSL conference was a success. The energy level was high and there was plenty of opportunity to network. We had the pleasure of catching up with old friends and making new acquaintances. It's not just fun, the networking allows us to share information and work together to improve our processes across the industry.

### ➤ 2017-2018 Initiatives

The SQA Committee met face-to-face at the conference and decided to work on the following initiatives:

- Collaboration within NITSL (Digital, Data Analytics, and Cyber)
- SQA Working Site Maintenance
- SQA Knowledge Product Sharing
- SQA Awareness Communication Strategy

### ➤ What you can do to help the industry gain efficiencies

The SQA Committee is going to need your help!

The vision is that the industry has a resource to research software they are interested in using. This resource would be a database on the NITSL website of software with the associated categories and a contact person.

Just imagine, your engineering or maintenance management says we need such and such software. Wouldn't it be nice to know what other utilities are using that software, what it is classified as, and who to contact to ask questions?

In the upcoming months, the SQA Committee will be contacting you to collect information for this database. Remember, we'll need your help to be successful!

## Infrastructure and Applications Standing Committee

### ➤ NITSL SharePoint Site Enhancements

The I&A Committee met on July 27 to review the following initiatives identified at the conference.

- Delivering the Nuclear Promise (DNP) – Bruce Gordon (APS)
- Data Analytics – Industry Collection of Use Cases – Jerrold Vincent (APS)
- Mobile Applications – David Arndt (Duke)
- Common Definition of Cloud Compliance – Angie Hensley (INPO), Kelly Petock (Talen Energy)
- Business Process Management – Misty Goff (Exelon)
- Electronic Work – Johanna Oxstrand (INL)
- Utilization of artificial intelligence to support business processes – Mike Peutl (Exelon)
- The internet of things – smart devices that want to connect to the network – Cedric Watson (INPO)
- Research and development of what is next – Eric Jurotich (Southern)
- Define processing for sharing data across the industry – Angie Hensley (INPO)

More information on each was provided by the Initiative Lead; this is in the I&A notes in the 2017-2018 subcommittee folder. Each Lead has an action to complete a basic Initiative Charter to better articulate Objectives, Business Value, and proposed team makeup. It is intended that the charter then be used for communication to member utilities and facilitate greater participation on the initiatives beyond just I&A members.

## Digital Controls Standing Committee

We are looking for a volunteer to assist our Digital Controls standing committee. If anyone is interested in serving as a co-chair for the Digital Controls standing committee please contact Bill Wood @ [william.wood2@exelon.com](mailto:william.wood2@exelon.com) and/or Gus Grosch @ [gustav.grosch@duke-energy.com](mailto:gustav.grosch@duke-energy.com)

The DCS subcommittee met at the conference and identified the following initiatives to focus on for 2017-2018.

1. Virtualization - Cyber to produce white paper on standard for VMs as CDA



2. Control of outputs of data historians - initiative with SQA.
3. Data Analysis - Data Centralization
4. Standard Digital Design Process
5. Remove Monitoring Sensors
6. Survey: Allocation of Tasks on Digital Systems between Engineering, Maintenance, IT & Cyber
7. Survey: Digital Control Lab

## Industry News & Articles

### Three New DNP Initiatives Released

The nuclear energy industry recently released three new efficiency bulletins in support of the Delivering the Nuclear Promise initiative.

The Standard Indicator-Central Database bulletin will aim to provide a central database that allows the Institute of Nuclear Power Operations (INPO), along with industry stakeholders, to manage key performance indicator (KPI) data, which allows for the management of standard KPI sets within a common, central database.

Another bulletin, titled Optimizing Strategic Engineering, Engineering Response Team and Component Maintenance Support, will aim to redesign engineering organizational structures so they may focus on core responsibilities, such as troubleshooting support and response to emergent plant issues.

The specific target implementation date will be at each utility's discretion consistent with its business environment.

The Optimizing Program and Design Engineering Organizations bulletin will seek to provide optimal organizational structures and staffing levels for program engineering and design engineering organizations.

The streamlined processes, NEI said, would result in effective use of resources and improved focus on equipment reliability and design change quality. The realignment and centralization outlined in the bulletin will allow for a more efficient use of resources.

Source:

<https://dailyenergyinsider.com/news/7318-nuclear-industry-releases-three-new-delivering-nuclear-promise-initiative-bulletins/>

### NRC Approves NuScale's Module Plant Protection Platform

The US Nuclear Regulatory Commission (NRC) has approved NuScale's Highly Integrated Protection System [HIPS] Platform for use in plant safety-related instrumentation and control (I&C) systems, NuScale said in a statement.

NuScale plans to use the HIPS platform in its Integral Pressurized Water Reactor (IPWR) small modular reactor (SMR) design. Earlier this year, the NRC began the full certification review of NuScale's IPWR, the U.S.' first full safety review of an SMR design.

The HIPS protection system architecture was jointly developed by NuScale Power and Rock Creek Innovations over a period of six years.

The platform is based on the fundamental I&C design principles of independence, redundancy, predictability, repeatability and defense-in-depth. The HIPS platform is comprised of four module types which can be interconnected in multiple configurations to support various types of reactor safety systems.

The HIPS platform "also uses field programmable gate array (FPGA) technology that is not vulnerable to internet cyber-attacks," NuScale said.

Last month, Senator Edward Markey called for U.S. federal government departments to demonstrate sufficient cyber security measures are in place at U.S. nuclear power plants, following media reports of security breaches.

The New York Times reported a persistent cyber security threat targeted personnel working for nuclear plant operators and manufacturers of plant control systems, citing a classified report by the Department of Homeland Security. Bloomberg reported that the chief suspect in these attacks was Russia, which is also suspected of disrupting energy infrastructure in Ukraine.

Source:

<http://analysis.nuclearenergyinsider.com/nrc-approves-nuscale-ic-security-system-holtec-snc-lavalin-accelerate-smr-160-program>



## Radiation Dose Software Vulnerable

A radiation dose management tool sold by Philips is vulnerable to hacks, according to an announcement by the Dutch technology company and the U.S. Industrial Control Systems Cyber Emergency Response Team (ICS-CERT).

The advisory (ICSMA-17-229-01) says Philips has discovered two vulnerabilities in its DoseWise Portal (DWP) web application, which healthcare providers in the United States, Europe, Japan and Australia use to record, analyze and monitor imaging radiation doses for patients and clinicians.

Specifically, DWP versions 1.1.7.333 and 2.1.1.3069 have hard-coded credentials and cleartext storage vulnerabilities which, if exploited, allow remote code to be executed by an attacker. If successful, an attack can give its author access to the DWP application database, which contains patient health information.

"Potential impact could therefore include compromise of patient confidentiality, system integrity, and/or system availability," the advisory reads.

Both vulnerabilities can be exploited remotely, even by a low-skill attacker. Fortunately, there are no known public exploits that specifically target these vulnerabilities.

OEM's typically disclose such flaws in their products alongside an update that patches them. In this case, Philips offered two "interim mitigation" procedures until an update is developed and sent to DWP users. Philips tells customers to implement "network security best practices" and to "block Port 1433, except where a separate SQL server is used."

ICS-CERT is a bit more thorough with its own recommendations:

- Minimize network exposure for all medical devices and/or systems, and ensure that they are not accessible from the Internet
- Locate all medical devices and remote devices behind firewalls, and isolate them from the business network
- When remote access is required, use secure methods, such as Virtual Private Networks (VPNs), recognizing that VPNs may have vulnerabilities and should be updated to the

most current version available. Also recognize that VPN is only as secure as the connected devices

Due to the complexity of the settings in which DWP applications are used, it's important that healthcare providers perform proper impact analysis and risk assessment before taking any steps to deploy the above defensive measures.

Healthcare providers should expect a new product version and accompanying documentation later this month. No exact date has been set to release the DWP patch.

Even with a patch in the works, the news is not encouraging. A Deloitte survey of 370 professionals in the medical device/IoT ecosystem this year revealed that 35.6 percent of organizations suffered some form of cybersecurity incident in the past 12 months.

Only 18.6 percent of medical device vendors said they were prepared for a lawsuit if their products were subject to cyberattacks.

Source:

<https://hotforsecurity.bitdefender.com/blog/philips-tells-healthcare-clients-to-use-best-practices-until-it-patches-critical-vulnerabilities-in-dosewise-portal-app-18780.html>

## 3 Mental Barriers to Learning

Regardless of your position (executive, manager, specialist, professional, etc.), the biggest barrier to learning is not your lack of time or resources. The biggest barrier of learning might be your ego. These three mental barriers could be getting in your way.

### - The belief that you already know

There is no reason to be curious or ask questions if you already know it all. This belief limits your perspective because you don't want to waste time on something you already know.

To fix this, stop saying you already know and say "tell me more" or "share your perspective". Look for nuggets of information.

### - The assumption that you are the smartest

Compared to someone else you might have a higher degree, make more money, make fewer mistakes, received a promotion, and the list goes on.

Comparing yourself to others and trying to be the smartest, best or most successful person in the room limits your ability to connect to other people.

To fix this give up the need to be better than anyone else and start appreciating others. Relationships will improve because they will be bound by interests and equality instead of comparison.

### - The need to be right

If you are afraid of being wrong you will cling to outdated ideas just to win the argument. "Being right" is about proving a point and not really about comparing ideas. You don't need to prove your worth by being right.

To fix this, give up the need to win every argument or prove every point. If you are approachable, people will give you opportunities to prove how right you are by seeking your opinion.

To build a learning environment you must give up these barriers and realize you will not always know the answer, others might know more and you will be wrong occasionally.

Source:

<http://www.smartbrief.com/original/2017/08/3-mental-barriers-learning>

## Safety Minute - Keeping Hands Clean

A recent [report](#) released by Sports Illustrated ranked the food-safety climate at every Major League Baseball park in the United States. Simple handwashing could resolve grievances related to food handling.

Handwashing involves five simple steps (wet, lather, scrub, rinse, dry) and can significantly reduce the spread of illness to help people stay healthy.



Handwashing before and after certain activities is one of the best ways to remove germs and prevent the spread of germs to others. It's quick, simple and can help keep us all from getting sick.

If soap is unavailable use an alcohol-based hand sanitizer that contains at least 60% alcohol.

Alcohol-based hand sanitizers can quickly reduce the number of germs on hands in some situations, but sanitizers do not eliminate all types of germs and might not remove harmful chemicals. Hand sanitizers are not as effective when hands are visibly dirty or greasy.

A lower alcohol concentration or non-alcohol based product might not work for all classes of germs. Studies show these products cause germs to develop resistance to the sanitizing agent and merely reduce the growth of germs instead of killing them outright.

From 2011-2015, U.S. poison control centers received nearly 85,000 calls related to hand sanitizer exposures among children. Hand sanitizers should be stored out of the reach of young children.

If possible, use running water to wet hands since standing water could be contaminated through previous use. The temperature of the water does not appear to affect microbe removal; however warmer water is more environmentally costly.

Use soap if available instead of just water. People tend to scrub hands more thoroughly when using soap and most soaps contain surfactants to lift soil and microbes from the skin.

When using soap and water, scrub your hands for 15-20 seconds. If you need a mental timer, hum the "Happy Birthday" song while you wash hands.

Why lather and scrub?

Lathering and scrubbing creates friction which helps lift dirt, grease and microbes from the skin. Microbes are present on all surfaces of the hand, often in high concentrations under the nails. Be sure to scrub the entire hand.

Germs can be transferred more easily to and from wet hands. Studies conflict about the best way to dry hands - air or towel but, hands should be dried with either a clean towel or air after washing.

Try to keep your hands clean to help prevent the spread of germs.

Source:

<https://www.cdc.gov/handwashing/index.html>