INFORMATION, COMMUNICATION & CYBER SECURITY NEWSLETTER

Dear EPRI ICCS Members and Stakeholders,

It's a wrap!

We held the second annual ICCS European Engagement Summit last week in Dublin, Ireland. It was nearly two days of enlightening presentations and interactions *(check out Annabelle Lee of EPRI, interacting with all those desserts!)*. The summit attendees included utility members, EPRI project managers, representatives from academia and solution providers – all working collaboratively to gain greater insight into the needs of the European electric utility market. A special thank you to ESB Networks for their assistance in planning and organizing the summit. Here is a summary of comments from attendees.

"Coordination with IoT interest group"   "Get buy-in from as large a number of stakeholders as possible"

"along with things that worked, also compile things that did not work (and why)"   "Share best practice on dealing with security breaches."

"Increase pilots and proof-of-concepts…"   "Be prepared to fail, fast, and share it."   "Collaborate and share IDEAS!"

"Help the industry lead rather than react to changes in ICT."

"Work on the challenges together"   "Help guide research"

The meetings were divided into two tracks, Information and Communication Technology (ICT) and Cyber Security (CS). The ICT track included presentations on Geospatial Information Systems, Telecommunications, Augmented Reality, and Advanced Metering Systems (AMI). The CS track started with a workshop on Cyber Security Metrics. Next, during the Cyber Security Architecture Methodology for Power Delivery Systems session, Joe Dauncey, of Scottish and Southern Energy, gave a presentation on the results of the UK Workshop on the Ukraine Cyber Attack. That was followed by a session on Improving CS Situational Awareness for Substations and Field Devices. The final CS session focused on centralized threat management --- integrating IT, OT and physical security information for better wide area situational awareness. The wordwall below illustrates the European take on next steps needed for EPRI to help address the issues facing Europe.

As the year continues we will strive to incorporate our learnings from the European summit into our research activities to provide value and insight to our European members as they face a myriad of similar and unique challenges.

Read on to see what else the ICCS staff have been working on this month.

Sincerely,

Matt Wakefield
Director, Information, Communication and Cyber Security Research

Information and Communication Technology (ICT) (161)

ICT Team Industry Contributions and Collaborations

John Simmins was quoted in a **CIO Magazine** article about the growing popularity of the use of augmented reality in utility operations. The EPRI and Duke collaboration is highlighted as part of the article, which begins on Page 9.

On April 7, Zac Canders, CEO of DataCapable, gave a shout out to John Simmins, reporting that while he was in Maine during a big wind storm, both Emera and CMP were able to seamlessly see trending outages across their territories because of the Outage Data Initiative work, seeing the value in real-time.

Upcoming Meetings/Webcasts	
GIS Interest Group – Approaches for Automating GIS Clean-up EPRI and the University of New Mexico have and continue to develop automated techniques to clean-up and even create new data sets for use by GIS professionals. They include: • Secondary Line Impedance Calculation • Meter Connectivity (Phase Identification) • Linking Smart Meters to Service Transformers	22-Apr-2016

• Asset Identification and Cataloguing The webcast will focus on Geospatial Information System (GIS) verification and correction approaches and algorithms using SCADA and smart meter data, asset images, and other useful utility data sets. Additionally, the webcast will provide the presenters and the participants a chance to brainstorm on what other automated techniques can and should be explored.	
Weekly Enterprise Architecture Collaboration Group Webcast	26-Apr-2016

Meeting/Webcast Materials Available

ICT Interoperability Webcast - Grid 3.0

Distribution and Transmission Modernization on Data Analytics

DMD/TMD Team Industry Contributions and Collaborations

DMD/TMD Demonstration Deliverables

Data Cleanup Algorithms--Examples from a Geospatial Information System

While the use of a Geospatial Information System (GIS) system is nothing new to utilities, leveraging that system with expanding sets of big data and the latest machine learning and statistical analysis techniques is new. At present, there is a real need for an industrywide program in GIS analysis that will disseminate the latest technologies and spur the development of commercial packages. Appropriating data cleanup algorithms and adapting them for use in utilities provides a shortcut to more refined and insightful analysis techniques. New insights as to how these algorithms might be used forms the basis for this report.

The intended audience for this report is anyone involved in GIS, GIS analytics, or big data analytics, with emphasis on the demands placed on geospatial data by the integrated grid and associated data analysis.

Improving Electric Power System Situational Awareness: Leveraging "Information Bursts" and an Internet Message Manager

This document proposes that it is not necessary to transmit more and more data in order to achieve the desired levels of system visibility and situational awareness. Instead of more data, the goal should be to transmit only the necessary data. The method proposed here is one of moving just the right messages—information bursts—to the appropriate points where that information can be leveraged most efficiently. Internet-scale technologies employed by "big data" companies like Google and Twitter—which are already being deployed for smart metering systems by some utilities—may be the next indispensable technology for the electric utility industry.

Upcoming Meetings/Webcasts	
EPRI Distribution Modernization Demonstration and Transmission Modernization Demonstration Spring Advisory Meeting 2016, Hosted by the Electric Power Board (EPB) of Chattanooga, Chattanooga, TN	11&12-May 2016

Smart Grid Demonstration

Smart Grid and Related Demonstration Deliverables

FirstEnergy Integrated Distributed Energy Resource Management Training, Use, and Acceptance

The subject of this case study is annual training on the use of the FirstEnergy Integrated Distributed Energy Resource (IDER) management system, deployed in the central region of the Jersey Central Power & Light Company (JCP&L). The IDER system has been used to support electric distribution system engineering and operations and to participate in the PJM Interconnection, LLC (PJM) market programs, where PJM is the regional transmission operator (RTO). As there are two applications of the IDER system—peak load management through residential direct load control (DLC) and acquisition and use of data from distribution line sensors, there are two different training programs.

This case study reviews the content of the presentations and demonstrations provided at training sessions, as well as how training has been adapted since first initiated in May 2009.

Upcoming Events	Dates
EPRI Distribution Modernization Demonstration and Transmission Modernization Demonstration (DMD/TMD) Spring Advisory Meeting 2016, EPB, Chattanooga, TN	May 11-12, 2016
EPRI Smart Distribution and Power 2016 Quality Conference and Exhibition, Atlanta, GA	June 28-30, 2016
Save the Date: EPRI Power Delivery and Utilization Advisory Meetings, Hollywood, FL	Sept. 19-22, 2016

Together...Shaping the Future of Electricity