



# 2016 Fall Automation Workshop

## Operational Intelligence: Beyond SCADA

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8:30am Breakfast

8:55am Opening Remarks

9:00am Keynote

### **Industrial Internet of Things (IIoT)**

*Arlen Nipper – Cirrus Link*

In this presentation we will review how IIoT infrastructures have matured over the last 18 years and what important IIoT technology can start to be leveraged by OT departments today. Much of the discussion around IIoT has embraced the convergence of IT/OT departments with a notion of an IT lead effort. But history has shown these efforts have not been successful and now OT need to take the lead in the design, architecture, testing, and deployment of IIoT based SCADA system.

10:00am Seminar 2

### **The modernization of Peel's SCADA system**

*Jason Little – Regional Municipality of Peel*

The modernization of Peel's SCADA system began in 2008 in with the formation of the Region of Peel's SCADA group. The legacy system was comprised of Bristol Babcock RTUs with Wonderware Intouch front end on a serial radio and lease-lined backbone with standalone desktop computers. Over the past 8 years, the Region has embarked on a large scale control systems upgrade that has allowed the Region to review best of breed technologies and architectures in a large scale deployment. The system consists of over 80 facilities, 5 datacenters, 126 virtual servers, 100+ HMIs, 130 KM of fibre, 3500+ instruments, 1500+ pumps, 2500+ valves and >1,000,000 tags. Key areas of focus include WAN, LAN, PLC, security, visualization, data reporting and analytics, virtualization and remote data logging.

10:40am Break

11:00am Seminar 3

## **Leveraging Big Data for Intelligent, Water Utility Management**

*Gary L.S. Wong - OSIsoft*

With recent advances in technology, wireless sensors to monitor water in real-time are available like never before. These sensors, along with control systems, smart meters, geospatial data, lab data, weather, asset information and others are part of the Big Data and Internet of Things evolution. A convergence of operations technology (OT) and information technology (IT) is taking place as the vast amounts of data generated must be effectively managed and analyzed in order to enable intelligent decision making.

This presentation will focus on a few case studies where water utility managers are leveraging instantaneous access to Big Data to enable better real-time decision making and operational intelligence. Successes include detecting leaks within minutes, safeguarding water quality, and saving millions of dollars in energy and asset management.

11:30am          Seminar 4

## **SCADA and Beyond: A California Perspective**

*Bill Serjeantson – Cole Engineering Group*

The optimization of water distribution, water consumption and Net Zero (energy management and resource recovery) is a significant driver for water and wastewater utilities in California. California has faced water shortage in past, but the ongoing drought has made matters worse and increased the challenges faced by utilities. More efficient, responsive systems that balance water collection, treatment, distribution and recycling, are a more effective way of reaching these goals. SCADA is the only way to intelligently and effectively connect complex systems of collection and distribution, detect and monitor leakages and minimize non-revenue water.

This paper will discuss the implementation of SCADA systems in California focusing on resource allocation, the impact of topography on build-out, and awareness of security issues.

12:00pm          Lunch

1:00pm          Seminar 5

## **City of Windsor's Experience in Enterprise Integration of Plant Data for Operational Intelligence**

*James Taylor – Rockwell Automation*

In this session we will discuss how the City of Windsor automated the chemical monitoring and ordering process which resulted in risk reduction, cost savings and improved efficiency.

We will review the technical architecture which enabled IT/OT convergence as well as compare the operational processes before and after implementation.

1:40pm Break

2:00pm Panel Discussion/Q&A

**Jason Little** SCADA Advisor, Peel Region

**Kevin Nyman** SCADA Manager, City of Toronto

**Richard Walker** SCADA Manager, York Region

Moderator Graham Nasby

3:45pm Closing Remarks