

BCWWA SCADA & IT Conference
“SCADA Systems, What`s Next?”

Speaker Biographies and Abstracts

Day 1 – November 21, 2017

Keynote: Internet of Things (IoT) and the Connected World
Presented by: Peter Bentley – OSIsoft

Mr. Peter Bentley is a long time technical evangelist and water advocate and administrator of his home water use. Presently he is leading the charge to establish OSIsoft’s efforts around Internet of Things (IoT) and edge based computing. He has spent his technical career in Silicon Valley and successfully help to develop and position new products from companies such as General Magic, Digital Fountain, Microsoft and OSIsoft. He has a BA in communications from the University of Maryland, College Park. He presently lives in Livermore, CA with his wife and children.

Abstract:

Water is a fundamental building block of life on this planet. It has been and will continue to be a highly charged topic replete with complexity and a persistent need for adaptation and responsible stewardship. Water management has its own challenges; operationally, technically, and politically. We will examine how current and upcoming technologies including edge computing, the Internet of Things and Big Data impact water management today and into the future.



Presentation Title: Basic SCADA for Operators
Presented by: Norm Vito – District of West Vancouver

Norm Vito, SCADA Technologist for the District of West Vancouver, along with his team of technicians/electrician is responsible for the operation, maintenance and upgrades to the District of West Vancouver SCADA System which monitors and controls a various water and sewer infrastructures, including water treatment and distribution, sewer collection and treatment, and power generation. Norm has over 10 years of experience in the municipal water and wastewater industry, and has been an active member of the BCWWA SCADA and IT Committee since 2012.

Abstract:

For operators SCADA has come a long way to where it is today. We will look at the evolution of the SCADA system. How does a SCADA system help an operator? What comprises of a SCADA system from a big picture point of view? How does data flow in a system? What kind of information can a SCADA system provide for operators, maintenance and managers? What SCADA tools are available for Operators today? What role does security play in a SCADA system?



Presentation Title: Integrating SCADA Data into Daily Operations

Presented by: Greg Shrimpton – Township of Langley

Greg Shrimpton is a process automation technologist responsible for SCADA system operations at the Township of Langley. Major responsibilities include project planning, SCADA and radio equipment installation, programming and maintenance, historian configuration, report creation and HMI programming. Greg has worked this role for approximately 5 years. Prior to working at the Township of Langley, Greg worked for Molson Canada for 2 years as a controls technologist working on high speed manufacturing PLC and SCADA systems. Greg graduated from BCIT with a diploma in automation and instrumentation and continues to study to obtain his engineering degree.

Abstract:

A look into how the Township of Langley is utilizing its SCADA system data to improve operations. By using a multiple pronged approach including reports, live trending and mobile notifications, the operations team can proactively respond to issues and focus crew time where it is needed most.

Day 2 – November 22, 2017



Presentation Title: Leveraging Mobile Data Access Technologies

Presented by: Jon Sommerfeld – TinBox Energy Software

Jon Sommerfeld is a SCADA Systems Technologist with over 17 years of experience in both the Oil & Gas and Water/Wastewater industries. Jon previous experience in the municipal water & wastewater field included his time at OPUS DaytonKnight and the City of Burnaby as a SCADA Technologist, during which he was also on the BCWWA SCADA & IT Committee. As a member of the TinBox Energy Software Engineering group his main focus is on implementing and providing innovative metering and measurement solutions that add value while maintaining compliance and accuracy.

Abstract:

We often hear the phrase “taking your data mobile” but what does this mean? In this session we will discuss how can we practically tie mobile devices to SCADA to leverage real time/historical data, relating it to decision making processes on every level of your corporation no matter the size or complexity.



Presentation Title: Why do you need a Radio Master Plan?

Presented by: Tom Dunn – Opus International Consultants (Canada) Ltd.

Tom Dunn is a SCADA and communications specialist with Opus's Automation group. Tom has a Senior Engineering Technician's Certificate from the British Columbia Institute of Technology (BCIT). He is a member of the British Columbia Water and Waste Association (BCWWA) where he serves on the BCWWA SCADA & IT committee and the International Society of Automation (ISA). Tom has been with Opus (formerly Dayton & Knight Ltd.) since 1999 and is involved in Regional Wide Supervisory Control and Data Acquisition (SCADA) systems and wireless communications projects. Prior to Opus, Tom worked for 18 years with Motorola Communications and specialized in integrating RF telemetry systems designed and built by Motorola's Fixed Data Group. He retired from the Canadian Naval Reserve as a Naval Radio Operator and Chief Petty Officer 2nd Class. He is also an advanced amateur radio operator (VE7TD) and a member of the North Shore Emergency Communications Team with Emergency Management BC (EMBC).

Abstract:

Why does a Municipality need a SCADA communications "Master Plan"? Good question. As an initial step for any Municipality to moving forward toward a fully integrated and comprehensive SCADA implementation program, a communications master plan is essential as it is the base infrastructure and foundation of how data will be transferred between various facilities and the Command Centre. In developing the communications master plan components such as key business drivers for corporate integration, risk assessment, need for standardization, optimization, sustainability, security, redundancy and operability need to be addressed.

Radio path analysis will also need to be undertaken to identify infrastructure locations, towers and structure heights, optimal locations, and usage of Municipal owned land and buildings necessary to provide optimum wireless coverage. Workshop collaboration is key to dissemination of information and provides Municipalities with guidelines for moving forward on developing their SCADA communications system.

In this presentation we will present several key issues and drivers required to developing the SCADA communications master plan:

1. RTUs (Remote Terminal Units) for more robust and reliable communications;
2. Leveraging SCADA communications for more effective Operations;
3. Redundancies in the SCADA communications system;
4. Better security, both physical and cyber;
5. Business integration;
6. Developing a security management plan and policy;
7. Risk management;
8. Radio technologies for efficiencies and redundancies;
9. Best practices; and,
10. Future integration with other technologies.

Does your Municipality have SCADA communications master plan in place?



Presentation Title: How IoT is Transforming Water Utilities
Presented by: Gary Wong – OSIsoft

Gary Wong is OSIsoft's Global Water Industry Executive and has extensive international experience providing sustainable, strategic and cost-effective business solutions, particularly in the water and wastewater industry. He has worked with major international organizations in both the public and private sector on sustainability, IT strategy, planning, operations, and engineering. Mr. Wong holds a Bachelor's Degree in Chemical Engineering, is registered as a Professional Engineer in Computer Engineering in British Columbia, holds an M.B.A. from the Queens School of Business and is also a

Certified Management Accountant.

Abstract:

For years, water utilities have relied on automation systems to help manage the water lifecycle and these systems generate vast amounts of data that must be effectively managed in order to enable intelligent decision making. Today, the terms Internet of Things (IoT) and Big Data are used to describe many, sensors and complex sources of data that generate vast volumes, often in real-time. Within a water utility, Big Data includes such sources as control systems, telemetry, SCADA, geospatial systems, lab data, the weather, social media, video data, and smart meters. The complexity comes into play as integrating Information Technology (IT) business systems with Operational Technology (OT) engineering systems is a must to address the water challenges now and into the future.

This presentation focuses on case studies where water utility managers are leveraging instantaneous access to Big Data from proven solutions to enable better real-time decision making and operational intelligence. Case studies from Evides, Veolia Eau, Thames Water, and SFPUC about their successes detecting leaks within minutes, saving \$600,000 / year in water loss control, safeguarding water quality, and saving millions of dollars in energy management and asset management will be presented. Immediate opportunities exist to collaborate and leverage these successes around the world.

Presentation Title: City of Vancouver's DFPS – Resiliency through SCADA
Presented by: Gurmesh Pathal – City of Vancouver

Gurmesh Pathal is a SCADA Manager with over 15 years of experience in Water/Wastewater, Food & Beverage, Manufacturing, Pulp & Paper, Oil & Gas, and Energy industries. Gurmesh was with GE Automation for 10 years prior to joining the City of Vancouver as their SCADA Specialist. At the City of Vancouver, Gurmesh and his team of four technologists look after six departments at the City which include Water, Sewers, Dedicated Fire Protection System, the Neighbourhood Energy Utility, Kent Yard Asphalt Plant, and the Landfill Flare Station. Since 2010, Gurmesh has been an active member of the BCWWA SCADA & IT Committee.

Abstract:

Presentation Title: Automation Master Plan Update – Where are we now?
Presented by: Darrol Weiss – City of Calgary

Darrol Weiss, Control Systems Services Leader for the City of Calgary Water Services Business Unit. Darrol manages a team of automation staff that are responsible for process control systems such as; SCADA, DCS, and Data Historians. These systems control Calgary's Water and Wastewater treatment plants, Transmission and collection systems.

Abstract: