

Speaker Name

Philip Aubin

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Philip Aubin is a Professional Engineer and holds a Bachelor Degree in Computer Engineering from the University of Newcastle, Australia.

Philip has been involved in SCADA system R&D, architecture and program management for 32 years. During his career he has presented at numerous industry conferences, in North America and across the world, on solutions for remote SCADA. Philip has been a member of the international DNP User Group's Technical Committee since 1998. He is based in Ottawa, Canada.

1. TITLE OF PRESENTATION

Using DNP3 to solve Water & Wastewater remote SCADA challenges

2. PRESENTATION SUMMARY

Intended Audience:

This is an intermediate presentation aimed at both middle management making decisions about investment in communication technology for SCADA applications, as well as designers and implementers of SCADA networks. Prior knowledge of the purpose of communications protocols and some SCADA network familiarity is assumed.

Uniqueness:

The session is presented by a recognized expert in the field of SCADA communication and SCADA system architecture. The content addresses the challenges faced by professionals in the Water & Wastewater utility sectors, highlighting the value propositions offered by standardization, extensible functionality and security within the framework of industry-best practices.

Presentation Main Points:

This session will review challenges in designing and operating remote communication networks for SCADA, discussing standardization of remote communications including the benefits of deploying remote management techniques for widely distributed equipment.

Challenges associated with a mix of communications media, and utilization of time-series data collection will be discussed; with a focus on maximizing information integrity and system performance in Water networks.

The value proposition of DNP3 as a standardized protocol for Water systems will be explored, including interoperability, security and highlighting features that have seen successful adoption of DNP3 for Water sector and other utility SCADA communications across the globe.

Challenges surrounding remote SCADA communication addressed by DNP3.

Topics will include:

- Remotely managing widely distributed equipment
- Dynamic system environment – growing systems and rolling retrofitting
- Amalgamation of previously separate systems
- Interoperability of communication in multi-vendor systems
- Standardizing the transmission of time-series data
- Security across long distance, low speed links
- Data integrity with discontinuous communication links
- Control integrity
- Optimized for remote communication
- Multi-master and peer-to-peer communication capability for water systems
- Remote diagnosis
- Configuration and upgrade management

Q&A:

Time will be allowed for interactive Q&A with the audience.

Demonstration:

Depending on the time available, a short demonstration could be provided, highlighting some of the discussions on remote SCADA using DNP3.