ABSTRACT for the 2018 ISA WWAC Symposium

DC Water's SCADA Infrastructure Standardization Program – Paving the Way into the Future

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SUBMISSION TYPE

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ABSTRACT

In an ideal world, a Supervisory Control and Data Acquisition (SCADA) system consists of a single hardware and software platform, is programmed by one team, and functions in a consistent manner. In reality, these systems are often designed and implemented by numerous parties with their own preferences and standards. This situation leads to different hardware and software platforms and inconsistent programming methodologies that increase the burden on SCADA operations and support staff.

DC Water distributes drinking water and collects and treats wastewater for more than 672,000 residents and 17.8 million annual visitors in the District of Columbia and provides wholesale wastewater treatment services for 1.6 million people in Maryland and Virginia. The size and complexity of the distribution and collection systems require a sophisticated SCADA system to control and monitor over 60 remote water and wastewater facilities. DC Water's SCADA system is a critical tool for providing system-wide monitoring and control for operations and to support better decision making.

Various integrators have worked on DC Water's system over the years, which has led to inconsistencies in system operation, data presentation, alarming, and graphics; all which impact operations and maintenance staff. This has led DC Water to embark on a multi-year program to standardize their entire SCADA system. Tools have been developed to provide standardization of PLC programming and graphics development. These tools are being used to reprogram the system and implement new High-Performance Graphics to improve operator productivity and enhance situational awareness.

This presentation will present how DC Water is completing their SCADA system standardization program. It will highlight standards development, implementation of standard programming blocks, and field verification efforts. The presentation will outline the next steps and offer recommendations and advice on how to develop and implement a SCADA standardization program.

ABOUT THE AUTHORS

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