

# **CASE Study for the Replacement of a Distribution SCADA System**

High Performance HMI and DNP3 Implementation

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## **SUBMISSION TYPE**

30 minute presentation

## **KEYWORDS**

SCADA, DNP3, High Performance HMI, Distribution System, Case Study

## **ABSTRACT**

This presentation will discuss the replacement of a legacy DCS control system for a water distribution system with a Commercial off the Shelf (COTS) HMI and PLCs/RTUs. The client's existing DCS system had the capability to time stamp and buffer regulatory data, and this functionality needed to be maintained in the replacement system. The new system was designed around using the DNP3 communications protocol to meet this requirement.

The client also wanted to combine the water distribution operations with the water treatment plant operations. This required redesign of the graphic displays and additional automation to allow a single operator to monitor and control both system. High Performance HMI graphics were used to assist the single operator with his new duties.

The presentation will discuss a solution using different HMI and PLC/RTU vendors, and how DNP3 was configured for the project. The presentation will also discuss some of the HMI graphic changes required and how it helped the utility.

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## **ABOUT THE AUTHORS**

**Dean L.C. Foote, PE** is a registered Professional Control Systems Engineer (PE) in Pennsylvania and Virginia. He has a Master in Information Systems (MIS) and has authored numerous papers on controls. He also holds a patent for Systems and Methods for Remote Monitoring and Maintenance of Vertical Transportation Equipment. He has been designing control system for over 25 years. Contact: [dfoote@ema-inc.com](mailto:dfoote@ema-inc.com)