The Sage Advisor

SCADA, SECURITY & AUTOMATION NEWSLETTER

Volume 25, Issue 1 • Spring 2015

A Publication of Sage Designs, Inc.

Cybersecurity Guidance for Water Utilities

2014 was the year that cybersecurity came into the national spotlight. The attack on Sony Pictures in November was only the latest in a long string of high profile attacks with significant economic impact and even political ramifications. In addition to the current cyber threat environment, there is growing awareness of an even greater concern – the potential for a cyber attack on critical infrastructure within the United States. The threat to critical infrastructure, which includes water and wastewater systems, is evidenced by the issuance in February 2013 of *Presidential Executive Order (PEO) 13636 – Improving Critical Infrastructure Cybersecurity*. Per the PEO, "The cyber threat to critical infrastructure continues to grow and represents one of the most serious national security challenges we must confront." [1] A key component in protecting critical infrastructure from cyber attack is protecting the industrial control systems (ICS) used to monitor and control critical infrastructure. Malicious software (malware) such as Stuxnet and Havex that specifically target an ICS is proof that the threat to critical infrastructure cannot be ignored.

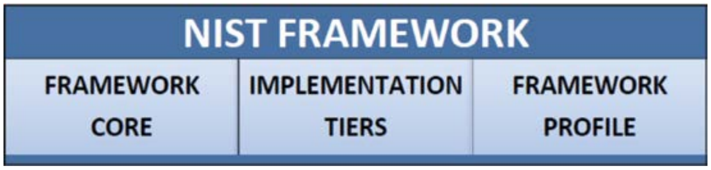
There is a wide range of resources available to water utility owners and operators for the development of a security plan; however, it can be difficult to identify guidance that is both practical and actionable. Fortunately, resources are available now that provide a clearer path for managing cyber risks for critical infrastructure including specific guidance developed for the municipal water sector by the American Water Works Association (AWWA).

NIST Cybersecurity Framework

PEO 13636 directed the National Institute of Standards and Technology (NIST) to develop a cybersecurity framework to reduce risk to critical infrastructure. The intent of the framework was to provide critical infrastructure owners and operators a flexible and repeatable approach to meeting baseline cybersecurity measures and controls. In February 2014, NIST released its "Framework for Improving Critical Infrastructure Cybersecurity Version 1.0" [2] (Framework). The Framework is available as a download from the NIST Framework web site (*www.nist.gov/cyberframework*).

The Framework is a voluntary, risk-based approach for managing cybersecurity risks for critical infrastructure. It references industry standards, guidelines and best practices to help organizations manage cybersecurity risks. The Framework is not meant to replace an existing program but can be used as the foundation for a new cybersecurity program or as a means to improve an existing program. The Framework consists of three parts: the Framework Core, Implementation Tiers and Framework Profile as shown in figure 1.

The **Framework Core** is a set of cybersecurity activities, desired outcomes, and applicable references common across all critical infrastructure sectors and are segmented into five functions as shown in Figure 2. These functions organize basic cybersecurity activities at their highest level. The five functions are: *Identify, Protect, Detect, Respond, and Recover.*



NIST FRAMEWORK

FRAMEWORK CORE

IMPLEMENTATION TIERS

FRAMEWORK PROFILE

Figure 1: NIST Cybersecurity Framework

Cybersecurity *Continued on Page 5*

The Next Step in the Evolution of the RTU

The Remote Terminal Unit (RTU) is one of the traditional solutions for remote water or wastewater applications. The RTU has been around for decades. The age of this device, and the advancement of technology leads to an obvious question. Is the RTU obsolete? The answer to this question is not as straightforward as it first appears. First we must understand what an RTU is, how technology has evolved, and rather that evolution is relevant to the RTU.

So, let's start by asking what an RTU is. Believe it or not, terms like RTU don't just pop up out of thin air. They are managed by an organization called the ARC Advisory Group (ARC). This group keeps track of trends, advancements, supplier market share, and other things within the automation industry. So how does ARC define the RTU?

ARC's definition is "RTUs used in SCADA systems are microprocessor based units designed to monitor and collect data as well as perform some control functions." At first glance, you might notice that this definition is vague. By the definition, any device that is microprocessor based, collects data, and performs some form of control can be a RTU. This could include dedicated devices, or PLCs, VFDs, etc. Obviously in the real world, you would not use a VFD as an RTU. But you could do it by the definition.

In the real world, RTUs are specifically designed for remote applications. They can be broadly broken down into two different types: RTUs that can be programmed (AKA "Smart RTUs"), and RTUs that cannot be programmed. To answer the obsolescence question, we must look at both programmable and non programmable units and determine what is occurring for each one.

For the non programmable RTU, there have been advances over the years. But these have been mostly in regards to size, power consumption, communications capability, environmental suitability, as well as Input and Output range. For the programmable RTU, a similar evolution has occurred. However, with the case of the programmable RTU, evolution has also occurred in regards to programming capabilities. For this type of RTU, the advancements have been dramatic enough that in September 2014 the ARC Advisory Group declared a new device had been created. The new device is called an rPAC, or remote Programmable Automation Controller. Obviously, the next question is what is an rPAC and how does it differ from an RTU.

A RTU has historically been a proprietary device that was designed to perform a specific task. But it evolved over time and certain open standards were adopted. The result was that several suppliers were offering RTUs that were a bit more open than the original RTU concept allowed. These standards may not have aligned with the open standards used in automation. An example is the SDI-12 protocol. This protocol is found in several RTUs but hardly any PLCs. A rPAC also uses open standards, but they are the same ones used in regular automation controllers such as Programmable Logic Controllers, and the more advanced Programmable Automation Controllers.

However, an rPAC also has speed advantages over a typical RTU. This means they can be used on remote applications that may require a more robust control capability then a typical RTU can provide. For water wastewater applications, this would include influent screens, septage receiving screens, grinders, and remote packaged equipment.

So, let's answer the original question. Is the RTU dead? Simply put, not yet. In the non programmable applications, its future is bright. But in programmable control applications, a new device exists that effectively bridges the gap between an RTU and a programmable controller. This new device is the next step in the evolution of the RTU.

— Grant Van Hemert
Industry Business Mgmt., Telemetry Solutions
Schneider Electric USA

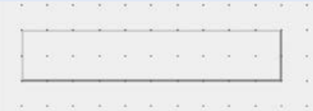
Inside this issue:

ClearSCADA Tips and Hints

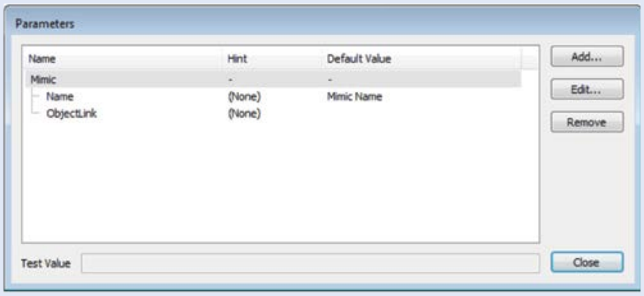
Creating a Menu Navigation Symbol

In discussing alternate navigation options for ClearSCADA with a customer, I was asked if it is possible to create a pushbutton symbol in ClearSCADA that will auto configure to provide a quick and simple way of creating a navigation button on a Mimic. As it turns out, this is very easy to do and works well in many circumstances. Here's a quick way to make a reusable pushbutton to navigate between screens in ClearSCADA.

1. First, create a Mimic and add a Pushbutton graphic.



2. Then edit the Parameters on the Mimic and add a Parameter Group ("Mimic" is a good choice for a Group Name, and two parameters: ObjectLink and Name. I added a Default Value of "Mimic Name" to the Name Parameter to make formatting the text on the button easier.

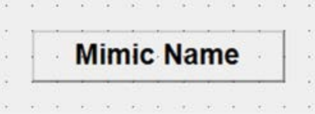


Parameters

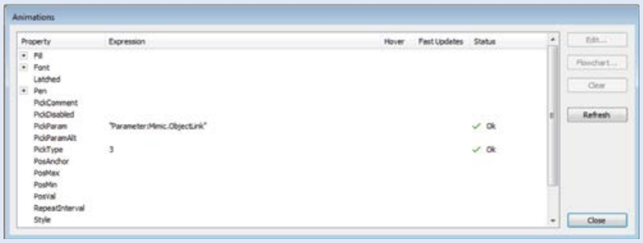
Name	Hint	Default Value
Mimic	-	-
Name	(None)	Mimic Name
ObjectLink	(None)	

Test Value

3. Format the text on the button to suite.



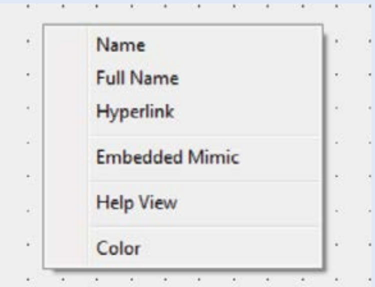
4. Connect the Pick Parameter of the Button object to the ObjectLink and the Pick Type to 3 (this is the parameter type for a Navigate action to the target, a type 4 opens the target as an inset window instead).



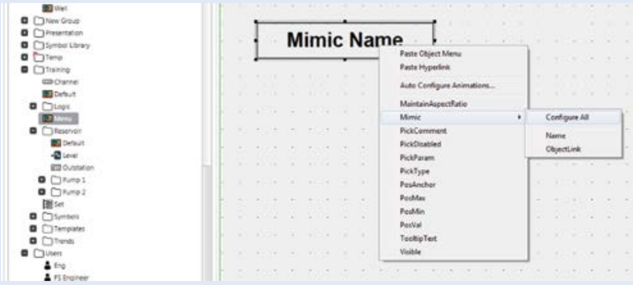
Animations

Property	Expression	Hover	Fast Updates	Status
+ Fill				
+ Font				
Latched				
+ Pen				
PickComment				
PickDisabled				
PickParam	"Parameter:Mimic.ObjectLink"			✓ Ok
PickParamAlt				
PickType	3			✓ Ok
PosAnchor				
PosMax				
PosMin				
PosVal				
RepeatInterval				
Style				

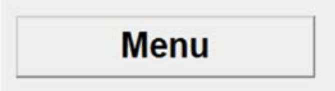
5. Drag the Mimic with the button onto any other Mimic and embed it there.



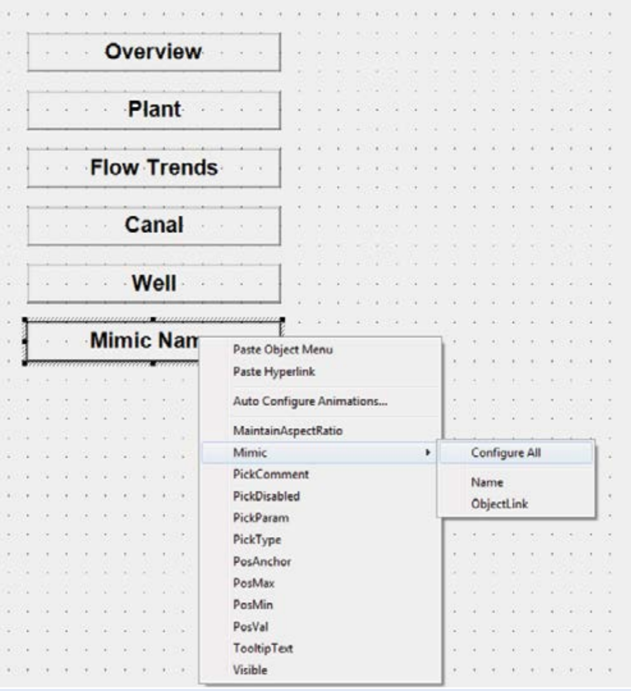
6. Drag any Mimic in the system onto the Button and Configure All.



7. Switch to Run mode and test your button.



8. Parameterized symbols are one of the many tools that can speed development and improve the usefulness of your SCADA system.



This Button Symbol can be used on any Mimic and connect to any other Mimic within limits of security. It can also be used to link to the property pages for Objects in the database or to navigate to Trends, and works as an excellent introduction to the power of parameterized symbols in ClearSCADA.

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Schneider Electric

SCADAWise™ Training Classes

ClearSCADA

ClearSCADA Level 1 Training Course

March 23-26, 2015 — Santa Ana, CA
October 19-22, 2015 — Mill Valley, CA

Day 1 (8AM– 4PM)	Installing ClearSCADA, Introduction to ClearSCADA, Components, Using ViewX, Using WebX, ClearSCADA Help
Day 2 (8AM - 4PM)	Configuring using ViewX, Database Organization, Basic Telemetry Configuration, Creating Mimics, Creating Trends
Day 3 (8AM - 4PM)	Configuring using ViewX, Templates & Instances, Logic Languages, Security, Communications Diagnostics
Day 4 (8AM - 4PM)	Reports, System Configuration, System Architecture, Questions

Cost: ClearSCADA Training Course $2,200 (2015 rates)

Sage Designs' ClearSCADA Level 1 Course has been certified by (a) the California Department of Public Health as courses qualifying for contact hour credit for Water Operator Certification for Drinking Water Treatment or Distribution in the State of California and (b) the State of Nevada Department of Environmental Protection, Bureau of Drinking Water for contact hours towards the Nevada Drinking Water Operator Certification Program.

(28 Contact Hours)

ClearSCADA Level 2 Training Course

May 5-7, 2015 — Mill Valley, CA

Day 1 (8AM– 4PM)	Installation, Understanding the Architecture of ClearSCADA, Application Design Considerations, Server Automation Interface, ClearSCADA Logic Engine, Using ODBC and SQL.
Day 2 (8AM - 4PM)	Advanced Mimic Design and Techniques, Data Grids and Data Tables.
Day 3 (8AM - 1PM)	Accessing Historical Data, Ad Hoc trends, Archiving

Prerequisite: ClearSCADA Level 1 Training Course

Cost: ClearSCADA Level 2 Training Course $1,650 (2015 rates)

(20 Contact Hours)

SCADAPack

Telepace Studio Training Course

May 12-14, 2015 — Mill Valley, CA
October 6-8, 2015 — Mill Valley, CA

Day 1 (8AM - 4PM)	SCADAPack controller operation, Series 5000 I/O, Telepace Studio introduction
Day 2 (8AM - 4PM)	Telepace Studio advanced programming techniques and advanced functions
Day 3 (8AM - 2PM)	Controller communications, Modbus Master/Slave protocol, Diagnostics, Modems

Cost: SCADAPack Telepace Studio Course $1,650* (2015 rates)

* You must have a licensed copy of Telepace Studio installed on your computer for this course. If you do not have a licensed copy, you may purchase one with the class at a special course price. Course price for Telepace Studio: $510 + applicable CA sales taxes

Sage Designs' Telepace Studio Course has been certified by (a) the California Department of Public Health as courses qualifying for contact hour credit for Water Operator Certification for Drinking Water Treatment or Distribution in the State of California and (b) the State of Nevada Department of Environmental Protection, Bureau of Drinking Water for contact hours towards the Nevada Drinking Water Operator Certification Program.

(20 Contact Hours)

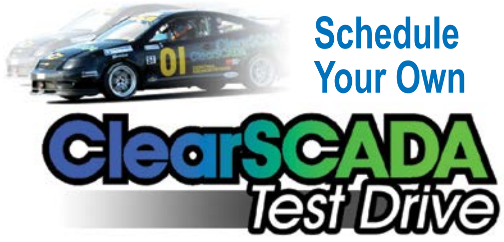
Instructors: ClearSCADA Level 1 & Telepace classes will be taught by Tony Sannellla, Sage Designs, a Factory-Certified Instructor. SCADA Level 2 classes will be taught by a SEUSA training instructor. The ClearSCADA Test Drives will be conducted by Sage Designs or a factory representative.

Location: See individual course registration form. Those requiring overnight accommodations should call the hotel directly for reservations.

What should I bring? Laptop computer with minimum requirements as shown on the specific course registration forms, plus necessary permissions to install software on your computer.

***You must have a licensed copy of Telepace Studio to take the Telepace course. We offer a course price for a license or you may purchase through your local Schneider Electric TRSS representative.**

What is provided? Course manual, daily continental breakfast, lunch & beverages.



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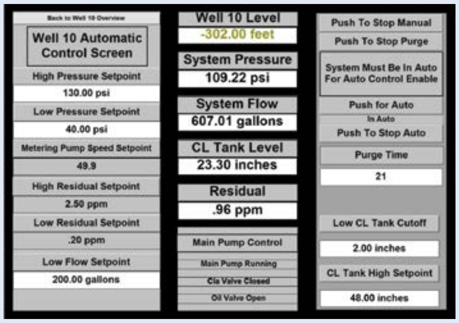
Download the Registration form at: http://www.SCADAWise.com

*** * * Registration Deadline: 4 weeks before 1st day of course * * ***

All registrations are subject to cancellation fees. A confirmation notice will be sent to all registrants on or before the deadline date.

SPOTLIGHT: City of Hemet Prepares for the Future


Back to Well 10 Overview

Well 10 Automatic Control Screen

High Pressure Setpoint: 130.00 psi

Low Pressure Setpoint: 40.00 psi

Metering Pump Speed Setpoint: 49.9

High Residual Setpoint: 2.50 ppm

Low Residual Setpoint: .20 ppm

Low Flow Setpoint: 200.00 gallons

Well 10 Level: -302.00 feet

System Pressure: 109.22 psi

System Flow: 607.01 gallons

CL Tank Level: 23.30 inches

Residual: .96 ppm

Main Pump Control

Main Pump Running

Cla Valve Closed

Oil Valve Open

Push To Stop Manual

Push To Stop Purge

System Must Be In Auto For Auto Control Enable

Push for Auto

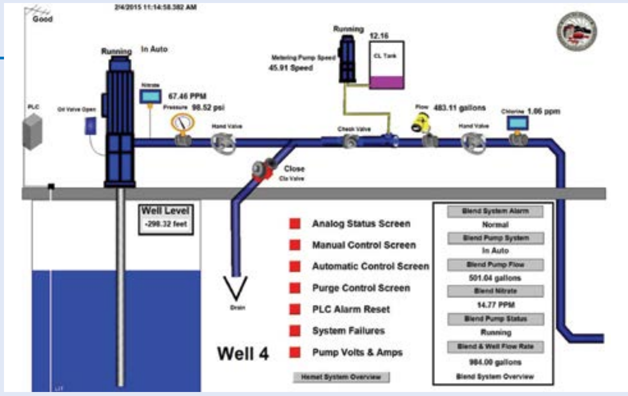
In Auto

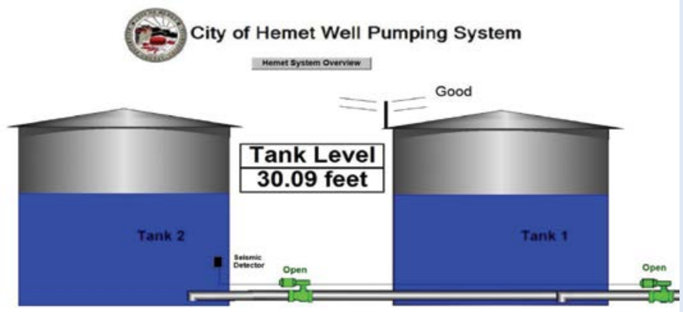
Push To Stop Auto

Purge Time: 21

Low CL Tank Cutoff: 2.00 inches

CL Tank High Setpoint: 48.00 inches



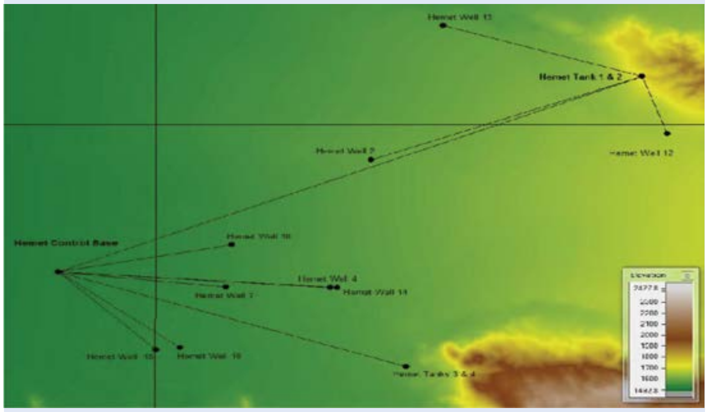


In 2013, the City of Hemet made the decision to proactively improve their SCADA system. The existing system was becoming inadequate to the needs of the city, and Hemet water professionals took forward-thinking action.

Consisting of 9 water wells, two reservoirs with a total of 14 tanks, and a City Yard, the City of Hemet supplies water to 82,000 residents across 28 square miles. With only slight augmentation from nearby Metropolitan Water District, the majority of the City's water supply relies on the wells of the Hemet SCADA system.

Contracted to complete the SCADA portion of the project, United Engineering and Construction utilized Carter Industrial Automation as a subcontractor for engineering, building, and installing new control panels and radios. Under the direction of Steven Steppe as lead Engineering and Programmer, working closely with Ron Proze, Water Superintendent for the City of Hemet, the new system design was customized to the exact needs of the City.

After careful analysis of the needs, and cost-conscious nature of City projects, Carter Industrial selected the Schneider Electric USA TRSS SCADAPack 334 programmed with Telepace Studio Ladder Logic Software as the Controller, Ethernet Trio JR900 Radios for remote communications, and ClearSCADA management software to provide an open software platform.



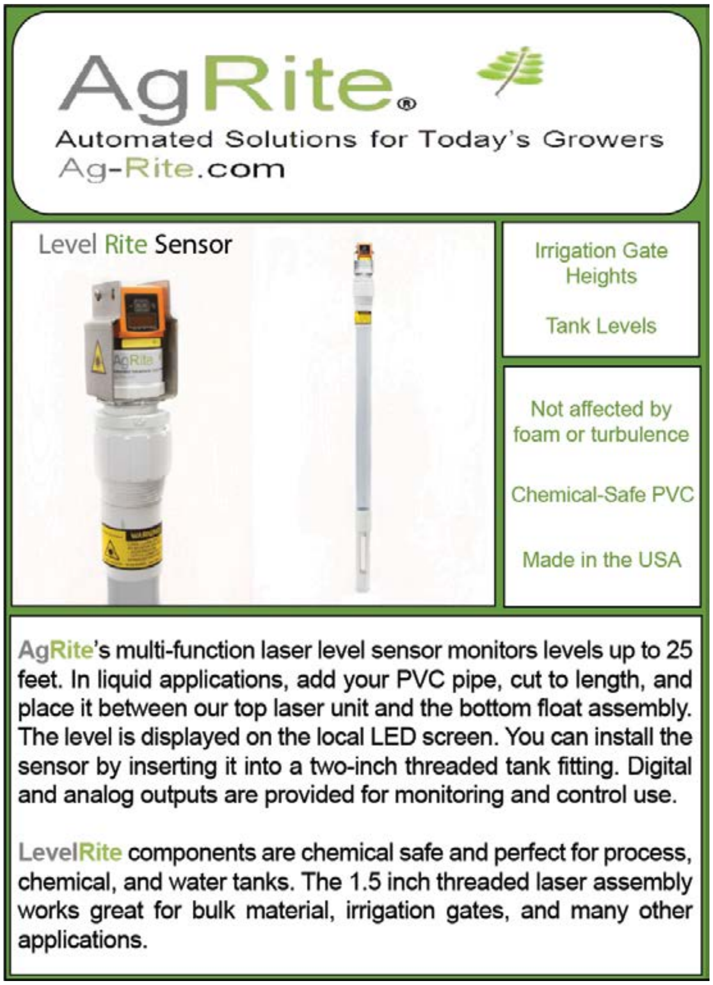
The existing SCADA control panels and wiring, which were installed approximately 20 years prior, and had been out of service for 10 of those years, were in bad shape. They had to be removed. New control panels were installed, and new power and control wires were pulled into them. Once complete, the GPS coordinates for each were sent through Sage to Schneider Electric TRSS. The Trio Radio engineering team provided a detailed survey with recommendations for the Trio JR900 installation to meet the City's need. Steven Steppe sourced and installed antenna poles to ensure a completely reliable wireless system.

Thinking forward to expandability and the need for open systems, the SCADA system is managed with a redundant ClearSCADA HMI, residing on 2 new servers with a dedicated UPS as a power backup. Each server has 1500 points with WebX servers, OPC, WIN-911 alarm notification software, and a total of 5 ea. WebX Clients to allow remote access. The office of Ron Proze, Water Superintendent, is equipped with a 60-inch viewscreen and a ViewX connection to his computer which allows for continual monitoring and adjustment of the system.

Prepared with all of these modifications and improvements to their SCADA system, the City was able to respond quickly to effects of the continuing drought. With the water table getting lower, several of the wells in the Hemet system started to show increased nitrates in the water. Ron Proze brought back Steven Steppe and the system was outfitted with new Graphic screens to monitor and control blending of the water between wells to maintain nitrate standards for public consumption.

SCADA systems need continual attention, and are never entirely complete, but efficient collaboration and forward-thinking products can help you be prepared for your next challenge.

The City of Hemet is in the San Jacinto Valley, Riverside County with about 82,000 residents and covers 28 sq. miles.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AgRite's multi-function laser level sensor monitors levels up to 25 feet. In liquid applications, add your PVC pipe, cut to length, and place it between our top laser unit and the bottom float assembly. The level is displayed on the local LED screen. You can install the sensor by inserting it into a two-inch threaded tank fitting. Digital and analog outputs are provided for monitoring and control use.

LevelRite components are chemical safe and perfect for process, chemical, and water tanks. The 1.5 inch threaded laser assembly works great for bulk material, irrigation gates, and many other applications.

Cybersecurity Guidance for Water Utilities, *continued from page 1*

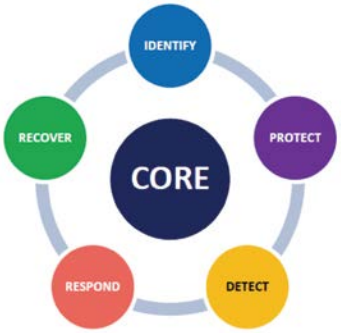


Figure 2: Framework Core: Basic Cybersecurity Functions

Each function is broken down into *Categories* that define groups of cybersecurity outcomes. The *Categories* are further divided into *Subcategories* that define specific outcomes of technical and/or management activities. Each subcategory is then matched to Informative References such as standards, guidelines and best practices. Figure 3 below shows how a Function (Identify) is broken down into various Categories (Asset Management for this example). Categories are broken down into Subcategories (Physical devices and systems inventoried) leading to specific Informative References such as the ISA-62443 standard. Additionally, the specific section of the Informative Reference associated with the subcategory is provided to ensure the content most relevant to that subcategory is clearly identified.

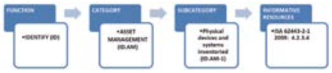

FUNCTION
•IDENTIFY (ID)
CATEGORY
•ASSET MANAGEMENT (ID.AM)
SUBCATEGORY
•Physical devices and systems inventoried (ID.AM-1)
INFORMATIVE RESOURCES
•ISA 62443-2-1 2009: 4.2.3.4

Figure 3: Linking Cybersecurity Function to Informative References

The Informative References listed in the Framework represent the most frequently referenced cross-sector guidance at the time of the Framework's development. There may be newer, sector-specific guidance that is not listed as an Informative Reference. One example is the AWWA Guidance previously referenced and discussed later in this article.

Framework Implementation Tiers characterize the organization's risk management practices as defined by one of four tiers with Tier 1 having the least amount of risk management and Tier 4 the highest. Each organization must determine which tier is appropriate for them to work towards given the organization's unique goals, feasibility of implementation, and acceptable level of cybersecurity risk.

The Framework Profile helps an organization define a roadmap for moving from a "current" profile that defines current risk management practices, to a "desired" profile that defines the outcomes needed to achieve the desired cybersecurity risk management goals. A comparison of the current profile and the desired profile provides a gap analysis that can be used to establish a plan defining actions required to meet organizational goals, and prioritization of activities to ensure cost-effective allocation of resources.

The Framework addresses the broad security needs of all critical infrastructure sectors including the Water & Wastewater Systems sector; however, as noted in the Framework, it is not industry-specific. Sector-specific guidance is intended to aid in the adoption of the Framework while providing guidance that is directed to the unique requirements of that sector. AWWA has developed cybersecurity guidance to meet the unique needs of the Water and Wastewater Systems sector. As with the Framework, the AWWA guidance also references existing standards, guidelines and best practices.

AWWA Cybersecurity Guidance & Tool

Concurrent with the development of the NIST Framework, AWWA initiated the development of cybersecurity guidance that would specifically address the requirements of protecting process control systems (PCS) used by water utility owners and operators to control water processes. The goal was to provide guidance that would be both practical and actionable. The final versions of the AWWA Cybersecurity Guidance & Tool were released in February 2014. Both are important resources for the water sector because they provide a voluntary, sector-specific approach for adopting the NIST Cybersecurity Framework as expressed by the Water Sector Coordinating Council (WSCC). [3] This is an important development. As a result of the WSCC's endorsement, the AWWA Cybersecurity Guidance and Tool will be the focal point of cybersecurity activities for the water sector relating to the NIST Framework moving forward.

The AWWA Guidance consists of two parts; a document titled "Process Control System Security Guidance for the Water Sector", and a web-based "Cybersecurity Tool". Both can be accessed at the AWWA web site (*www.awwa.org/cybersecurity*). The document is a free download. The Cybersecurity Tool requires a login to access. Registering a login username and password is free and you do not have to be a member of AWWA to register for access.

The Process Control System Security Guidance for the Water Sector (PCS Guidance) document outlines key cybersecurity practices and controls that are the basis for the Cybersecurity Tool. The cybersecurity practices are a set of recommendations for improving PCS security for water utilities. These practices are intended to be practical and actionable while establishing the foundation for a more comprehensive security plan.

The recommended practices are further defined by a set of 82 cybersecurity controls that provide more detailed measures for implementing the recommended practices. The Cybersecurity Tool was developed to simplify implementation of the cybersecurity controls by directly linking each control to one of the referenced security standards. The controls that are most relevant to a given user are determined by the use case scenarios selected in the Cybersecurity Tool.

A use case characterizes the manner in which a utility has designed and configured their PCS, and the connections between the PCS and external sources. Each use case represents a different type and degree of cybersecurity risk. Based on the use case scenarios selected in the online tool, a report is generated documenting the appropriate controls and priorities, and the specific section of the relevant standards that the user can reference for more detailed information. The report can be downloaded for future reference. Figure 4 illustrates the process employed by the Cybersecurity Tool to link the various use case scenarios to specific standards.

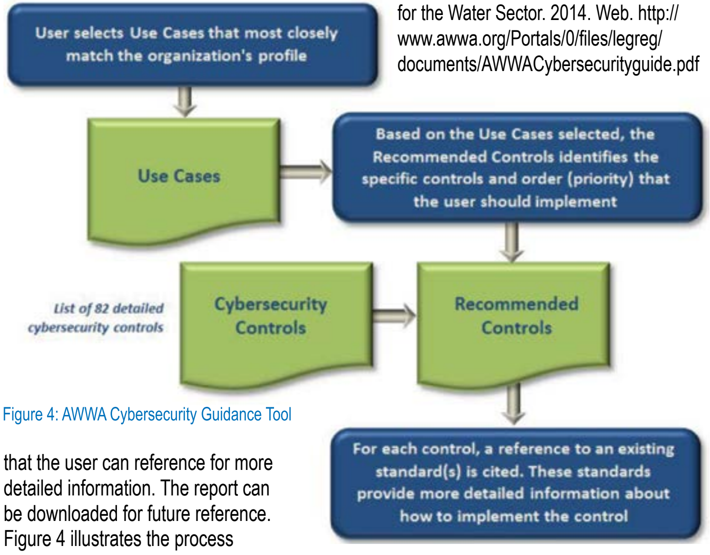

User selects Use Cases that most closely match the organization's profile
Use Cases
Based on the Use Cases selected, the Recommended Controls identifies the specific controls and order (priority) that the user should implement
List of 82 detailed cybersecurity controls
Cybersecurity Controls
Recommended Controls
For each control, a reference to an existing standard(s) is cited. These standards provide more detailed information about how to implement the control

Figure 4: AWWA Cybersecurity Guidance Tool

Summary

US Presidential Executive Order 13636 – Improving Critical Infrastructure Cybersecurity recognizes that the cyber threat to critical infrastructure, including the Water and Wastewater Systems sector, continues to grow and represents one of the most serious national security challenges for the United States. The NIST Framework and AWWA Guidance reference various industry standards, guidelines and best practices, and provide practical and actionable guidance for the development of a security plan that is fundamental to ensuring the future availability and reliability of water and wastewater systems.

References

1 Executive Order – Improving Critical Infrastructure Cybersecurity. February 12, 2013. Web.

http://www.whitehouse.gov/the-press-office/2013/02/12/executive-order-improving-critical-infrastructure-cybersecurity

2 National Institute of Standards and Technology. Framework for Improving Critical Infrastructure Cybersecurity, Version 1.0. February 12, 2014. Web.

http://www.nist.gov/cyberframework/upload/cybersecurity-framework-021214-final.pdf

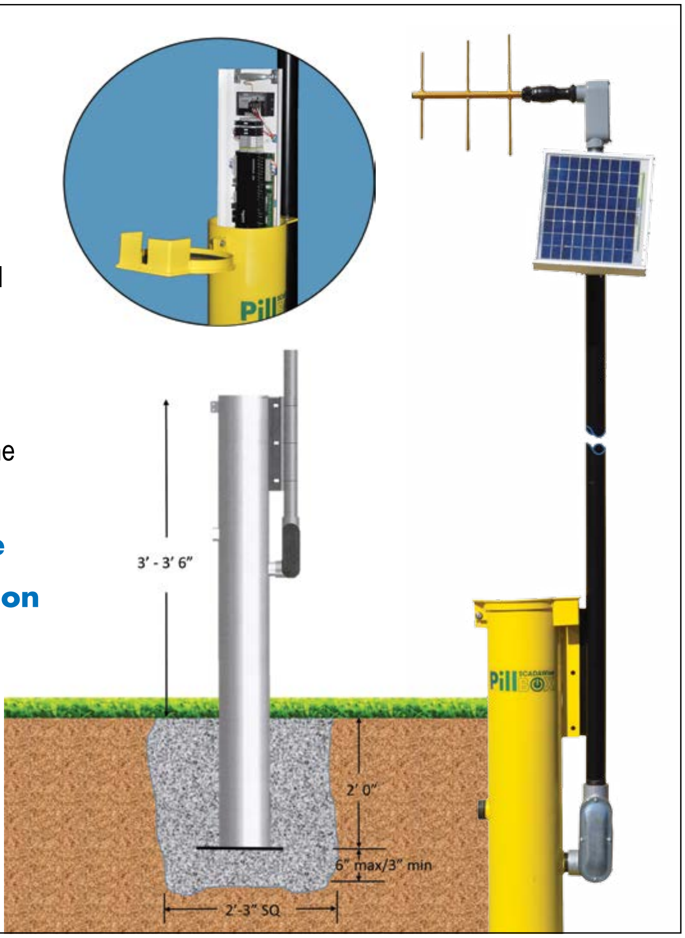
3 American Water Works Association. Process Control System Security Guidance for the Water Sector. 2014. Web. http://www.awwa.org/Portals/0/files/legreg/documents/AWWACybersecurityguide.pdf

About the Author:

Don Dickinson has 30 years of sales, marketing and product application experience in Industrial Controls and Automation, involving a wide range of products and technologies in various industry segments. Don is the Senior Business Development Manager – Water Sector, Phoenix Contact USA. He is the past chair of the NC AWWA-WEA Automation Committee and the current chair of the Automation Security subcommittee.

— Don Dickinson, Senior Business Development Manager – Water Sector, Phoenix Contact USA (ddickinson@phoenixcon.com)

Pillbox SCADAWise



The Pillbox™ is a self-contained housing for field installation of electronics packages that need protection from the elements as well as unwelcomed attention. Inside, there is up to 3 sq. ft. of panel space with 3' of mounting DIN rail for mounting equipment and 3' of wiring Panduit. The equipment panel slides in behind the retainer system which allows for easy removal of all mounted components. The bottom of the retainer system includes a battery tray allowing the removal and service of the batteries without tools for disassembly.

✔ **Easy to Install**
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Sage Seminars Return!

2014 marked the successful return of Sage Designs' annual product seminars, as integrators and end users gathered to learn about the multiple product lines being released in Q4 2014 and Q1 2015.

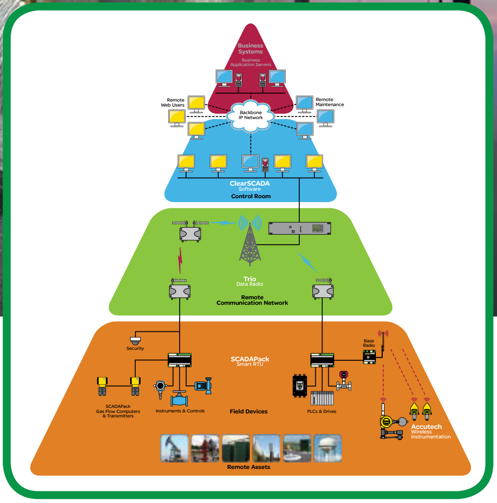
Attendees enjoyed breakfast, snacks, and a pack of giveaway items courtesy of Sage Designs and Schneider Electric. They were provided an opportunity to learn about the new rPAC designation, more about which can be read in Grant Van Hemert's article on the front page of this issue, and how the new IO-packed rPAC 530E/535E series fits into the rPAC description and the future of the Water industry, direct from Grant himself. Attendees were also given an early opportunity to see and interact with the Trio Q radios months before their official release, courtesy of Jordan Heldrich of Schneider Electric. Jordan spent a considerable portion of her time answering questions on the issues the Trio will resolve that conventional radios were unable to deal with. Greg Ochs, the Western Regional Sales Manager, shared the Schneider Electric road map for the next several years. And Sage Designs' own Tony Sannella conducted a guided exploration (and long Q&A) of the features available in the newly-released ClearSCADA 2014.

In a post-seminar questionnaire, attendees overwhelmingly rated their experience as both enjoyable and educational. Sage Designs is dedicated to informing our customers about the newest trends in the industry, and we hope to present many more equally successful seminars in the future.

If you have a product or issue that you'd like to see addressed in a future seminar, or a suggestion on how we can make these an even better experience for you, please contact your local Sage Designs representative and let us know! Sage representatives are also happy to meet with you one-on-one to discuss any of the products featured in our seminar.

Need help in transforming remote asset data into valuable business insight?

Let’s talk!



Make the most of your remote assets with complete end-to-end solutions for monitoring and controlling field operations across a widely dispersed infrastructure

Controlling cost of ownership

The installation, operation and maintenance of remote site SCADA operations is often the most significant overall long term expense factor. With scalability,flexibility and ease-of-use in mind, Schneider Electric’s Telemetry and Remote SCADA Solutions are tailored to help lower this total cost of ownership.

Secure and Reliable SCADA

Safety and availability are must-have characteristics of critical infrastructure. This especially holds true when considering security for SCADA systems that monitor and control remote operations across a wide array of communications technologies. At Schneider Electric, our Telemetry and Remote SCADA Solutions incorporate solid security at all levels, from the field to the enterprise.

Minimising risk by improving safety and regulatory compliance

Many industries are challenged with increasing requirements for operational safety, compliance with environmental regulations and the overall security of assets. Schneider Electric’s Telemetry and Remote SCADA Solutions address all of these critical requirements through flexible end-to-end integration and comprehensive feature sets.

Innovation at work

ClearSCADA Software – Providing functions to reliably and securely manage remote SCADA assets across a wide range of communication options, with easy integration into business systems.

Trio Data Radios – Ensuring data integrity over short and long-haul distances with versatile and reliable data transmission options.

SCADAPack Smart RTUs -The monitoring and communication capabilities of a Remote Terminal Unit (RTU) combined with the processing and data-logging power of a Programmable Logic Controller (PLC).

Accutech Wireless Instrumentation – Configurable startup and failsafe conditions, enhanced diagnostics and years of maintenance free operation.

Make the most of your energy^{SM}

Schneider Electric

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The Sage Advisor

SCADA, SECURITY & AUTOMATION NEWSLETTER

Calendar of Events

March, 23-26, 2015	**ClearSCADA Level 1 Training Course***, Santa Ana, CA
April 29-30, 2015	**CWEA 2015 Annual Conference**, San Diego, CA
May 5-7, 2015	**ClearSCADA Level 2 Training Course***, Mill Valley, CA
May 12-14, 2015	**Telepace Studio Ladder Logic Training Course***, Mill Valley, CA
June 2-5, 2015	**USCID Conference**, Reno, NV
August 2015 (TBD)	**Wine Country Water Works**, Rohnert Park, CA
September 22-24, 2015	**Tri-State Seminar on the River***, Las Vegas, NV
October 6-8, 2015	**Telepace Studio Ladder Logic Training Course***, Mill Valley, CA
October 19-22, 2015	**ClearSCADA Level 1 Training Course***, Mill Valley, CA
October 26-29, 2015	**CA/NV AWWA Annual Convention**, Las Vegas, NV

Download the registration form from our website or call for more information.

SAGE DESIGNS, INC.
SCADA & Security Products

SCADA
ClearSCADA Enterprise Software
SCADAPack RTU/PLC Controllers
FlowStation Pump Controllers
Pillbox Ruggedized SCADA Enclosures
WIN-911 Alarm Notification Software

WIRELESS
Accutech Wireless Instrumentation
Trio Spread Spectrum & Licensed Radios
Firetide Broad-Band Mesh Network
Teledesign Systems VHF & UHF Licensed
FreeWave Spread Specturm Serial & Ethernet

SECURITY
Video Surveillance , Hardware & Software

MS4 PERMITTING SOFTWARE

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