

ENHANCEMENTS TO THE MC3000 SCADA . . .

New SCADA Master System Enhancements -- Top of the Line

The MSE-Tetragenics MC3000 SCADA Master now supports DNP3 Protocol. We designed our MC3000 SCADA Master to provide system control in a secure environment. The DNP3 Host protocol enables the MC3000 to achieve standard, open-based interconnectivity between substation computers, Remote Terminal Units (RTUs), intelligent electronic devices (IEDs), and MC3000 Master stations.

Industry trends show that DNP3 is now the leading choice for automation managers. The MC3000 combines advanced MSE-Tetragenics software with 32-bit protected mode processing, built-in diagnostics, critical alarm upgrading, Ethernet support, security, multi-region/number callout, network data logging, and multiple download options. You can view the system locally or remotely over your Intranet/Internet at remote

sites using a standard web browser.

MC3000 SCADA Master System Highlights

- Supports a variety of protocols
- Provides Security
- Provides RTU Expandability
- Immediately Internet/Intranet Ready
- User-Definable Logic/Control Sequences
- Auto Generated Text Screens
- User-Defined Screens
- Allows Ethernet Polling
- Contains System Editors
- Allows Trending
- Provides an Historical Data Archive
- Includes Email Alarm Notification
- Provides Ping Alarming
- Includes Plant Control Functions
- Contains User-Defined Alarm Levels
- Allows Customized Expansion

**The MC3000
supports DNP3
protocol**

Read more about the MC3000 features at www.tetragenics.com/mc3000.htm◆

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Out and About - MSE-Tetragenics Guest Speaker at Water Show

SCADA presentation at the Water School for Water and Wastewater Operators and Managers

Joe Mullaney, MSE-Tetragenics Manager, was a guest speaker at the 71st Annual Water School for Water and Wastewater Operators and Managers, held in Bozeman, MT on September 27-30, 2004.

Joe's presentation focused on Telemetry and SCADA. More than 50 operators and managers attended the presentation. The class covered SCADA system components and configurations, human-machine interfaces (HMIs), and SCADA planning and maintenance. The list below shows a quick overview of what the class contained:

- Industry definitions of telemetry, data acquisition, and SCADA (a combination of telemetry and data acquisition)
- Standard SCADA components /how they interact

- Remote stations and how they add to the system
- Networks and transferring data to and from sites
- Central monitoring systems and how they add value
- Field instrumentation (i.e. analog, discrete, and digital (smart) devices) and its role in SCADA systems
- Typical system configurations that can work for you
- HMIs and how they work for you
- Auto dialers for remote work
- Tips for planning your SCADA system
- How to maintain your SCADA system

Additional information and the full presentation is available at our website at www.tetragenics.com.

The Water School offers exam prep training for entry-level operators, exams for all certification classes of water and wastewater operators, and continuing education credits for renewal requirements. Other speaker presentations included electrical safety, technology in distribution, filter assessments, public health, pumps, disinfection, and lagoon operators.



SPOTLIGHT . . . Sterling Chemicals

A continuing customer and partner

Sterling Chemicals (Texas City, TX) recently upgraded their MSE-Tetragenics MC3000 SCADA Master to the Windows-based Master system. The MC3000 Master provides centralized information from electric substations located throughout the chemical plant. Our WTV32 graphic user interface and electronic virtual printer (EPrinter) provide system information to any computer with access to the Sterling Chemicals Local Area Network (LAN).

System Test and Training

Frank Koster and Tony Ringer of Sterling Chemicals attended a Factory Acceptance Test (FAT) and training session at the MSE-Tetragenics site in Butte, Montana, from September 28-30, 2004. The new system was installed at the Sterling site in November 2004.

Sterling Chemicals System

The Sterling Chemicals system consists of a PC-based MC3000 SCADA Master with a 16 serial port expansion module. A fully equipped, ready-to-run, cold stand-by backup Master doubles as a user interface and editing workstation. The MC3000 Master gathers information from seven MSE-Tetragenics TG332 RTUs located throughout the plant. Two of the seven RTUs communicate with Bitronics meters using Modbus protocol. The Master uses an MSE-Tetragenics Z80 RTU to update lights on an electronic mapboard to indicate plant breaker and switch status information. Also, the Master uses Modbus protocol to send data to a remote system.

This is the second MC3000 Master upgrade for Sterling Chemicals, our customer since 1995. The first upgrade was in 2000.

Sterling Chemicals is located in Texas. Their plants manufacture six commodity petrochemicals including styrene, acrylonitrile, acetic acid, plasticizers, sodium cyanide, and disodium iminodiacetic acid (DSIDA). These chemicals are used in the production of a wide array of consumer goods and industrial products.
www.sterlingchemicals.com/

MSE-Tetragenics

Welcomes Two New

Additions: To increase service to our customers, we've added two new people to our experienced staff.

Jeff Hartwick: Marketing Specialist

Jeff Hartwick is the new Marketing Specialist for MSE-Tetragenics. Jeff is an accomplished marketing executive with six years experience in the technology industry. He is responsible for marketing initiatives for MSE-Tetragenics and will market our complete line of products and services.

Jeff's experience and direction spans marketing program development, web marketing, communications, event coordination, technical writing, and sales. Prior to joining MSE-Tetragenics, he held positions in marketing for technology firms including leading manufacturers in the software industry. Jeff is a graduate of the University of Montana.

Steve Quick: Senior Sales Engineer

Steve Quick is the new Senior Sales Engineer for MSE-Tetragenics. He previously worked as a Project Engineer for Tetragenics. Steve is responsible for providing an advanced level of sales expertise within the company. He will research and interpret customer needs and identify appropriate MSE-Tetragenics equipment and/or services to meet those needs.

Steve has a B.S. degree in Mechanical Engineering and applicable experience in SCADA, control software, databases, and communication monitoring. With more than 15 years of experience in the industrial construction industry, design, supervisory, and management arenas, Steve brings a wealth of knowledge and expertise to MSE-Tetragenics to serve our customers.



TETRA VIEWS

Published by MSE-Tetragenics to provide useful information about products, corporate news, and industry events. Send comments to the editor at contact@mse-ta.com.

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INTEGRATION NEWS . . . City of Pablo

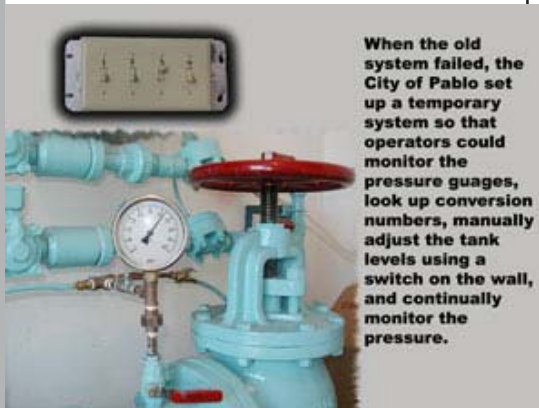
I&C Integration - SCADA Water System - City of Pablo

City of Pablo, Montana, Lake County
Water SCADA System:
Instrumentation and Control Project

Pablo, Montana. Our Instrumentation and Control (I&C) department upgraded the existing Supervisory Control and Data Acquisition (SCADA) system for the City of Pablo.

Situation:

The City of Pablo, Montana, had a problem: an outdated proprietary water control system had failed. The control system monitored the City's water storage tank and the four pumps that supplied it with water. The failure wasn't the first and the cost to keep repairing the system was accumulating. Because the existing control system had failed, temporary wiring was installed to allow the City operator to manually view and control the tank level. This required onsite monitoring every four hours to avoid overfilling the tank and insure that the City had a sufficient supply of water for the high demand summer season. Operators monitored the tank pressure, manually calculated the amount of water required to fill the tank, and manually flipped temporary switches to control the four pumps to fill the tank, continuously monitoring the pressure gauge to avoid overfilling the tank (*old system picture*).



The old system also offered no central control or data archiving capabilities. Due to the round-the-clock manual operation of the pump station, time was a critical factor in selecting a new control system.

The Integrated Solution:

MSE worked with the City of Pablo to provide them with a solution that met their current specifications as well as their time of delivery requirements. Following the City's requirements, we provided a SCADA system that linked to programmable logic controllers (PLCs) and could be easily adapted to future expansion and operation changes.

The New SCADA System:

The new SCADA system we installed for the City of Pablo monitors and controls the water level in the storage tank, provides tank level control at the well #1 pump station, allows operators to specify setpoints for all the pumps, displays graphical representations of the tank and the system, provides alarm features, and generates trending and historical data. The new system includes the following:

- Central control from a graphical user interface at the City Office
- Dial up client support
- Automatic water level monitoring and control
- Historical trending and data archiving
- Definable system alarming
- Graphical local interface at the pump station for viewing data and changing setpoints
- Pump start/stop and runtime statistics

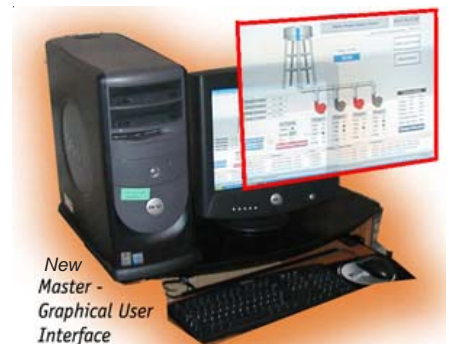
The new system provides tank level control at the well #1 pump station. A pressure transmitter provides a continuous signal into the system with the necessary input/output modules. We built a local

interface into the well #1 pump station SCADA Control Panel (SCP) to allow operators to change setpoints and view current data and alarm status points.

Using a 900 MHZ radio communications link between the pump station and the City office, the user interface receives and displays data from the pump station. City personnel can now view data (graphically), view alarm conditions, and change setpoints.

Pump Control: Currently, the SCADA system controls four remote pumps. The system monitors the tank levels and responds according to the setpoints. If the tank level drops, the system activates a pump, monitors the levels, and stops the pump. It also monitors for potential pump failures or failure conditions and keeps tracks of the pump usage.

Operator Interface: We built an interface into the pump station SCP for local indication that allows future changes to be programmed into the system without additional hardware. The interface displays current status points, setpoints, and alarms. From the screens, operators can reset a pump failure condition and make changes to the current setpoints. Read more about the features at www.tetragenics.com/Newsletter.htm



OUT AND ABOUT

Visit our booth at the 2005 DistribuTECH Conference

MSE-Tetragenics will exhibit at the 2005 DistribuTECH Conference & Exhibition held **January 25-27 at the San Diego Convention Center in San Diego, CA.** DistribuTECH covers the current trends shaping the utility industry, including automation and control systems, transmission and distribution engineering, power delivery equipment, and water utility technology.

Our booth (#2027) will join more than 200 exhibiting companies and 4,000 industry attendees at [DistribuTECH 2005](#). The exhibit features the latest products and technologies needed to succeed in today's utility industry. Conference sessions will take an in-depth look at the fundamental principles and newest technologies shaping the utility industry today. More than 150 industry speakers will discuss critical topics and cutting-edge technologies in more than 50 different conference sessions.

Join us. For a complimentary pass to the exhibit hall, please contact Jeff Hartwick (406.533.6813 or jeff.hartwick@mse-ta.com).

TIDBITS



We are developing a replacement Central Processing Unit (CPU) for our VME-based Plant Control System that will work with our standard input/output hardware. The new development includes a real-time, Linux operating system. Planned features include current MC3000 PC-based Master functionality, including Ethernet connectivity. The new product is scheduled for release the first quarter of 2005.

Advanced Editors

Did you know that Tetragenics' System Database Editor (SDE) is a complete editing package for your Tetragenics control system. It is Windows based and lets you add RTUs or build your own screens. Look for highlights in upcoming issues.

MSE-Tetragenics

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and information.

