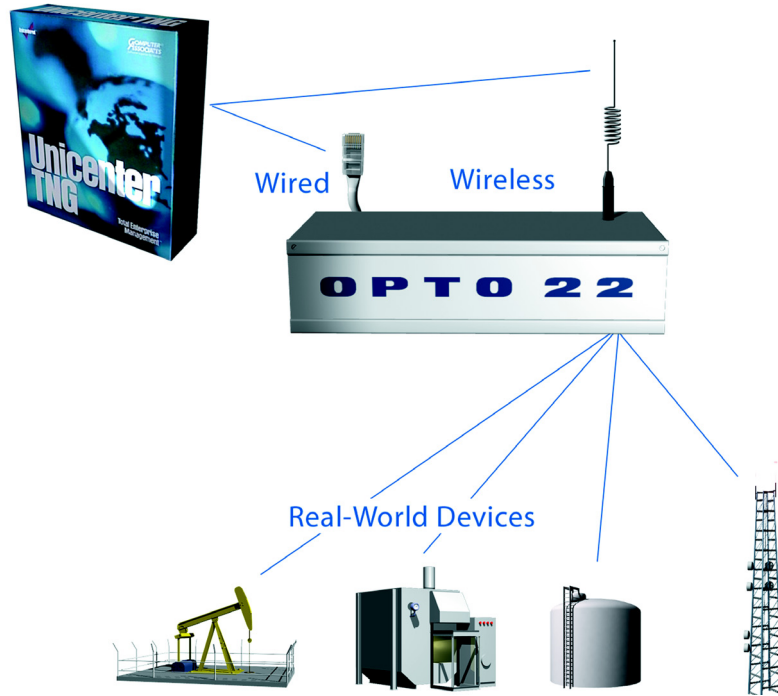# Meridian Medical Technologies Improves Critical Water Quality with Opto 22 SNAP–IT

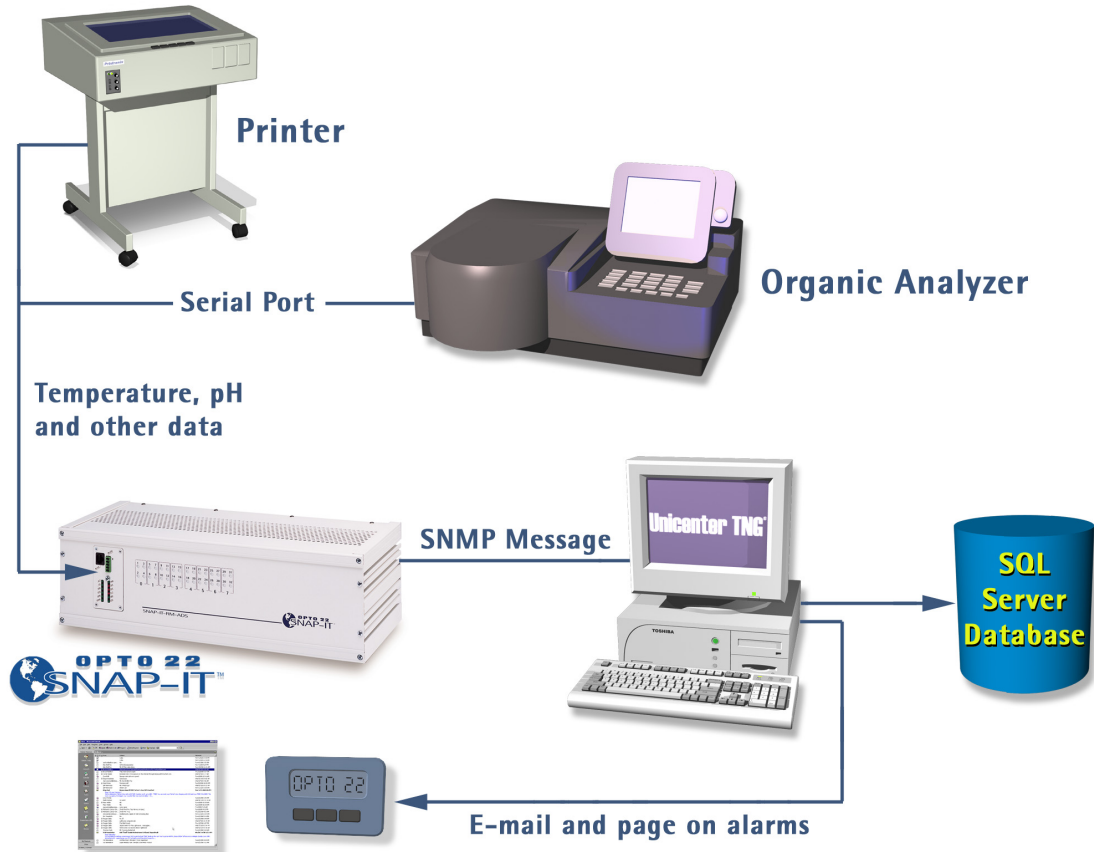## The Challenges of Integrating Real-World Data

Meridian Medical Technologies, located in St. Louis, Missouri, had been using Computer Associates' Unicenter TNG® enterprise management software to monitor its computer network, servers, and other information technology (IT) devices in their facilities. At a Unicenter user's group meeting in October, 1999, Meridian's IT Director, Stan Hammond, heard about a new technology for monitoring non-IT devices, manufacturing machines, environmental systems, and other mechanical, electrical, and electronic devices through Unicenter TNG.

The new technology sounded like it might improve a long-standing process in Meridian's St. Louis, Missouri, manufacturing facility that relied on printed reports for monitoring water purity. These reports were located in a hard-to-reach area that was only staffed for normal business hours

(8:00 a.m. to 5:00 p.m.). Meridian Medical Technologies manufactures drug delivery systems and cardiopulmonary equipment. Meridian's drug delivery systems include auto-injectors, which are used for military and civil defense applications for

About Meridian Medical Technologies

Meridian Medical Technologies is a leading medical products and pharmaceutical systems company, serving the emergency and early intervention healthcare markets. The company is a world leader in the development and sales of auto-injector drug delivery systems and has world class proprietary technologies in non-invasive cardiopulmonary diagnostics. Meridian's Drug Delivery group, described in this article, manufactures the life-saving EpiPen® auto-injector, is the sole supplier of auto-injectors for nerve agent antidotes to the U.S. government and other NATO allies, states and local municipalities, and manages a large commercial drug delivery business. For more information, visit **www.meridianmeds.com.**

the self-administration of nerve agent antidotes against the effects of chemical agents. They also make the EpiPen® auto-injectors prescribed to patients at risk of anaphylaxis resulting from severe allergic reactions to bee stings, insect bites, foods, and drugs, as well as exercise-induced anaphylaxis.

To assure purity, water used in this pharmaceutical manufacturing process must meet strict requirements, including a requirement for organic matter purity (TOC). The TOC analyzers are highly specialized instruments that continually monitor the water to make sure it does not exceed specifications.

The procedure used to monitor the instruments' reports, however, was manual. The analyzer, connected to a line printer, printed the results of the latest water analysis every few minutes. A technician would walk around and check the printouts periodically by hand, verifying that measurements were within specifications and taking action if they were not. The manual process left too much of a

time delay in responding to unacceptable water conditions after work hours.

In addition, data from the printer had to be manually entered into a computer database for record keeping. If the existing Unicenter TNG management system could be used to automate this process, it would simplify operations by automatically logging data, storing it to a database, and notifying personnel of

About Professional Consulting Services (PCS)

PCS is a full-service IT consulting firm, specializing in eBusiness Solutions, Enterprise Systems Management, and Sensible Hosting. PCS is one of the top resellers and implementers of Unicenter TNG solutions in the world. In addition to implementing traditional IT solutions, PCS offers the Real World Management Bundle for Unicenter TNG, which allows the monitoring and management of non-IT devices through Unicenter TNG and which can be viewed live at **www.ManageTheWorld.com.**

any problems at the earliest possible time. As a progressive company, Meridian had looked for a cost-effective way to get the data into the current monitoring system. But up until now, connecting non-IT devices like the TOC analyzer to a network was a lengthy and costly undertaking. The new technology sounded like it might be a solution.

The Solution for Non-IT Devices

With Unicenter TNG already in place, the new technology did solve the problem, quickly and easily. Using Opto 22 SNAP-IT™, it took only a couple of weeks to complete the project, integrating data from the TOC analyzers into the existing Unicenter TNG management system.

The serial port of each TOC analyzer was connected to an Opto 22 SNAP-IT unit, while still remaining connected to the printer. The SNAP-IT unit receives analog, digital, and in this case serial data from real-world devices and makes the data available as SNMP messages over a 10/100 Mbps Ethernet connection. The SNAP-IT unit was then connected to the company LAN and automatically discovered using the Unicenter TNG console.

Once the data was available on the LAN, the integrator, Professional Consulting Services (PCS), created a custom preprocessor application to log analysis data from the device to a Microsoft SQL Server database. The database gives Meridian real-time data and data trends over any time period from all organic analyzers.

Monitoring water quality reports is no longer a manual process requiring a technician to look through pages of data. Instead, the automatic process is exception-driven. When specifications for water conditions are exceeded, Unicenter e-mails and pages key personnel immediately. "Opto 22 and PCS delivered a straightforward solution for 24 x 7 data acquisition from disparate non-IT devices and integrated them into a database and our Unicenter

TNG management system," says Meridian's Stan Hammond. "Managing key production devices with Unicenter TNG has enabled Meridian Medical Technologies to implement one methodology for alarms company-wide. We save money by consolidating many possible alarm and paging systems into one cohesive solution."

With the success of the automated water-quality monitoring system, Meridian has already moved to manage other non-IT systems with Unicenter TNG as well. Thanks to Opto 22's SNAP-IT units, Meridian will be monitoring its facilities security system, time and attendance system, and building environmental systems. "With the new SNAP-IT technology from Opto 22, it's now a simple matter to bring these islands of non-IT devices into Unicenter TNG," comments Bob Sheffres of Opto 22. "Meridian Medical Technologies is a good example of how easy it now is to manage all kinds of real-world devices right alongside IT equipment in a single enterprise management system."

About Opto 22

Opto 22 manufactures and develops hardware and software products for applications in industrial automation, remote monitoring, and enterprise data acquisition. Using standard, commercially available Internet, networking, and computer technologies, Opto 22's SNAP systems allow customers to monitor, control, and acquire data from all of the mechanical, electrical, or electronic assets that are key to their business operations. Opto 22's products and services support automation end users, OEMs, and information technology and operations personnel. Founded in 1974 and with over 85 million Opto 22-connected devices deployed worldwide, the company has an established reputation for quality and reliability. Opto 22 products are sold through a worldwide network of distributors, partners, and system integrators. For more information, contact Opto 22 headquarters at 800-321-OPTO or visit our Web site at www.opto22.com.

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