

# New Technology

## Provides Low Cost Distribution Automation Solutions

By STEVE HODGES

**L**ow cost wireless communications and easy access to data on the Web have led to a variety of low cost distribution automation options. Even so, most down line problems are reported manually, resulting in long service outages and high costs in labor and equipment. Providing power at competitive prices means developing more effective ways to monitor and control the distribution system. Voltage fluctuations, intrusion, conductor temperature, ice loading and insulator contamination are a problem for the whole industry. How do you monitor the entire system, especially in a service area as big as a state?

Telemetric, a wireless remote monitoring and control company, is marketing low cost MicroRTU's that allow utilities to monitor and control equipment anywhere in their service area. Using MicroBurst, technology from Aeris.net™, Telemetric is able to utilize extensive, seamless cellular coverage in the North and South America - providing the freedom to deploy the MicroRTUs virtually anywhere. This low cost service is made possible by leveraging unused cellular radio frequency, eliminating the need for additional infrastructure. The units also have built-in automatic roaming. There's no need to configure the MicroRTU based on location, or to buy local cellular airtime.

By using this low cost wireless option, Telemetric is able to offer utilities remote monitoring and control with a much smaller investment than for other radio, cellular modem (CDPD) or land phone line options. Utilities can take advantage of low cost MicroRTUs to monitor down line equipment that has previously been too expensive to monitor.

Telemetric is also able to offer a choice of data delivery options. Utilities can control and monitor their equipment using



their own secure page on Telemetric's web site or they can have the data imported directly into their existing SCADA system. A recently added feature of the Telemetric MicroRTU is its ability to communicate using the DNP3 protocol.

Many new RTUs and Intelligent Electronic Devices (IEDs) now use DNP3 to communicate with the outside world. In the February 2001 issue of Utility Automation, Ameen Hamdon reported "A recent international substation automation study indicated that DNP3 is now the most popular protocol in use by global electric utilities. The DNP LAN implementation led the way for planned use by both North American and international utilities."

With the addition of the DNP3 option, the Telemetric MicroRTU will be able to establish two way communications with a broad range of equipment by converting the DNP3 data into MicroBurst packets and sending it to the Telemetric server. Once on the server, the data can be viewed on the Web or translated into any number of data formats.

Cannon Technologies is one company that is excited about the Telemetric MicroRTU. They plan to support this new DNP3-enabled MicroRTU, as well as existing Telemetric devices, on their Yukon' distribution automation software platform. Existing Cannon Yukon applications include demand management, load curtailment, distributed generation, capacitor bank control and substation monitoring. These applications along with new additions, such as distribution fault restoration, will be enabled or enhanced by the DNP3-enabled MicroRTU from Telemetric. Cannon's esubstation.com, a Yukon-based subscription service, will provide web access to substations that are currently difficult to cost effectively monitor. They will use the Telemetric MicroRTU to gather and communicate the necessary data. ■

*Steve Hodges is the President and Founder of Telemetric Corporation. He has over ten years of experience in the electric utility industry, and founded Telemetric in 1999.*