The Sensaphone SCADA 3000 provides cost-effective control and monitoring for freezers, refrigerators, and other devices.

Supervisory control and data acquisition (SCADA) technology collects real-time data from virtually any environment where there is a need to monitor machinery or processes, make adjustments based on measurable conditions, measure downtime, or regulate processes to avoid costly problems. The computer-based technology was designed to do all these things with minimum human involvement. SCADA systems reduce downtime, improve record accuracy.

From the central reading location, a SCADA system can monitor a number of remote systems equipped with remote telemetry units (RTUs). SCADA technology will notify personnel of current or potential alarm situations, allowing an operator to notify designated staff before predetermined temperature limits are exceeded, preventing the loss of valuable research.

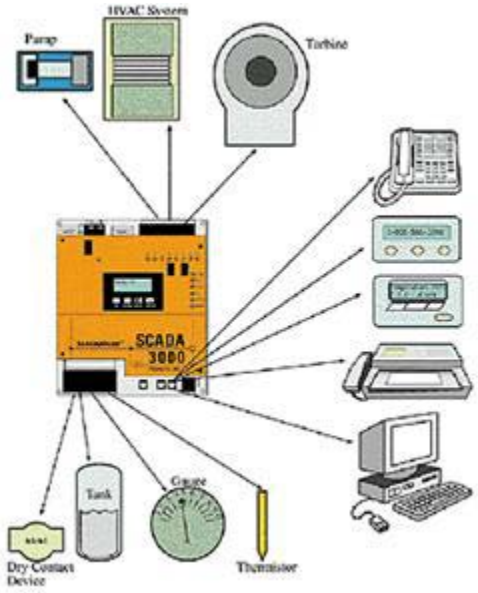

Figure 1. SCADA 3000 uses a central processing unit (CPU) to collect and read data from sensor points collected by remote telemetry units (RTUs). The RTUs measure such parameters as pressure, flow, and temperature from machinery and process locations and transmit the data to the CPU. The CPU feeds the data to a host PC.

The SCADA system can communicate with a host PC through standard data radio, telephone lines, or a combination of both (see Photo 2). Through these communication techniques, the system notifies you in the event of a problem or irregularity. No matter what communication method is selected, SCADA 3000 reports the alarms using voice, numeric or alphanumeric pagers, fax, or e-mail. All alarms can be programmed for recognition time, with high or low limits and reset time, and can be recorded with voice messages.

Photo 2. SCADA 3000 communicates with a host PC through standard telephone lines and notifies you of irregularities or problems at the device level.

Processing Power

SCADA 3000's motherboard operates with two high-speed 32-bit processors. The first processor is dedicated to performing the input, output, and control functions, and the second processor is used for communications and alarming functions. The two processors work together, sharing information through a common area of dual-port memory. To further offload the processing requirements, expansion modules have their own processors to perform the I/O analog conversions and floating-point range scaling. The distribution of processing provides a powerful and efficient design.

This information was obtained in part by an article by Dave DeFusco, Engineering Manager at Phonetics, Inc., 901 Tryens Rd., Aston, PA 19014; 610-558-2700, fax 610-558-0222, ddefusco@sensaphone.com