

A Brief History of SCADA

By Robert White, Director of Sales and Marketing, RF Neulink



SCADA SYSTEMS PROVIDE REAL-TIME MONITORING AND CONTROL of your facilities, and is an acronym for Supervisory Control and Data Acquisition. Its fundamental purpose is to remotely monitor a range of processes, collect real-time data and then perform analysis on the accumulated data. The foundation of SCADA can be researched back to the 1960's, when simple input and output devices were used to remotely monitor operations in industrial applications. Due to technology advancements, SCADA systems have now developed using advanced software, high performance microprocessors and wireless technology. Additionally, SCADA systems deliver productivity and operational efficiencies by improving the reliability and stability of your system. Corrective action can be automatic and instantaneous. Constant monitoring helps to identify troubled areas before they become critical. The end result is reduced interruptions in service and improved operational costs.

The SCADA system

SCADA systems are typically composed of the Master SCADA Unit, Remote SCADA unit, Communication Media Unit, and SCADA Software. The Master SCADA Unit is the main control unit centrally located for use under the operators control. The remote unit is installed where the process is being monitored and collects the required process data for return to the Master SCADA Unit. The Communication Media Unit transmits and receives data between the master unit and the remote units. The Communications Media can be a cable, wireless media, or satellite. The software is an interface between the operator and the units. It allows the operator to analyze, visualize and control the functions of the process.

The SCADA Application

A SCADA system gathers information, such as where a leak on a pipeline has occurred, transfers the information back to a central site, alerting the home station that the leak has occurred, carrying out necessary analysis and control, such as determining if the leak is critical, and displaying the information in a logical and organized fashion. SCADA systems can be relatively simple, such as one that monitors environmental conditions of a small office building, or incredibly complex, such as a system that monitors all the activity in a nuclear power plant or the activity of a municipal water system.

Benefits of a Wireless SCADA

By monitoring the process in real time we can minimize the operational costs by means of providing direct information of system performance, thus improving system efficiency and performance. The benefits of this, increase equipment life and reduce labor costs required for troubleshooting or servicing the equipment.