



# Mini-SCADA Solution

## Mini-SCADA Solution



—The Cooper Power Systems Mini-SCADA solution is a suite of supervisory control and data acquisition tools that help electric utilities make data-based vs. time-based maintenance decisions—

The Cooper Power Systems Mini-SCADA solution is applicable for both public power utilities and investor owned utilities.

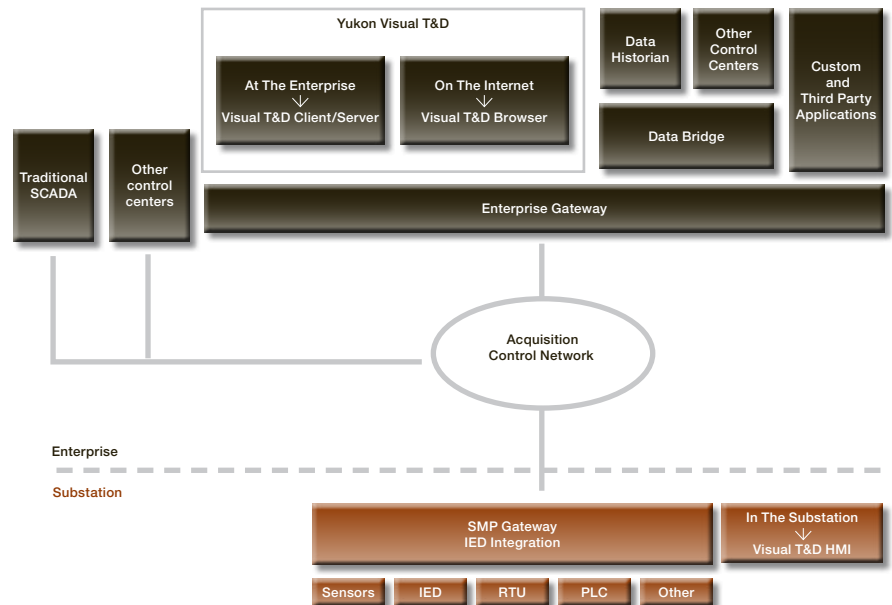
### Mini-SCADA—A Simplified, Easy-to-Use SCADA Solution

Mini-SCADA is the Cooper Power Systems smart monitoring and control alternative to traditional SCADA. Many utility customers want the benefits of a SCADA system, but do not have the resources to implement a complicated project or to staff a 24x7 control room. Mini-SCADA provides a scalable, pre-configured, easy-to-use alternative.

Mini-SCADA is an application of Visual Transmission and Distribution. It is a solution that:

- Helps utilities implement a smart grid initiative with real-time, continuous monitoring
- Monitors how fast conditions are changing, thereby allowing utilities to make timely decisions
- Allows utilities to monitor long-term trends and make maintenance decisions based on real data as opposed to time-based maintenance

### Mini-SCADA System Architecture



## Mini-SCADA Solution

Cooper Power Systems Mini-SCADA solution is a scalable, pre-configured, easy-to-implement and easy-to-use alternative solution to a traditional, full-scale SCADA solution.

### Mini-SCADA vs. Fully-Functional SCADA

Mini-SCADA is an application that continuously monitors substation and distribution equipment operation and performance. The application provides the same information as traditional SCADA systems in a way that is less complex and simpler to implement and use.

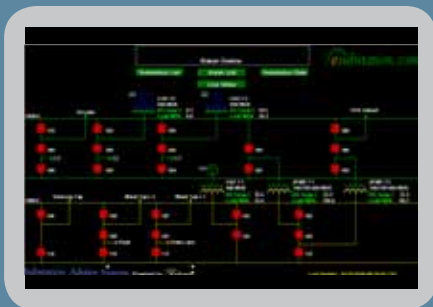
The Cooper Power Systems solution collects operational history that allows utilities to view their system operation and to plan maintenance and capital expenditure programs more efficiently. The main features of Mini-SCADA are:

- Intelligent notification of events and alarms via pager, e-mail or text message with user-configurable event thresholds
- System overviews with real-time data display and control of remote assets
- Trended historical data (data historian)
- Graphical and tabular real-time and trending displays
- And for users of Mini-SCADA Browser:
  - Remote access from any location via secure Web interface
  - Customer-hosted (via an intranet) or Cooper-hosted (via the Internet) solutions

### Mini-SCADA Browser Hosted System

For utilities without IT departments or who prefer not to install Mini-SCADA on local servers, Cooper offers a Mini-SCADA Browser system. The hosted system collects substation data and stores it on secure commercial servers. Utilities have secure access to all of the data online, via the Internet, from any location. Cooper's flexible roll-out program permits bringing additional substations online as budget or operating conditions allow.

Yukon Mini-SCADA Displays



One-line diagrams with ability to drill down.



Graphical and tabular real-time and trending displays.



Virtual Front Panel for remote control operation.

# Mini-SCADA Solution

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The Cooper Power Systems Mini-SCADA solution provides electric utilities with a suite of powerful tools for utility controlled applications designed specifically for the Power Industry.

### Designed Specifically For The Power Industry

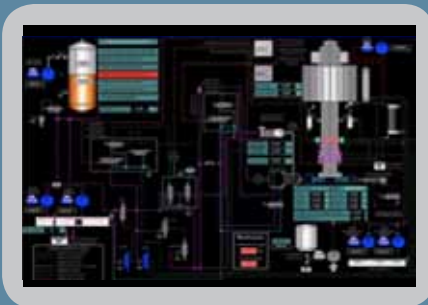
Mini-SCADA was designed from the ground up to support electric generation, transmission, distribution monitoring and control. Mini-SCADA has the following advanced features:

- Automatically retrieve event files
- Millisecond time tagging and IEC 61850 data quality attributes
- True select before operate (SBO)
- Power industry shape libraries to simplify diagram creation
- Data point tagging for information and control inhibition
- Automatically convert device timestamps to support different time zones
- Automatically add prefixes to support multiple sources with identically named data points
- Licensing model adapted to the large number of data points in modern IEDs
- Connect to power industry standard OPC servers, including Cooper Power Systems SMP Gateway when the SMP is equipped with an OPC option
- Cooper Power Systems use the Communication Server module to provide access to a large variety of devices, including ABB, AREVA, GE, SEL, SIEMENS and others, using numerous standard or proprietary protocols

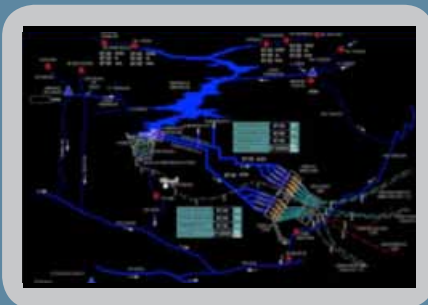
Mini-SCADA is also used in a wide variety of applications because of its full feature set, including:

- Built-in high-performance historian, which logs events, alarms, operator actions, and all transitions on all data points
- Capability to build point lists automatically
- Support for a large variety of devices and data sources
- Built-in equation editor to create new logical data points based on calculations performed on physical data points

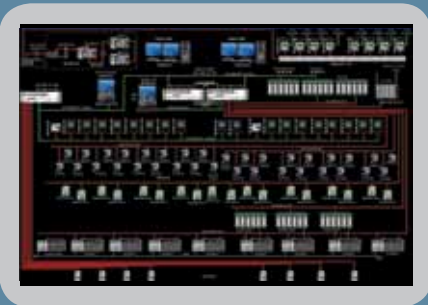
Yukon Mini-SCADA Displays



Overview and control of generation.



Geographic Overview with ability to drill down.



Process automation, including interfaces with Programmable Logic Controllers.

## Mini-SCADA Solution

The Cooper Power Systems Mini-SCADA solution provides electric utilities more with less. **More** supervisory control and data acquisition tools with **Less** control room resources.

### **An Integrated Solution For Simplified Engineering And Commissioning**

Mini-SCADA is designed as a companion to the SMP Gateway. Connect Mini-SCADA to the SMP Gateway and get the following additional advantages:

- Automatically import all configuration settings from the SMP Gateway
- Support redundant network paths
- Use the SMP Gateway time source to automatically synchronize the PC clock

One of the principle advantages of an SMP Gateway is to improve bandwidth utilization (or reduce bandwidth requirements). An SMP Gateway distributes information throughout the system and helps bridge different communication methods and latencies.

### **Communication Path Studies**

Cooper Power Systems recognizes reliable communication links as absolutely essential to SCADA system installation. If desired, Cooper can provide thorough radio frequency communication path analyses.

### **Point-to-Point Analytical Path Studies**

Analytical path studies can be provided to evaluate radio wave propagation over a given topography. Using location information for each of the telemetry system's assets, two-dimensional (2-D) path profiles can be generated, outlining the topographic features that lie between any two communicating stations. These profiles allow Cooper Power Systems engineers to determine whether a clear "line of sight" propagation path exists and make appropriate recommendations on antenna siting, equipment specification and other physical site characteristics to support reliable communications.

# Mini-SCADA Solution

## Mini-SCADA Solution

Cooper Power Systems Mini-SCADA is an integrated solution for simplified engineering and commissioning.

### Mapping

Cooper Power Systems utilizes a variety of mapping resources to complement radio frequency path studies of different scopes. When required, maps can be generated to relate measured radio frequency propagation data to topography within a desired service area. In addition, published coverage data from existing cellular and paging network providers may be integrated for those projects that utilize public networks as part of the communications infrastructure.

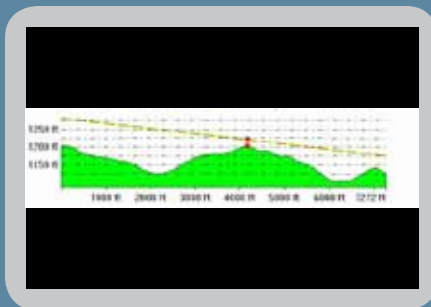
### On-Site Survey and Validation

While Cooper Power Systems makes every effort to provide an accurate, comprehensive analytical output, Cooper Power Systems is proud to also offer an on-site survey and validation service to provide an added level of confidence for those deployments demanding more attention due to difficult terrain, long-range links or specialized system integration. Our engineers are equipped to perform onsite pre-installation, point-to-point radio frequency path validation and mobile drive tests in order to characterize proposed and installed communications networks.

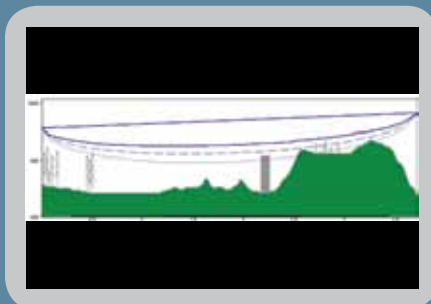


Example of an On-site Survey.

### Yukon Mini-SCADA Displays



Example of a Path Profile.



Example of a Path Profile.



Example of a Topographic Map.

## Mini-SCADA Solution

Cooper Power Systems can also provide a turnkey Mini-SCADA solution—providing solution implementation by experts.

### Turnkey Solution—An Operational System by Experts

For utilities that wish to free themselves from installing a new system, Cooper Power Systems offers a turnkey solution that will provide the latest Asset Monitoring capabilities and a Mini-SCADA system.

### Complete System Design

Cooper Power Systems engineers and designers will work with a utility's engineers and operations personnel to develop a system design that includes equipment configuration, software, database and display development, installation supervision, and support.

### All Necessary Hardware Provided

The Cooper Power Systems Mini-SCADA turnkey solution includes all required hardware—both in the office and in the field. This often includes any applicable upgrades for existing Cooper Power Systems equipment, field sensors, communications infrastructure, RTUs, servers, and more.

### Summary of Benefits

The Cooper Power Systems Mini-SCADA solution gives utility personnel the information they need to quickly identify and analyze potential failure conditions, improve system reliability, increase equipment availability, lower the risk of expensive failures and reduce costs.

Cooper Power Systems provides utilities with the Tools for Tomorrow—Today. To learn more about how Cooper Power Systems emerging technologies like Mini-SCADA can empower you, visit [www.cooperpowereas.com](http://www.cooperpowereas.com) or [www.cooperpower.com](http://www.cooperpower.com) or call our toll free number 1.800.827.7966.

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