



SCADA-C

Real-time Monitoring & Control
of Complex Systems



What is SCADA-C?

SCADA-C is a control and monitoring software application designed to allow easy configuration and control of industrial plants that cover a wide geographical area.

SCADA-C is designed for networks such as water and waste water systems, gas reticulation, irrigation and mining that operate using ELPRO wireless Remote Telemetry Units (RTUs). It has a number of pre-defined plant types along with generic plant definitions, allowing users to create their own specialised configurations.

These Plant Types Include:

- Pumps
- Reservoirs (including water towers and Dams)
- Control Valves
- Flow Meters
- Remote Telemetry Units (RTUs)
- Pulsed Inputs
- Accumulators
- General Plant
- General Analogue
- General Digital



TLX 400

Features

SCADA-C includes the following features:-

Control Modes

By defining your own Control Modes, a user can specify the parameters used to automatically start and stop plant items. Any changes made to a Control Mode parameter takes immediate affect without the need to shutdown and restart the system.

For example, a pumps start condition could be defined similar to:

Pump Start

= ("Source Reservoir Level" > 80%) & ("Destination Reservoir Level" < 50%)

Control Groups

Combining a number of plants together into a single Control Group allows SCADA-C to perform specific operations on this group. This includes:

Rotate when Idle – which provides load sharing between pumps

Rotate when in Fault – which provides plant redundancy

Rotate on User Defined Equation – providing plant rotation based on any Logical Equation

Group Tariffs – Allowing groups of plants to be inhibited during high tariff times

Reflections

Reflections allow any Scada tag to be assigned a value based on the result of a control equation. This may be used for example to convert a flowmeters value from litres/second into kilolitres/hour
Result = ("FlowMeter Value" x 60 x 60 / 1000)

Schedules

Schedules created within SCADA-C allow a user to define preset time period that a schedule will be active for. In addition to being able to define a schedule time period, you can also defined the days of the week it will be active on, its start and end dates and whether it occurs annually. The following are a selection of scheduler applications to further automate the system:-

Pagers – to efficiently schedule the times a pocket pager receives messages.

Control Groups – to define High Tariff periods.

Reflections – to specify the times that reflections occur.

Alarm Remote Acknowledgements – to limit when Remote Acknowledgements can take place..

Alarms

Alarms are automatically triggered in the system whenever a Scada tag value deviates outside an alarms predefined set-point values. Alarms may be Digital (such as a input from an Overflow Float Switch) or analogue alarms, in which case both non critical (HIGH) and critical (HIGH HIGH) alarm set-points can be defined. SCADA-C can display a visual and audio indication of any active alarms as well as activate a pager sequence to notify remote users via Pocket Pager, SMS Text, or Email messaging. A history of all alarm details is kept in the secure Event Log.

Paging

The ability to define multiple Service Providers, multiple Paging Devices and multiple Paging Sequences within SCADA-C gives great flexibility in the way alarm notification messages are delivered to users.

Multiple Service Providers - means messages can be sent by Email as well as SMS or dedicated Pager system.

Multiple Pagers – allows the same alarm message to be sent to a number of pagers, or by using the scheduler, to have "Out of Hours" pagers that only receive messages at certain times of the day or night.

Multiple Sequences – allows an alarm to go through a paging sequence, for example to contact a second pager if the first user does not respond.



Event Log

The Event Log is used to create a secure time stamped log of all activity in the system and is an ideal tool both for tracking system changes as well as a fault finding tool for events that have happened in the past.

Typical activities that are logged include:-

Plant Activity – includes pump starting and stopping times, mode changes etc.

User Activity – includes user logon / logoff times, users changing control modes etc.

Alarm Activity – includes activation and deactivation times as well as when and by whom an alarm was acknowledged.

In addition to this the event log can optionally log changes to any Scada tag variable in the system.



User Accounts

Multiple user accounts can be created, giving the ability to limit access to individual areas within the SCADA-C software environment on a per-user basis. Where applicable, user accounts details are also used during the event logging process.

Redundancy

SCADA-C supports two forms of redundancy:-

RTU Redundancy – allows additional RTUs to be run in parallel with the main RTU, so that if one RTU fails, a second one will automatically take over.

System Redundancy – an exact replica of the SCADA-C system is automatically maintained on a remote computer. The replica system is constantly updated with live data, so that if the first computer fails the second one will automatically take over.

Mimic Screens

Using Citect's Mimic screens, a system can be designed so as the various user screens an operator sees are a reflection of the layout of the plant items in their system. This provides a for a very intuitive user interface.

Historical Trend Data

The system can be configured to log certain key parameters to trend data files. This trend data can then be used to provide historical trend graphs and detailed reports of plant activity over time as well as allowing this data to be analysed using Citect's "Process Analyst".

Supported Hardware

SCADA-C is ideally suited to work with ELPRO's range of wireless Remote Telemetry Units, including the TLC, TLX and E Series units. It can also use the full range of device drivers supported by Citect Scada, including a MODBUS interface.



ELPRO Technologies

Global Offices

Australia

9/12 Billabong St, Stafford, Qld, 4053, Australia
Tel: +61 7 3352 4533 Fax: +61 7 3352 4577

24 Hour Support +61 7 3352 5276

USA

7364 El Cajon Boulevard, Suite 201, San Diego, CA, 92115, USA
Tel: 619 741 3574 Fax: 619 303 9347

24 Hour Support 866 713 4409

UK

Bloxham Mill, Barford Road, Bloxham, Banbury, OX15 4FF, UK
Tel: +44 1295 724 270 Fax: +44 1295 724 271

24 Hour Support +61 7 3352 5276

Email: sales@elprotech.com

www.elprotech.com