Gridstream™

SC ASP

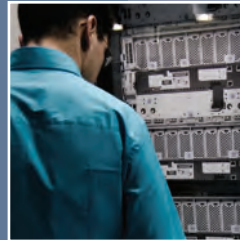### SCADA Center **Advanced Substation Platform**

- Advanced substation aspplications
  - HMI
  - Data concentrator/server
  - Sequential events recorder
  - Historian
  - Annunciator

Advanced Substation Computing

The SCADA Center Advanced Substation Platform (ASP) is a high performance software package designed for use in today's modern substation. This software-only solution does not require vendor-specific hardware, allowing the utility to choose the appropriate hardware for each particular installation. ASP can run on standard server-class machines, or on hardened substation-grade systems available from many manufacturers. ASP replaces many existing operating platforms with a single, robust system. It is no longer necessary to purchase separate units for HMI, SOE, and annunciation; as all these functions are performed by ASP. This results in significant cost-savings and enhanced reliability. For mission-critical substations, ASP is available in a redundant configuration that runs on two servers simultaneously, providing continuous system availability and protection from hardware failures.

In addition to traditional substation functions, ASP also contains the power to perform advanced substation and distribution automation applications. The built-in communication manager oversees communication with devices within the substation, as well as field devices located on circuits fed from the sub. Both TCP/IP and serial communication are supported. A high-speed, independent channel processor allows devices to be polled in parallel and update all data values once per second. Combined with the ability to retrieve time-tagged data using industry-standard protocols, ASP can handle all your data requirements, both today and tomorrow. This system has the power to grow along with your needs. ASP is a member of the SCADA Center product family, providing solutions from simple data concentrators through utility-wide enterprise information systems.
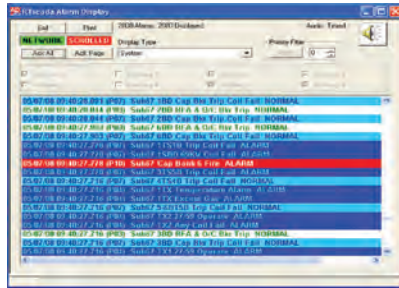
Data Concentrator and Server

As a data concentrator, ASP supports up to 64 serial channels and 512 TCP/IP channels. Data on each port is acquired simultaneously, allowing all the substation data to be refreshed once per second. All popular protocols are supported, such as DNP and Modbus. For protocols that support time-tagging, ASP uses the acquired time tag for alarming and data served to external systems. Data is served to external systems by creating one or more virtual slave devices. This allows ASP to appear as a DNP device to external systems. Multiple slave devices can be created, with multiple devices per channel and multiple slave channels. Data can also be served to multiple external systems. ASP allows control commands to be passed from external systems to substation and field devices. Control tag coordination, communication accounting, and scan control is also provided through standard DNP points and control commands.
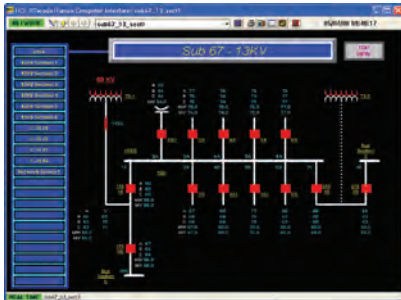
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Alarm Display

The ASP alarm processor provides a time-sorted display of alarm and events with millisecond accuracy. Ten different displays can be used to segment alarms into meaningful collections, such as voltage, severity, and type. In addition, a filter is available with 256 priority levels to extract critical alarms. Standard Windows audio files provide an audible indication of alarms. Alarm acknowledgement can be performed from the display or from the graphical user interface. A unique auto-inhibit feature prevents malfunctioning inputs from clogging the display with repetitive alarms.
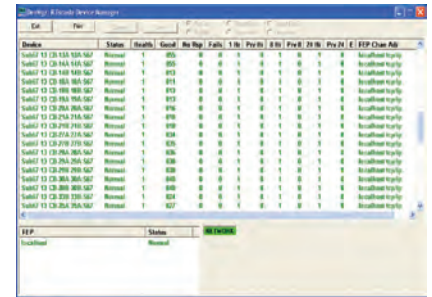
HMI

ASP includes a full-graphic HMI. The HMI is used for display of station single-line diagrams, trends, and tabular data. Multiple windows can be displayed simultaneously for a complete view of the substation data. A full-featured editor is included which allows creation of custom views and user-defined symbols. In addition, an extensive set of pre-defined view templates is provided, allowing rapid deployment of a full-featured system. Flashing symbols and multi-state color support provide a rich user experience.

When coupled with the substation historian, the HMI can be used to replay historical data, single stepping through each event with millisecond accuracy.

Communication Manager

The ASP communication manager provides extensive accounting statistics for all devices. Communication status as well as health for each device is shown in an intuitive tabular display with sortable columns. Health statistics include both present reading and historical reading for present and previous hour, 8-hour and 24-hour periods. In addition, a built-in protocol analyzer provides display of raw and decoded protocol messages.

Configuration

ASP provides a simple, intuitive approach to configuration. An extensive set of database and screen templates are provided for popular substation devices and bus configurations. Adding a new device is as simple as referencing a device template and generating the database and views with a single click. New templates can be easily created using the provided tools.

ASP Scalable, Expandable Platform

- 1.4 GHz Pentium M
- 1 GB DDR SDRAM
- 16 GB Solid State Hard Drive
- 4x serial ports (RS-232/422/485)
- 2x 10/100 LAN ports
- 2x USB 2.0
- PCMCIA/CardBus slot
- VGA: 15-pin
- LEDs: Power, IDE, LAN, serial Tx/Rx
- PS-2 Keyboard/mouse connector
- Windows Server 2003
- Operating Temperature: -20 to +605C
- Power: 10-53 VDC 24 Watts

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