

- Navionics Unveils WiSTAR™ SCADA System
- Office Unit Brings User-Friendly Interface To Wireless SCADA
- Field Units Offer Interface With Total System Control
- Wireless Data Transmissions Support Networked Control

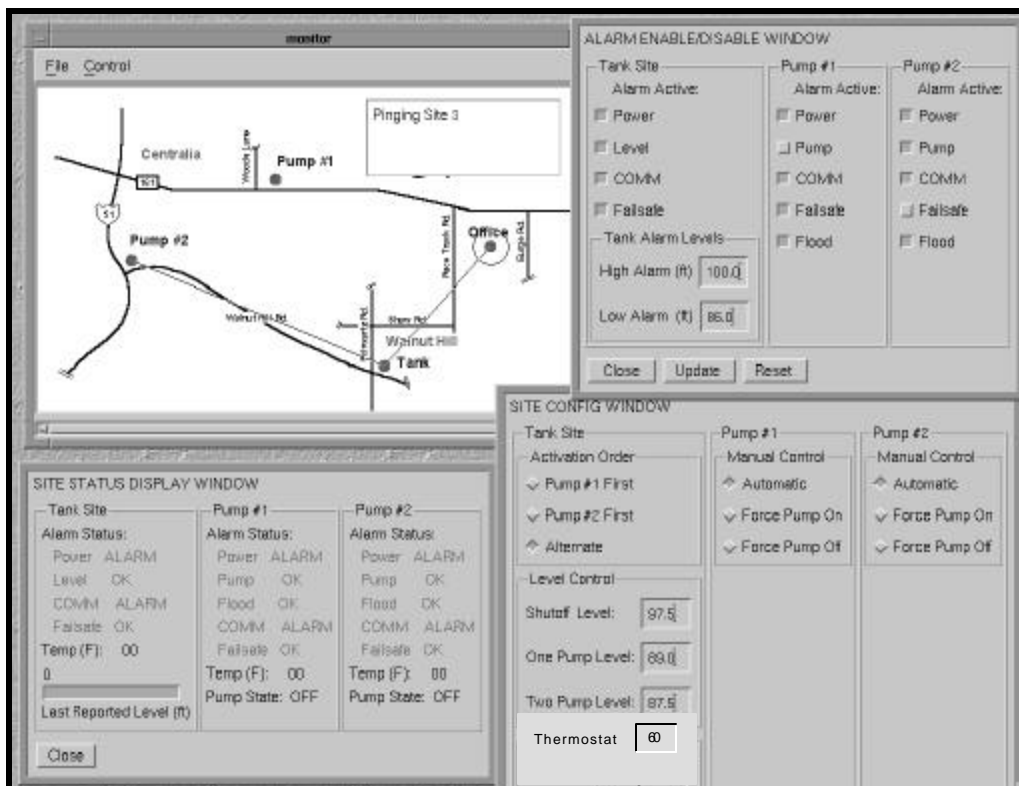
NAVIONICS UPDATE

Navionics Unveils Ultra-Reliable WiSTAR™ SCADA System For Automatic Wireless Control Of Rural Water Systems

In November 1995, Navionics proudly unveiled a bold new concept in wireless SCADA: The WiSTAR™ (Wireless System Telemetry And Remote-Control) System. The product, which was designed from the ground up with special emphasis upon ease-of-use and maintainability, is comprised of two main subsystems: the WiSTAR™ Field Unit and the WiSTAR™ Office Unit. Both units are PC-based, use standard "off-the-shelf" components, and synergistically comprise an entire wireless system, capable of providing continuous monitoring, control, and data collection from dozens of Field Units. The strength of the WiSTAR™ system's design lies in its ability to detect system faults and to aid the managing personnel in correcting emergency situations early before the level of severity increases.

Office Unit Brings User-Friendly Interface To Wireless SCADA

The Office Unit is a Pentium™-based PC running the reliable LINUX™ operating system. It regularly queries the field sites to obtain their status and stores the data in a redundant disk array for security. The Office Unit also provides screen data graphing and ink jet printing, remote-control of Field Units, and alarm (visible, audible, and auto dialer) functionality, all in a friendly graphical interface environment which features state-of-the-art user-interaction with the mouse and screen windows.



Telemetry And Control Functions At The Office Unit Are Easily Performed With A Point And Click Of The Mouse

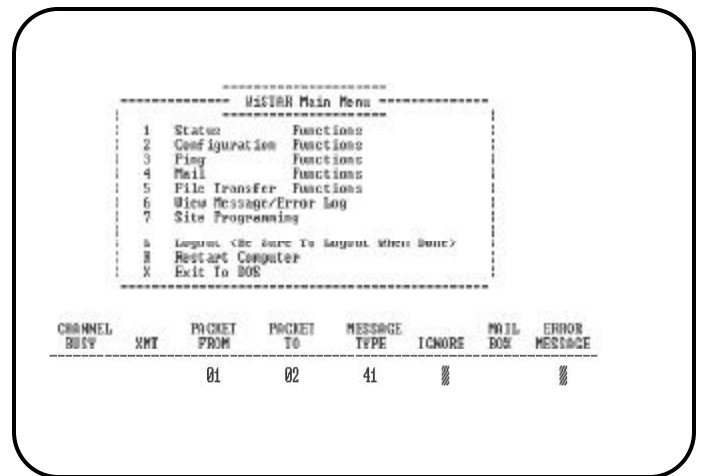
Field Units Offer Interface With Total System Control

The Field Units are user-configurable to support a variety of input readings and equipment-controlling outputs. Their operation is protected from power outages with a battery backup, and their on-board computer systems retain configuration settings at power down.

For both safety and reliability, the units are provided with a high level of protection from lightning and power spikes at the RF cable and 120V power line entrances. The Field Units are housed in NEMA-4 rated enclosures for equipment protection, and units which will be exposed to extremely cold temperatures are outfitted with insulation and a thermostat-controlled strip heater.

Personnel can interface to each unit with a standard laptop PC (which is provided with each system) through a serial-port connection. The laptop interface provides system-wide status and control options to the user, as well as a history of local status, configurations, and error messages. Several troubleshooting options assist the user in determining faults in either the industrial system or the WiSTAR™ system. Each unit can support up to a combination of 16 discrete input and output modules. Discrete input modules test for the presence of 120V, 240V, 5V, contact closures, and contact opens. Discrete output modules take the form of normally-open solid-state relays. Each unit can support up to 8 analog inputs for reading levels such as pressure, temperature, and

chlorination. Additional input/output capacity can be custom-added if desired. The discrete and analog inputs are read by the computer at the Field Site and are combined with input data queried from other relevant sites via the wireless link. Implementation-specific decisions are then made to switch machinery into ON or OFF states. State-changes are then reported immediately to the Office Unit for display.



Screen Snapshot Of Laptop Interface Main Menu

Wireless Data Transmissions Support Networked Control

The WiSTAR™ System's design is flexible so as to easily accommodate many different applications. All sites can communicate with all other sites through a message-relay system. The relay paths are user-configurable, and are initially selected by Navionics, based upon a topographical radio signal propagation analysis, so as to provide optimal signal strength at the receivers. The sites communicate via radio modems, requesting or announcing status and setpoint data from or to other sites as needed. The Office Site collects all sites' status and setpoints to provide the managing personnel with a record of system performance data. All transmissions include an error-check code, and error correction is then achieved through retransmission of any messages which fail the error-detection check.

Need More Information?

Give us a call. Working together, we can configure a Navionics WiSTAR™ System to solve your Water or Wastewater System's control and telemetry needs.

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