

Vineland Municipal Utilities Accomplishes a Complete Ilex® System Replacement With QEI TDMS SCADA



Project Scope

Redundant Hewlett-Packard Itanium Servers. Second SCADA Server Located Off-Site for Increased System Reliability

Translation and Migration Of Existing Ilex SCADA System Database (Displays, Point Definition, etc.)

Supply of All Required Third-Party Hardware (Operator Consoles, UPS, Dispatch Office Display Systems, etc.)

Integration of New and Existing Intelligent Electronic Devices (Including 26 Ion PowerLogic® Meters) with the ePAQ-9410 Substation Gateway

Re-use Of Existing Ilex® Substation Enclosures

Onsite Training For Operators, Administrators, Engineering, And IT Personnel

Supply and integration of System Data Historian (hardware and software)

Integrated Wall-Mounted, Large Screen, Dispatch Center Installation

Three-year Complete Warranty (Renewable) with Unlimited Web and Telephone Support



Automating A Municipal Map with TDMS-WorldView™ Display HMI

Summary

Vineland Municipal Utilities Operated a SCADA system for more than a decade using technology from C3-Ilex®, but found that the demands of running a 21st century municipal to be more than they could address with periodic upgrades and expansions. In 2013, when support for the existing Ilex system was terminated, by the vendor, it was decided that a completely new master station and multiple gateways would be acquired for monitoring and controlling their substations and for upcoming expansion into distribution management.



Ilex® RTUs Were Replaced with the ePAQ-9410 Substation Gateway

With the assistance and input of an experienced consulting firm, a formal specification which addressed the technical, commercial and procedural aspects was drawn up and issued for competitive bidding. Because past experience with SCADA, the city wanted to make sure that the new system would not only address the needs of 2013/2014, but would prepare them for the emerging smart grid environment of the next several decades. The new



Vineland Solar III Generating Facility

Vineland Municipal Has Been Supplying Utility Service to Residents and Businesses in Vineland, New Jersey Since 1899



The hardware platforms used for the Vineland Utilities SCADA servers were Hewlett-Packard Itanium® RX-2800 with the OpenVMS Operating System & NAS Network Services. This operating system is used worldwide in power, finance, medical, military and other high availability applications. There has never been a successful worm or virus attack on any OpenVMS based system.

system would also have to make use of the SCADA installation and database in order to retain the maximum amount of the city's extensive investment in the existing SCADA system. To this end, the proposals were to be effectively "Turn-key" with the winning vendor providing products and services that were ready for immediate use. This would include taking responsibility for all aspects of hardware, software, database, IED integration, IT Integration, warranty, and training of all user personnel.

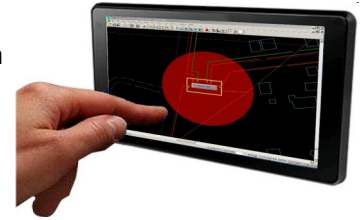
After a joint analysis by their staff and their consultant of the proposals received, the city decided to partner with QEI located in Springfield, New Jersey.

Primary Considerations

The original system architecture of multiple SCADA server with traditional hardwired remote terminal units was to be expanded to include physical separation of the servers (for increase hardening to catastrophic failure) and the full incorporation of Intelligent Electronic devices (IEDs).

In order to avoid the previous problem with obsoleting of the OS/2 operating system, a well established and continuing SCADA operating system was required, and this was addressed through the QEI use of OpenVMS® from Hewlett

Packard. The worldwide use of OpenVMS in mission critical applications will help insure continuing support and enhancement for the life of the system.



Standard Windows® PCs, already present on the city's enterprise network, along with new consoles being supplied, will insure that authorized users, anywhere on the city's network, can have easy access the capabilities of the system.

User Can Securely Access Standard SCADA Displays Through a Wireless Tablet via Remote Desktop Services

The hardwired status, analog and control points in the existing Ilex RTUs along with IED data and control were incorporated into the new ePAQ-9410 substation gateways. These would provide data concentration and management capabilities for the existing substation IEDs (primarily Schweitzer® relays)

Project Implementation

While the initial transfer of the Ilex system database (displays, point definitions, etc.) was accomplished by QEI, all of the editors and training necessary to manage the system were supplied.

While all editors and training were provided to city personnel for IED integration and display development, the system database and all initial displays were generated by the QEI database generation group in Springfield, New Jersey. Database management tools (provided for all systems as part of the QEI standard offering) allowed easy integration of the Ilex database into the new master station and gateways.

All hardware and software were supported by a 3 year warranty covering update, replacement and essentially unlimited VPN assistance. These warranties are extensible on a year-to-year basis.

For further information concerning this project, or the options available for upgrade of an existing Ilex system, contact your local QEI Representative.

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