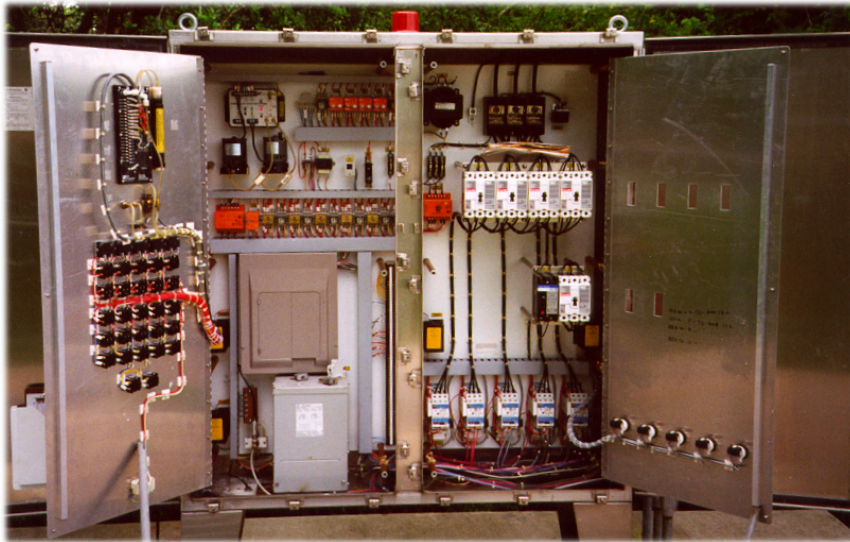


Water and Wastewater Remote Telemetry SCADA



Telemetry and remote control are cornerstones of progressive water and wastewater treatment specialists.

John Gross of Gross Solutions in Cypress, Texas is an automation professional with impressive experience in water and waste watersystems. While John was working for PSG, the nation's largest water and wastewater contract operations company, he had an opportunity to design and install an Opto 22 system.

The Freeport, Texas water system was a perfect 'Demo' project. The water department had no telemetry or remote control systems in place at the time PSG was awarded the contract to operate the system.

Without telemetry, the water crew had to visit each of five sites two to three times per day just to verify that tanks were full and distribution system pressure was adequate. The Opto 22 equipment was installed in 2 of the 5 systems. An ISA controller in a PC at the central office was installed to poll the sites.

Now the operators come into the office at 7:00 AM and review the system status on screen; the ISA is scheduled to poll at 7:00 AM every day. Operating data is downloaded and reviewed by the operators on an as-needed basis.

A file is automatically logged to disc on a regular basis, and then used by Microsoft EXCEL to provide the required monthly state reports for water operations.

"Another thing that we were looking at that was a real plus was the forward-backward compatibility. All the new products are compatible with the older Optomux, Cyrano, and Factory products, i.e. racks, bricks, SNAP," said Gross.

"There has long been a need for a system that can be configured for a wide variety of needs."

"Many of the projects started out as straight telemetry projects, but when we arrived at the sites to do the installations, we found a number of other problems that had to be addressed at the same time. Control failure problems, motor control problems, things of that nature. The Opto equipment we had already bought was very easily adapted and changed to fit the changing conditions at the site."

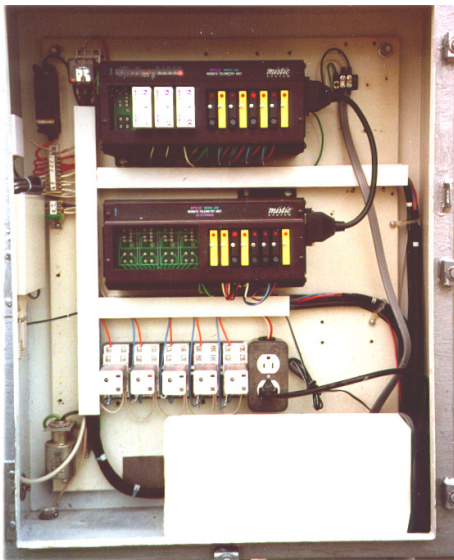
Observations

Last summer the RTU temperatures ranged up to 140° F; no problems. Start up costs were lower due to the

absence of software license fees for the Opto 22 MMI. The Freeport system has a laptop computer for the on-call operator, so that alarm call outs can be reviewed before costly overtime trips to a site are made or before extra personnel are called.

"Another big cost saver was the 'need an I/O point; add an I/O point' capability of the Opto equipment. No need to purchase a complete 8-point or 16-point rack for one wet well level signal. No need to purchase separate racks for each type of digital point; mix and match as needed. Flexibility."

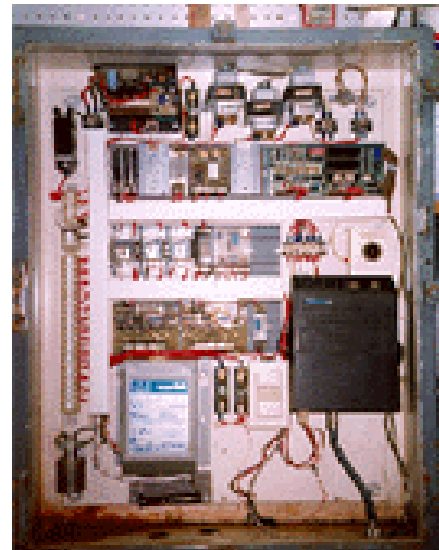
Since the original 'demo' project, a system has been installed on the Freeport wastewater plant influent lift station and connected to the polling system. Plus, systems have been installed in eight facilities in Angleton, Texas.



Gross listed several advantages of going with an Opto 22 system:

- We liked not being locked in to one control scheme.
- We also liked single-vendor integration of hardware and software.
- Wide Temperature range.
- Closed systems were a problem.
- Easily customized to include only the capabilities needed.
- Flow Charting -- "Once I learned it, it has proved to be quite easy."

- Individual sites are configured to disconnect from control system and call a pager service on alarm conditions.
- Avoided the \$1500 cost of an Autodialer system.
- Central unit calls sites to acquire data.
- Often we can correct a problem without sending out a crew - something that is usually done on overtime.



Above: Old system for monitoring-only using radio

Left: Monitoring and control using standard dial-up phone line communication

About Opto 22

Opto 22 manufactures and develops hardware and software products for applications in industrial automation, remote monitoring, and enterprise data acquisition. Using standard, commercially available Internet, networking, and computer technologies, Opto 22's SNAP systems allow customers to monitor, control, and acquire data from all of the mechanical, electrical, or electronic assets that are key to their business operations. Opto 22's products and services support automation end users, OEMs, and information technology and operations personnel. Founded in 1974 and with over 85 million Opto 22-connected devices deployed worldwide, the company has an established reputation for quality and reliability. Opto 22 products are sold through a worldwide network of distributors, partners, and system integrators. For more information, contact Opto 22 headquarters at 800-321-OPTO or visit our Web site at www.opto22.com.