Application Highlight:

Air Liquide Migrates Control and HMI System to CTI 2500 Series® and zenon

To update an obsolete plant control and supervisory system composed of a SIMATIC® 505 PLC and CVU10000, Air Liquide has selected the CTI 2500 Series® PLC and zenon® HMI/SCADA software.

On the French La Réunion Island, Air Liquide has a medical oxygen and liquid nitrogen facility which used a Texas Instruments CVU10000 for process monitoring and control. The hardware (running under MS-DOS) was no longer maintainable and the software was no longer supported. To ensure the long-term reliable operation of this plant, Air Liquide turned to NAPA International France to provide a turnkey migration to a modern control and supervisory based on a CTI 2500 Series® PLC and zenon.

The zenon supervisory system operates from a standard PC running Windows® 7 and communicates with the CTI 2500-C200 PLC over an Ethernet network. Access to CTI CPU diagnosis from supervision is just one mouse click away.

A second PC on the network uses a web browser to connect to the supervisory PC as a web client. This arrangement is an economical solution to supply multiple supervisory screens without increasing costs.

Optimized engineering

With decades of experience in automation and supervision systems ranging from Texas Instruments and SIMATIC® 505 to CTI PLC's, NAPA International France engineers are now actively involved in the development of alternatives to these old systems using CTI 2500 Series® and zenon. For this migration, they reproduced in zenon a supervision system with a look and feel as close as possible to the one the operators were familiar with. In addition, they reproduced the standard CVU10000 system views such as loop summaries, alarm groups, and tuning.

Configuration of the zenon system is faster and less expensive for the customer. The old views of the CVU10000 HMI are used as a background to design new zenon® views, and the list of variables, along with their description and PLC memory address, is extracted directly from ASCII export of the CVU10000 system. This information is then converted to xml files and imported into the zenon project. This process minimizes the time spent making the migration, but more importantly minimizes the risk of human error during engineering.

Remote maintenance and support

The Message Control feature in zenon allows sending an SMS (or email) via a modem with a SIM card to alert maintenance crew agents when an alarm or an abnormal event occurs.

The Ethernet LAN is further connected via an Internet gateway to the corporate network allowing operators to connect remotely as Web Client via a secure VPN connection over the Internet. Similarly, this allows support engineers at NAPA International France to connect remotely to quickly diagnose configuration problems, and even take over control to make a change in the zenon supervisor or in the PLC program using FasTrak WorkShop Suite programming tool.

CTI 2500 Series® and zenon together provide the most economical and lowest-risk solution for revamping CVU10000 and other discontinued supervisory systems such as TISTAR®, SIMATIC® PCS OSx or SIMATIC® PCS7/505.

Because this solution requires no replacement of the PLC system or rewriting of the existing PLC programs, it is very economical compared to alternate approaches. There is also much lower risk in the migration since the PLC process control program is untouched. And finally, there is no extended downtime required to recommission the system. In this project, downtime was limited to only a few minutes required to replace the Simatic® 505 PLC with its CTI 2500 Series® equivalent. It is even possible to continue operating the original CVU10000 supervisory system in conjunction with zenon as long as the customer wishes.

For migration projects such as this, NAPA International France can deliver turnkey services, or we can work in collaboration with your local integrator or other partners.

If you have needs for migration of obsolete control and supervisory systems, don't hesitate to contact us to discuss your requirements and see a detailed demonstration of our solutions.