

# CASE STUDY

## HOSPITAL SYSTEM ADAPTS AND EXPANDS

First published: IQNews February 2003

For a group of four hospitals in Italy, the adaptability and ease of expansion of Trend building controls have proved very important features. Control and monitoring of the sites' HVAC services are provided by an integrated, centrally managed Trend system that makes use of several types of communications network, including the hospitals' Intranet. Installed by Paolini & Balzani Installazioni Elettriche Snc (PBIE), the much-expanded system has already paid for itself through the energy and maintenance savings it has made.

The original part of the Trend system was installed in 1995 at the hospital in Osimo, which lies 30km from Ancona on the Adriatic coast. A large dispersed site, some of whose buildings date back to medieval times, it is served by the town's district heating scheme. Control of the heat exchanger station that supplies the hospital's radiator circuits was one of the first functions of the system, which then consisted of a number of IQ111 intelligent controllers.

Today the system's duties also include control and monitoring of DHW, office fan coil units and air handling plant serving the newer buildings and operating theatres, and the logging of heat meter readings. The IQ111s have been joined by IQ131s and IQ200 series controllers, all of them linked to the same local area network. The fan

coils are controlled by IQLs, which connect to a LonWorks bus.

The system's success at Osimo led to it being extended to three, small outlying hospitals at Castelfidardo, Loreto and Chiaravalle, where again it provides control and monitoring of HVAC and DHW services.

The main operator interface through which the system is managed is a PC-based Trend 962 supervisor in the maintenance department at Osimo. Through this the other hospitals can be remotely monitored, any plant alarms being automatically displayed. Regular tours of inspection to check for plant problems have thus become unnecessary and there is consequently no longer a need to have maintenance staff based at the smaller sites.

Initially, the 962 accessed the remote locations via modem. Now, following

recent integration work by PBIE, it uses the Ethernet IT network that covers all four hospitals. The supervisor and controller LANs – including the LonWorks bus – have been linked to this via standard Trend routers. Effectively the IT network acts as the 'backbone' of the Trend system, providing the latter with fast, efficient and low-cost communications. From its offices in Ancona, PBIE will be able to access the system over the Internet.

Fitted in each operating theatre is a Trend keypad/display unit, through which the medical staff can monitor and adjust the temperature. This connects to an LCD display showing temperature values in graph form.

The system has made energy and maintenance savings totaling some 30,000 euros per year, with control of Osimo's heat exchanger station having a particular impact on energy consumption. Previously, heat from the district heating scheme was being supplied to the hospital 24hrs a day. So far, PBIE has put in almost 30 IQ controllers, with a total of 600 input/output points. Supplying and installing the system has cost around 100,000 euros.

Current issue: Oct 2006

