

Healthcare under control: PC Control facilitates integrated communication in retirement homes

Customized software solution integrates building services and care documentation

In mid-2008 the Belgium-based Armonea Group commissioned a software platform for its retirement homes that controls all building services as well as the care documentation system. The software package was developed by the IT company Myrtus. Beckhoff Automation supplied the intelligent operating panels and the infrastructure components.



Over recent years Armonea, a management group for retirement facilities based in Mechelen, Belgium, acquired around 50 retirement homes and apartments through mergers and acquisitions. Each of these facilities was equipped with different call, access control and phone systems. An integrated communication system was called for and Myrtus, a Belgian IT company, was commissioned to implement the system. "The development of a dedicated care documentation system that is integrated into the intelligent building control system was regarded as the optimum solution. The tailor-made Domoreg software package takes the burden of certain documentation requirements off the nursing staff and leaves

more time for actual care of the residents. In view of our long-standing experience in the care sector this was a logical improvement," said Kris Mues, managing director of Myrtus.

Integrated communication creates transparency

The software package, which seamlessly combines building services tasks with the care documentation system, is tailored to the specific requirements of the retirement facilities. Meanwhile Domoreg has been installed in 11 of the Armonea Group homes in conjunction with around 1,000 intelligent Beckhoff Ethernet Panels in 5.7-inch (CP6607) and



Each room is equipped with a Beckhoff Panel PC with a touchscreen. Via an identification button the caregiver can log in to enter or view data.

6.5-inch (CP6619) screen sizes. The integrated building and care documentation system comprises three levels: The central server with database, the central controller in each Armonea retirement home, and the local room control in the residents' accommodation, integrated via an Ethernet Panel that includes TwinCAT software from Beckhoff.

All data entered by the nursing staff, including the administration of medication or other care services, are automatically sent to the central PC controller (a Beckhoff C6925 control cabinet PC) and stored. The system keeps a precise record of the services received by each resident and records which staff member provided them. The controller sends all data to an SQL database on the central Armonea server. In this way all controllers in all facilities are connected to the central Armonea database. This enables precise comparisons between the individual retirement homes, so that the database ultimately also serves as a management tool.

Customized Control Panel handles all control functions

Via a display in each room residents can control the lighting, shading devices and nurse calls. Nurse calls are relayed to the switchboard via the central controller. "Beckhoff offers Control Panels with an integrated PLC," said Patrick Gielis, managing director of Beckhoff Belgium, "so that we only need a compact control and operating device. For the Millegem retirement home in Ranst we adapted our standard panel to the requirements of the customer. It now has buttons to the left and right of the monitor and LEDs show the lighting status. The advantage of this control solution is that all ICT (information and communication technology) applications can run on the same device."

RFID badges for access control

The software package developed by Myrtus also deals with access control. Residents and caregivers can register via RFID badges and the user name is displayed on the monitor. Residents and caregivers are granted or denied access to certain rooms or actions depending on the access rights stored in the PC.

The control software, which currently covers certain building services segments and the care services documentation, can easily be expanded in the future. For example, by installing a motion detector and a switch at the radiator valve, the temperature setpoint in a room could be reduced during the heating season when no movement was registered in the room for a certain period. New files and software versions can conveniently be installed via remote access.

Armonea N.V. www.armonea.be

Myrtus N.V. www.myrtus.be

Beckhoff Belgium www.beckhoff.be



Patrick Gielis, managing director of Beckhoff Belgium, said: "In larger buildings, a switch on each storey is linked in turn to the central switch."