

State-of-the-art modernisation of equipment and systems: Biel Medical Centre

Thanks to a complete, interdisciplinary offer of medical services, the Biel Medical Centre is one of Switzerland's leading hospitals. It employs some 1,500 people, which makes it a leading employer in the area around the Biel lake and in the Bernese Jura. The Technical and Safety Department of the hospital is responsible for the supply of power, technical services and maintenance of some 2,500 devices in 2,350 rooms, a task equivalent to catering for the needs of a town of 1,400 inhabitants. System modernisation in the highly sensitive environment of a hospital is always a very delicate operation in terms of planning and implementation.

Full replacement and integration

Renovation of the heating centre and its links to the individual buildings involved entirely replacing the EY2400 sub-stations and LZ 10 control level – which had been in action for over 15 years – and gradually integrating all existing systems.

Removal of the 80 EY2400 sub-stations cleared the way for the EY3600 system family and novaPro Open management level and allowed linking up of the existing sub-stations and functionalities on the existing control level. Thus some 2,500 hardware data points and 3,000 data points of the EY2400 had to be connected and changed over respectively to the EY3600 and new management level.

In addition, it was necessary to automate alarm signalling to the printer in the caretaker's office, from where signals are relayed telephonically to the relevant duty technician.

novaPro Open also features ALERT software, whereby individually configured alarm signals can be sent by pager to any duty technician. If no call receipt is returned within 15 minutes, the message will be sent to the pager of the next employee.

Urgent alarms requiring immediate intervention (e.g. intrusion alarms) are automatically printed and sent to all pagers of the security company.

Staged renovation offering 100% security

The new control panels, components and field devices were installed and locked on to the novaPro Open management level outside of the hotter part of the year (start of April to August 2001). This was followed by integration of the existing LZ10 control level in stages, thereby ensuring complete continuity of all functions, and in particular of alarm signalling.

Stage 1:

The most important action in stage 1 involved analysis of the programmes, updates

and retro-operational system changes in the automatic programme control system of the LZ10, which has grown much over the years.

Stage 2:

In stage 2 the programme was converted to the novaPro Open management level, thereby enabling comprehensive documenting of functionalities.

Stage 3:

Stage 3 involved configuration of the new management level with the aim of simplifying operating guidance and monitoring of the systems. To achieve this, a number of systematic sorting loops were used to transform the addressing concept from building- to task-oriented (heating, ventilation, air-conditioning). The Technical Dept. was thus given the opportunity to cover and service those parts of the technical system under its responsibility very efficiently and effectively.

Stage 4:

In stage 4 the LZ10 and its EY2400 sub-stations were changed over to the novaPro Open system over a period of 14 days and nights. The operations ended with a complete series of function tests.

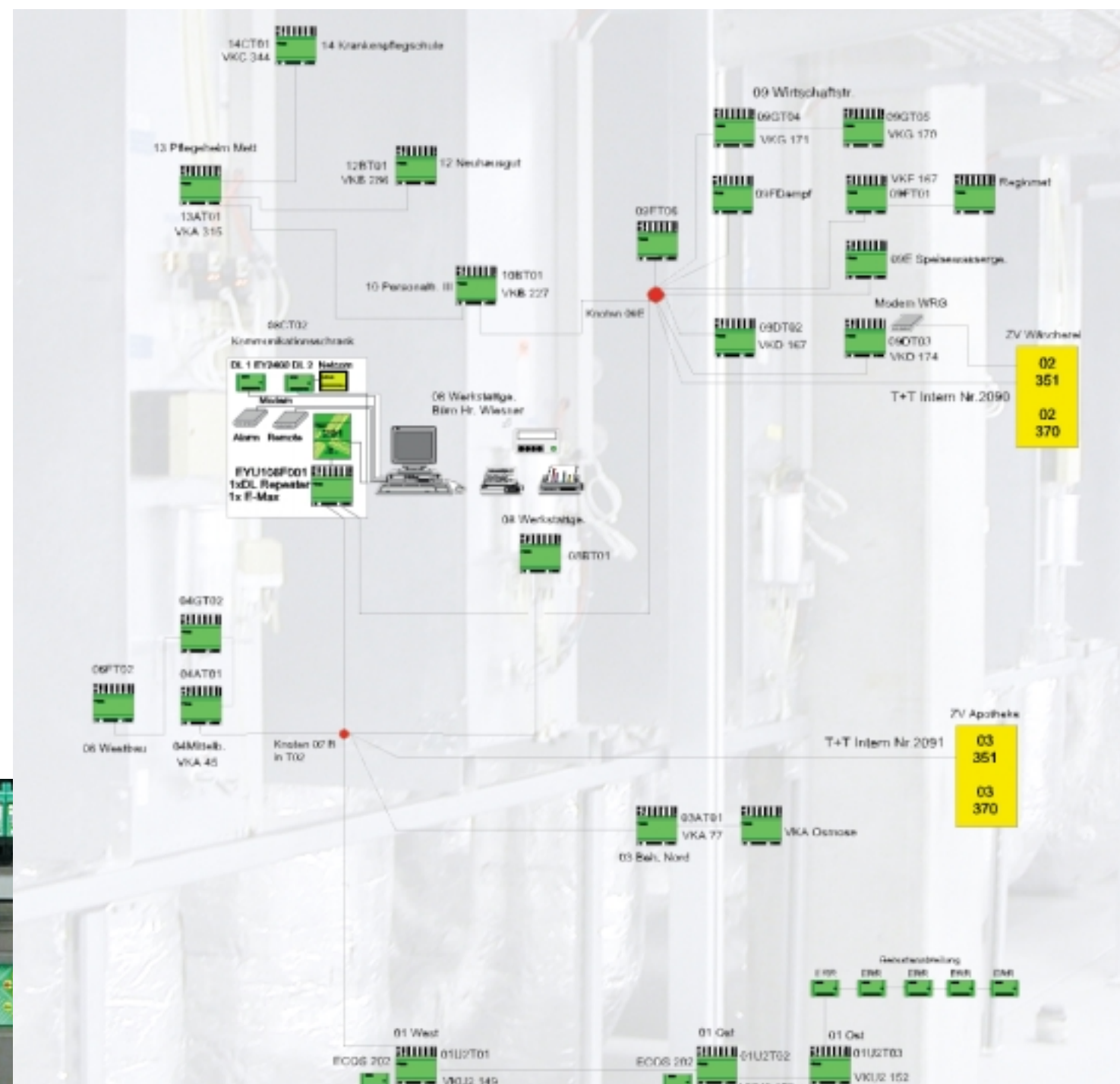
In the daytime the bus link was changed from the old to the new version, followed by testing of the connections between the new management level and existing systems.

In the night the existing control level took over its sub-stations again.

Termination:

Before its final removal, the old control level was left on site for redundancy checks for another two months.

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Multiple uses

By replacing not only the systems equipment but also the field devices, automation stations and management level, the Biel Medical Centre successfully implemented very real improvements. These include:

- Ensuring availability of all functionalities on management level and of the automation stations
- Updating of documentation
- Increased efficiency of visualisation and operating of non-subject-related equipment
- Increased efficiency and output of alarm system
- Phased renovation and integration of existing systems
- High degree of flexibility allowing for the integration of third-party equipment thanks to the open nature of the present EY3600 novaPro Open building management system.

EY3600 automation stations with local EYT240 operating station and field modules.