CASE STUDY

DATWYLER TO WIRE UP NEW DATA CENTRE FOR THE RHINELAND REGIONAL ASSOCIATION

With a view to streamlining its operations, LVR-InfoKom, the system house for the Rhineland Regional Association LVR, has expanded its principal data centre in Cologne and relocated it to a new building. The contract for the re-wiring was awarded to Datwyler who offered an economical overall solution, rapid completion and software-supported planning and documentation.

The Rhineland Regional Association LVR, which was set up in 1953 as one of two municipal associations in North Rhine Westphalia, Germany, has approximately 15,000 employees who handle projects in the Rhineland relating to care for the disabled as well as youth welfare services, psychiatry and culture. Among other things, the LVR funds housing benefits and workshop workplaces for disabled people; it sponsors more than 40 special schools, runs psychiatric clinics and day clinics and maintains six museums at eleven locations. The head office of the LVR Central Administration is in the Deutz district of Cologne, where around 2000 people are employed. LVR-InfoKom, the system house for the Regional Association, also operates its principal data centres in Cologne.

In 2009 LVR-InfoKom decided to extend one of its two data centres and to relocate it to a new building in the Chorweiler district of the city, around 15 kilometres away, which, in addition to the server room, also comprises a number of function rooms. In the new data centre all the active components were to be interconnected by means of a future-proof, top-of-rack cabling system using copper and fibre optic technology.

In the copper technology sector, therefore, tenders were invited for a class E_A system with a 10 gigabit capability. In the fibre optic sector the LVR wanted OM3 multimode cable and, for the link to the outside, OS2 singlemode cables in buffered fibre assembly, which were to be supplied complete with cable splitters and pre-assembled LCD connectors. In addition to acceptance measurements and a function test on the cabling, a system guarantee covering 20 years plus a full set of documentation were required, which also had to include the link-up of the active components. Besides this, the extended cabling project was to include the construction of the cable runs required for cable feed from above, firestop facilities between the function rooms and the housing of the cable runs in the corridors.

"Turnkey project"

The contract for this was awarded to Datwyler. "As far as we were concerned, the strength of the Datwyler tender laid not only in the highly economical solution which was put forward, in particular for the fibre optic lines, but also in a plausible plan outlining just how the very tight installation times could be adhered to", explains Michael Kemper, Director of Communication Technology at LVR-InfoKom.

Datwyler's approach to implementing the order was to apply a turnkey strategy. The installation work was based on a detailed schedule agreed by everyone involved. The beginning of July 2011 saw the completion of the raised floor and the power supply to the area. In order to enable a concurrent start to be made on relocating the server, the work on the cable runs, the installation of the racks and the cabling itself were all finalised for mid-August. This made it possible to embark on commissioning and initial partial acceptance at the beginning of September and on the first relocation phase for the data centre at the end of the month. Final acceptance took place according to plan on mid-November 2011.

Short installation times
Within just a few days the teams from Datwyler were able to lay the type 7702 copper cables, assemble them with connectors and finally measure and document the line segments, around 1000 of them with a total length of 16 kilometres. The pre-assembled FO trunk cables – a total of 210 lines, in most cases with 24 fibres each – arrived inclusive of the test reports in a number of part deliveries and were installed immediately in each case.

A further 1500 copper and fibre optic patch cables, 400 patch panels and patch bays as well as around 200 optical distribution boards form part of the system. Additional short-term requirements and changes such as occur in conjunction with many data centre projects were handled at very short notice by the project managers to the satisfaction of the customer.

Joachim Reck, Branch Manager Data Centres at Datwyler, is convinced that "without the pre-assembled FO lines it would probably have been impossible to get this project underway in such a short time". He reckons that, with a 2-way on-site connector assembly, two good, experienced splicing teams could have managed around 200 FO terminations a day, which equates to approximately four pre-assembled line segments. This means that more than 50 working days would have been required for all 210 lines – not allowing for set up times, laying the cable and acceptance measurements.

Software-supported planning and documentation
For project planning purposes, including determining the length of the FO lines required, Datwyler used its own corporate software solution, "Panorama CablingView". Right from the planning phase this replaced the tabular calculations program formerly used at LVR-InfoKom; using this to map the rack connections would inevitably have involved increased expenditure. By contrast, with the new software, the cabling, including all the linked active components, could be documented quickly, clearly and in a traceable format.

The two LVR-InfoKom data centres in Cologne-Deutz and Chorweiler were interconnected using several kilometres of long, singlemode fibre optic line segments. These are, for reasons of safety, being laid in redundant mode along separate routes via two of the bridges over the Rhine.

Everyone at LVR-InfoKom is very satisfied with the project. The ambitious timetable has been adhered to, commissioning has gone smoothly and the two data centre locations have been operating since relocation without any complaints.

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