CASE STUDY

FUTURE-PROOF STRUCTURED PREMISES CABLING FOR FEDERAL OFFICE FOR CIVIL PROTECTION IN BERN

The faulty communications network at the Federal Office for Civil Protection in Bern was in need of some premature refurbishment – and this needed to happen against the background of 'Business As Usual'. By way of an 'emergency solution', a class E_A System from Datwyler was installed, offering the operator a secure long-term investment.

In 2017 the building complex at the Federal Office for Civil Protection in Bern is scheduled to undergo a general refurbishment. Forming part of this refurbishment will be the installation of a new communications cabling system.

However, rewiring could not wait until 2017. The introduction of Windows Vista made it necessary to bring the installation forward so as to prevent any disturbances to routine operations that might otherwise be anticipated. This meant bringing the communications network forward to the period between December 2010 and May 2011. The project comprised the extension of the existing network in the buildings at Monbijoustrasse 47-51 as necessary and a comprehensive programme of replacements at the buildings situated at 51A and at Giessereiweg 4-6. What made these installations special was the fact that the work was carried out while business was proceeding normally.

Powerful Class E_A system

The faulty infrastructure, in parallel with the existing cabling, was to be replaced by a modern, powerful Class E_A system serving as a basis for future 10 gigabit Ethernet transmissions and offering long-term investment protection. Based on a design by Robert Thommen, Telematics Management Consultancy, Category 7_A copper data cables and Category 6_A RJ45 keystone connection technology were specified in the office area. For the backbone cabling, the requirement was for fibre optic (FO) cables with category OM3 fibres.

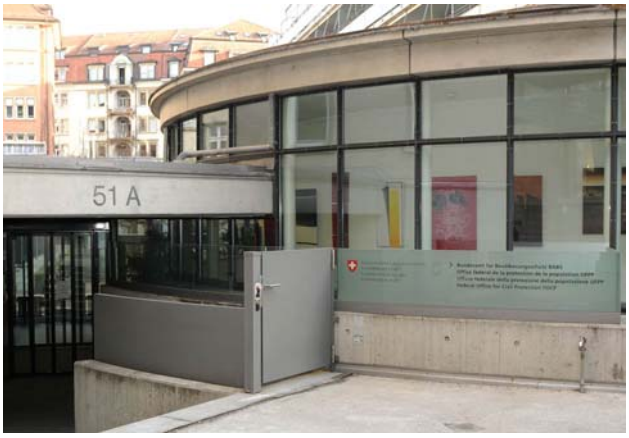
The respective order from the Federal Office for Buildings and Logistics, based on a solution devised by Datwyler, went to ARGE Elektro Burkhalter AG and Agel AG.

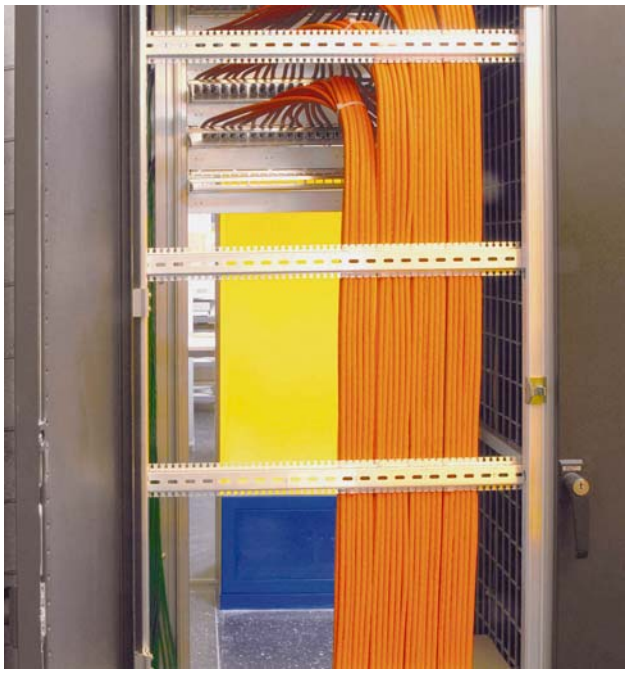
On each storey the fitters installed the AWG22 CU 7150 cables, terminating in category 6_A RJ45 keystone modules in 19" patch panels. The backbone solution consists of Datwyler's FO Outdoor cables with G50/125µm OM3 fibres and ready-to-splice FO patch panels. The new cabling was measured in accordance with Class E_A to ISO/IEC.

In stages and to plan

Meanwhile, in the office area, ARGE's installation and commissioning activities were proceeding floor by floor. In so doing, the installation teams came up against the Federal Office´s requirement to minimise the amount of disruption to the working practices of its employees. One of the advantages here was the fact that the new RJ45 modules could be installed relatively quickly on site. In addition, the fitters were able to accommodate the copper system in the existing distributor racks as planned – and to achieve high port densities. It also proved possible to continue using the existing FO cabling (62.5/125µm OM1) between the floor and the building distributors to a major extent.

"This project was one of the first in Switzerland to be implemented using the new Keystone Cat.6_A modules", explained Markus Gautschi, the Project Manager responsible for Telematics at the Federal Office. In his experience: "Datwyler's solution





offers good value for money, good quality material which can be quickly connected to the supply as well as guaranteeing excellent measured values. This has meant that installation and commissioning have been a very straightforward and structured operation, wholly in accordance with the customer's time constraints". A further and not insignificant contributory factor was the fact that the network department at Heiniger Kabel AG has always been 'on the ball' and ensured punctual deliveries.

Robust, expandable network

Today, the communications cabling provides a robust foundation for all workplace data applications up to 10 gigabits. Thanks to the AWG22 cables, it is also possible to connect all the equipment supplied to the cable system using Power-over-Ethernet capability.

The network is scheduled to undergo expansion by 2017 at the latest. It is then that the Federal Office for Civil Protection is planning the integration of the Voice-over-IP telephones together with all applications up to 10 gigabit Ethernet.

(March 2012)

