CASE STUDY

THE LOWER VALAIS GETS A "DATA SUPERHIGHWAY"

L'Energie de Sion-Region SA, the biggest regional energy supplier in the Swiss canton of Valais, is constructing a Fiber-to-the-Home network with fibre optic racks from Datwyler.

L'Energie de Sion-Region SA (ESR) employs a workforce of over 200 and is the largest regional energy utility in the Swiss canton of Valais. In addition to supplying and distributing electric power the company, which was founded in 1996 and counts numerous Valaisian municipalities among its shareholders, administers other companies in the water, gas and cable network sectors. Not least, ESR also provides its customers with multimedia services, including over 100 television channels, interactive TV, broadband Internet and telephony.

Until recently customers were only able to receive multimedia services via coaxial cable. In 2008, after a careful assessment of the cable television network and mindful of the need to cater for future technology, ESR decided to develop a Fibre-to-the-Home fibre optic network. The new FTTH network has been designed to provide companies and private individuals in 20 municipalities with high-performance multimedia services – of better quality and augmented by additional offerings such as high resolution television and Video on Demand.

It proved possible to incorporate part of the existing network in the construction of the Valaisian "data superhighway". Since 2000 Datwyler has already supplied numerous different types of fibre optic cable for the fibre optic backbone. Thanks to the current upgrades half the city of Sion, the capital of the canton of Valais, and the neighbouring municipalities are already benefitting from a FTTH backbone network.

System with high interconnection density

Construction of the FTTH network's central fibre optic distribution points, known in the trade as Points of Presence, or PoPs for short, began in the autumn of 2011. "The most difficult part of the project was establishing the number of PoPs required for the network", says Jérôme Luyet, in charge of the multimedia cable network and FTTH at ESR. "As soon as this decision was taken we had to find the best answer to equipping the PoPs. ESR opted for a Datwyler system with high port density. This is compact, flexible, and of a size which fits all the available sites. It is, moreover, an integrated system which is suitable for passive and active components and permits a huge number of possible connections in one single rack – and all at a reasonable price".

Each of these racks – also called optical distribution frames (ODFs) – allows up to 2880 fibre optics in 19-inch drawers to be connected to each of two rack units. Up to 144 fibre optics on LC/APC couplers can be lined up in one drawer. The passive ODFs also have a sophisticated patch cable management system and bend radius control devices for optimum fibre management.

Plenty of spare capacity for future expansion

By the end of May 2012 the first racks had been installed at the various PoPs, and connection of the fibre optic cables could begin, both in Sion itself and the various neighbouring municipalities. The first fully installed and equipped fibre optic distribution point, beautifully named "Heart of the City", is in Sion city centre. The distribution point houses four large passive racks, currently with around 6,000 fibre optic connections for city centre subscribers. In addition it provides space for approximately 12,000 further connections

connections, which in future – as subscribers numbers grow – can be brought into service as required without the need to add additional ODFs. Thousands of connections have also already been completed in the racks for active components, and these too provide generous spare capacity for future network expansion.

At ESR David Follonier is in charge of constructing and equipping the PoPs in Sion and some of the surrounding localities. He organises materials procurement and the acceptance of incoming goods, and coordinates the work of the various parties involved. The installations themselves are effected by ESR technicians. They construct the ODFs,

set up the cable ducts and insert the many different distribution and backbone cables. The PoPs have secured energy supplies. A ventilation and air conditioning system was also installed to dissipate the heat of the active components. ESR tasked a specialist company with the assembly and splicing of the fibre optic cables.

ESR is pressing ahead rapidly with the construction of PoPs in the various neighbouring localities. Installation of the ODFs and connection of the fibre optic cables is scheduled for completion by 2015.

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