

CASE STUDY

FIBRE-TO-THE-HOME: EWL – IMPLEMENTING TOMORROW’S TECHNOLOGY TODAY IN LUCERNE

ewl and Swisscom have embarked on a project to construct a comprehensive Fibre-to-the-Home network by 2014. The special cables and wall outlets that are required for the installation of optical fibres in homes all come from Datwyler.

Over the past year ewl (which stands for ‘energy water lucerne’) has been working jointly with Swisscom on a project to establish a Fibre-to-the-Home network (FTTH) in the coverage area of ewl. In so doing and in order to streamline the expenditure, time and costs entailed in the construction and operation of the fibre optic network, ewl and Swisscom are making use of the existing cable infrastructures of both companies. Swisscom is responsible for laying the cables between the districts within the city, whilst ewl looks after the last mile distribution of the fibre optic cables to the individual apartments and properties.

Property or storey owners are connected free of charge to the new high-speed network. As far as private users are concerned, among the benefits of having the FTTH connections in their apartments will be high resolution TV in HD quality, time-shifted TV and rapid Internet surfing currently at speeds of up to 100 megabits a second. The FTTH network is also open. This means that the customers have a free choice of the services offered by the different service providers - Pluz, Mygate and others.

For this forward-looking project, ewl is using special fibre optic cables and wall outlets from Datwyler in the buildings. By the summer of 2011 the Altdorf company had already delivered more than 500 kilometres of FTTH In-house cable and around 12,000 outlets.

High material requirements

For the in-house wiring ewl decided to use as thin an FTTH cable as possible with a flame-retardant yellow sleeve and four fixed fibres with a maximum diameter of 0.6 mm each. In terms of its design, the FTTH wall outlet needed to correspond to the existing installations, was to be as flat as possible and had to be approved by Swisscom. In addition to a window for the label, dust protection caps and connectors with laser protection, pre-fabricated pigtailed, designed for shrink and crimp splice protection as well as an integrated, generously proportioned fiber tray were called for. In addition, the

wall outlet was to ensure the easiest possible handling during installation.

A decision was made in favour of Datwyler because the long-standing supplier to ewl was able to provide the right FTTH products at the required quality and price. Another decisive factor was the company's extensive optical fibre know-how, experience gained from other FTTH projects and the fact that the Altdorf team had the necessary flexibility and resources available to deliver the required quantity at the desired point in time.

Reliable partners

In order to ensure that everything went smoothly, ewl put the whole of the logistics operation in the hands of Kablan AG, a company based in Ostermundigen. Working with this specialised distribution and logistics partner means that ewl is at the same time able to achieve savings as regards the warehousing and availability of the required material.

The products were installed by ewl's installation partners Cablex AG and Network 41 AG, sourcing the required material directly from Kablan. The installers splice the fibre optic cables,



fed into the building together with the fibres of the respective FTTH in-house cable, each in a central housing, the Building Entry Point (BEP). The in-house cables are conveyed into the individual apartments via riser ducts. There the installers splice two of the four fibres (type G.657.A) in the wall outlet on to the pre-fabricated pigtails and insert these into the coupling (LC/APC Duplex). The tenants and the owners can then proceed with directly connecting the service providers' equipment.

The specific design of the Datwyler cables and outlets means that the installation companies can carry out rapid installation. For example, it is comparatively easy to lay the FTTH in-house cable, with an external diameter of only 2.8 millimetres, in the riser ducts that are in most cases already occupied by other cables.

Thanks to excellent collaboration between all the parties involved, ewl has succeeded in making around 12,000 FTTH connections in the districts of Tribtschen and Maihof. From now until 2012 the works will be concentrated on the districts of Würzenbach and Hirschengraben. By the end of 2014 all 42,500 users should be connected to the FTTH network.

(September 2011)