A Swiss cable operator builds a FTTH field trial

Broadband data originally considered by most cable operators to be merely a side business is becoming a really important source of income today. As there is more on the way in the form of new services and technologies, operators realise that they must develop the broadband access data in the coming years.

SIERRE ENERGIE

Background
In summer 2003 Sierre Energie, (SIESA) a medium-sized Swiss cable operator, decided to deploy an FTTH field trial with the aim to assess the techno-economic feasibility, demonstrate the viability of FTTH and develop strategies for flexible future network upgrading.

Challenge
SIESA predicted that broadband data to the home will evolve towards 10Mbs. As a shared medium system, DOCSIS technology is not really designed to support these high speeds.
The key question asked was: "What alternative access will enable a low-risk cost effective migration toward the IP-future and in parallel can deliver all legacy CATV services"? The operator opted for an FTTH - solution from EMC SA.

Basic requirements
The main objective of the project was to install a network solution supporting conventional broadcast CATV, DOCSIS services and simultaneously be able to support true high speed broadband.
The network has been designed to provide 48 direct fiber connections in a multi-tenant house environment. Star architecture was also required. A prerequisite for the installation was to reuse the existing canalisation and internal tubing system for deploying the fibers.

The Solution
A site overview and preliminary investigation were arranged. SIESA had some relevant suggestions to be considered. After integrating the specific customer needs our *SUBONET®* network basic solution was mutually agreed upon. The system consists simply of an active optical node mounted in a local cabinet and a multimedia outlet placed in the various flats. The network section between the optical node and the subscriber's outlet is purely passive. This enables a fast deployment of the network and at same time provides a higher reliability compared to coax.The segment of the network between the optical node and the HE is over existing fiber. Deployment of additional fiber or CATV equipment at the HE was not necessary.
For the installation an Air Blowing System was used from each flat to the optical node. A pre-assembled patch panel handles the fibers and provides the connection to Ethernet switched system.

The Products
The Optical Node NHC-0000 platform provides CATV services in both directions. It distributes the downstream signals to the final users and simultaneously serves as a concentrator for the upstream signals.
On the subscriber side the Multimedia outlet NHP-0000 performs the signal conversion of CATV- and DOCSIS-based services. Although today's services are cable services, the network infrastructure is designed to provide an evolutionary path that ensures migration toward unified IP-communication services.

Results
The EMC FTTH network represents something completely new in the Swiss network market. With this design approach we have been able to offer our customer an open system for the gradual rollout of new services and technologies while supporting legacy technologies.
The realisation of the field trial enables the company to develop a great choice of products, in order to make deployment of FTTH-networks easy for the customers.
For further information, please feel free to contact EMC at: **sales@emc-web.com**