

Sasbachwalden

FTTH CASE STUDY

Installation of fibre-optic cable on land, in water and in air

This sprawling rural community in the Black Forest was selected as a model broadband project and now owns the first FTTB network funded by the state of Baden-Württemberg.

The citizens of Sasbachwalden have been generally unhappy with the lack of broadband in their community. The problem was particularly acute for a conference hotel in the community. Upon request, Deutsche Telekom informed the community of Sasbachwalden that an extension with DSL would require a guarantee in the amount of €500 000 for a minimum of 800 new subscribers. This offer was refused. Afterwards the community started negotiations with suppliers of wireless solutions, which were not feasible because of the difficult topography a complete solution could only be realised with enormous effort and expenditure. In addition, the new installation would require fibre to be installed over a minimum distance of 3km.

General Information

Location:

Community of Sasbachwalden (2500 inhabitants and 177 companies spread over 13 km²)

Network/infrastructure owner:

Community of Sasbachwalden

Network status:

Operational

Why not deploy the same fibre into every single home? After consulting with the clearing office "Neue Medien im Ländlichen Raum" (new media in rural areas), which gives advice to communities in Baden-Württemberg about broadband deployment, it was decided that a feasibility study should be carried out to clarify the technical and financial foundations for creating an open and neutral fibre infrastructure for Sasbachwalden and connecting it to existing fibre networks.

Business Case

Investment:

~€3.6 million. Public funding was granted in the amount of €1.5 million. The financial resources came from the program "Developing the rural area" (ELR) of the state of Baden-Württemberg and the economy package II of the German government

Business model:

telsakom rents the passive infrastructure exclusively from the community Sasbachwalden, operates the active network and provides services (in future also TV services) to business and private customers.



Following a public tender, an engineering firm was assigned to carry out the study. Half of the costs for this feasibility study in the amount of €58 000 were eligible for public funding due to the model character of the project. The target of the pilot project was to gather new insights about the development of broadband infrastructure in rural areas. Within the framework of this study, a survey of private and business customers was carried out. Private users indicated that they would be willing to pay up to €60 per month for services. All businesses were willing to pay a one-time installation fee. Furthermore, 80 % of the companies could also make a financial contribution to the project.

Deployment

Size of network:

44 km of network with 165 km of optical fibre. The fibre is available for everybody – 1 280 households in 578 buildings distributed over 44 streets. On January 18th 2012, 191 subscribers were connected by telsakom

Technology/architecture:

FTTH in a GPON configuration

Third party access:

Service layer (layer 3)

The result of the study, which was presented in October 2008, confirmed that the extension of the street cabinets with DSL could not meet all requirements of the community. However, the concept of "Fibre to the building" (FTTB) did match the requirements of the community Sasbachwalden, both now and in the future:



- The main target for equal treatment of all connected subscribers (private and business) is met without problems.
- Two more requirements, such as a local LAN-LAN connection and the distribution of TV signals, can also be achieved.
- FTTB represents a sustainable solution to the problem to supply broadband
- Fast Internet access is seen as an important locational factor for businesses and tourism.

In October 2009 the construction phase was started. The responsible operating company for the infrastructure was founded in January 2010 by the community. The fibre cables for the network of approx. 44 km in length have been laid in conventional trenches, sewers and using overhead lines. As well as the conventional construction methods for deploying fibre-optic cables, alternative methods have been used: mole ploughing, vibration ploughing, aerial poles and microtrenching. The innovative network concept “earth-water-air” has been realised as follows: 22 km with conventional civil engineering, 4 km in sewers, 6 km over aerial cables, 8 km by deploying new ducts or using existing ones, and 3.5 km by private construction.

End-user Services

Business customers:

under preparation (fees per month before VAT):

business €149,00

Internet flat rate with 50 Mbps download and 25 Mbps upload, attractive phone tariffs for commercial users, if required ISDN interfaces

business plus €199,00

Internet flat rate with 70 Mbps download and 35 Mbps upload, telephony same as saschwalde business

Private customers (fees per month incl.VAT, based on 24-month contract, one time activation € 99.90):

saschwalde comfort € 49,90

Telephone Flatrate for two numbers and Internet with 50 Mbps download und 2 Mbps upload

saschwalde comfort plus € 64,90

Telefon Flatrate for two numbers and Internet with 75 Mbps download und 3 Mbps upload

saschwalde ferien € 49,90

only for owners of a second home, can be activated monthly, per activation additionally € 14,90

TV services under preparation, testing in progress.

Valentin Doll, Mayor of Sasbachwalden said:

“This fibre project is an important step to prepare our community and holiday region for the future. A long-held dream is now fulfilled. We recently lost a number of businesses due to our



poor Internet access. Those companies often move into the neighbouring region of Alsace on the other side of the river Rhine where fast Internet has been available for some time now. Broadband has also become an important locational factor for the tourism industry: it is not possible to market yourself as a provider of seminars or conventions without good access to the Internet.”

Written in December 2011

Photos by community Sasbachwalden and seim & partner
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