CASE STUDY

NÜRTINGEN GETS INFORMATION SUPERHIGHWAY

Over the next few years Nürtingen's Municipal Utilities, Stadtwerke Nürtingen GmbH, will continue to expand the city's fibre optic network for private and business customers with its NT-net Service Division. The company is relying on Datwyler products and services to connect its NT-net customers.

The city of Nürtingen, with a population of just under 40,000, is an important business and service centre in the Stuttgart region. In order to lay the technical foundations for new communications services in the urban area and surrounding region, in 2010 Stadtwerke Nürtingen GmbH created the NT-net Broadband Supply Division, which will set up an extensive optic fibre-based access network (AN) over the next few years. This new "information superhighway" provides commercial and private customers with high bandwidth access of currently up to 100 megabits per second, allowing superfast Internet and high-definition television among other things. At the same time it forms the basis for future offerings, for example the connection of intelligent energy consumption meters (smart metering).

Broadband expansion in Nürtingen is a real pioneering achievement, as in Germany at the time it was still rare to find municipal utilities of small to medium-sized towns planning and financing the construction of their optic fibre network from their own resources, i.e. without public aid.

Gradual expansion

Since October 2011 both Fiber-to-the-Curb (FTTC) and Fiber-to-the-Home (FTTH) networks have been created in Nürtingen. This was done first of all by accessing street distribution cabinets with fibre optic cables in three sub-municipalities. Here multifunction devices provide connections to the existing copper cables for FTTC. For FTTH, cable distribution frames were installed in the street cabinets and additional fibre optic connections into the buildings created at what is known as network level 3.

Image 1: Blowing fibre optic cables into ducts.

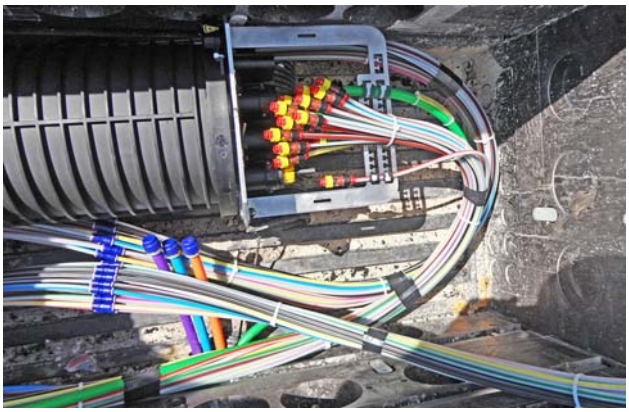

Image 2: Fibre optic splice closure in a shaft.

Nürtingen's Municipal Utilities found Datwyler to be an expert and reliable product and installation partner for their broadband expansion, and this successful collaboration has proved its worth in many individual projects since October 2011. Initially private households and small businesses in the district of Reudern were able to surf and telephone using cutting-edge technology from autumn 2012 onwards. Since early 2014, the districts of Raidwangen and Neckarhausen have also been benefitting from the services provided.

Over 50 sub-projects completed

Datwyler is expanding the fibre optic network in close cooperation with trained, certified installation partners. The first orders, executed in 2011, included connection of the Municipal Utilities control room, of IT company BÜROTEX metadok and green roofing company ZinCo Dachbegrünung. These projects focussed primarily on creating the requisite fibre optic splice closures, splicing and measurement work and drawing up the relevant documentation.

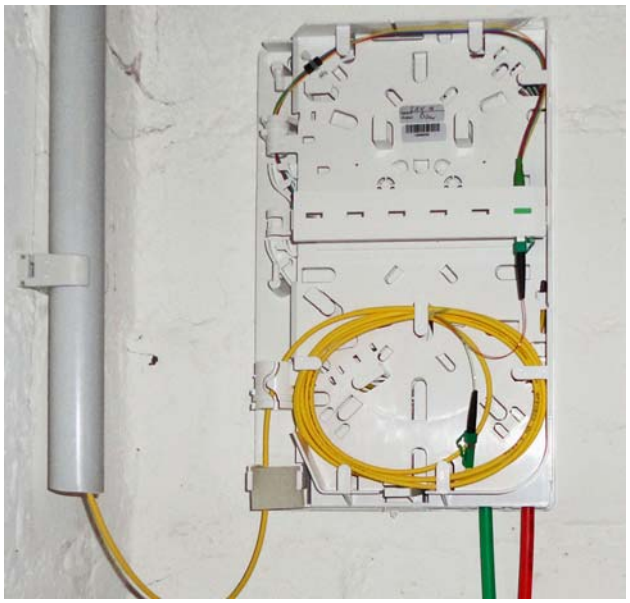

Image 3: A wall-mounted distributor in the basement serves as the BEP.

Since then – in line with the Municipal Utilities' requirements – Datwyler has been responsible for the turnkey implementation of around 50 other projects. In addition to the work described above these included blowing, installing and connecting various types of fibre optic cable in shafts and buildings both inside and outside urban areas.

By late 2013 approximately 17 kilometres of cable had been installed, around six kilometres of which were used to link the central distribution points (Point-of-presence, POP) to street cabinets, with about eleven kilometres of cable entering the buildings. The connection of private households was realised for the most part with 12-fibre cable, that of business customers with Datwyler's 24-fibre Micro and S-Micro cable.

In FTTH projects the fibre optic cables are normally terminated in wall-mounted cabinets which are generally located in the basements of buildings. As a rule an optical/electrical media converter is installed at the building entry point (BEP). Depending on the contract, users can connect their own home network and telephone or telephone system here. Some of the cables, however, were also routed into the network cabinets of larger companies and connected directly to type OV-A optical distribution panels.

In recent months 30 commercial and over 200 private customers have been connected to the new "information superhighway". To date all the installations and respective start-ups have proceeded without a hitch, so the Nürtingen's Municipal Utilities are very happy with Datwyler's products and services – and will also make increasing use of them during subsequent extensions of their network.

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