

## M-net and SWM deploy one of the largest fibre optic networks in Germany

Stadtwerke München and provider M-net aim to connect half of the Munich households to fibre optic networks by 2013.

In October 2007, both M-net Telekommunikations GmbH and Stadtwerke München GmbH (SWM), together with Stadtwerke Augsburg Energie GmbH, Allgäuer Überlandwerk GmbH, N-ERGIE AG, infra fürth GmbH and Erlanger Stadtwerke AG, all shareholders of M-net – started the network deployment in Munich with a ground-breaking ceremony. With a fibre optic network as next generation access technology, about half of all Munich's households should progressively get high-speed Internet access with 100 Mbps. The pilot project planning was done together with the Cologne-based city carrier, NetCologne, with whom a close cooperation exists since many years.

### General Information

**Infrastructure/network owner:**  
SWM Services GmbH

**Location:**  
Municipal districts of Munich

**Network status:**  
Operational

During the development phase, 63 buildings with a total of 567 apartments in the Neuhausen district, owned by the real estate company GEWOFA, were connected. The pilot project was realised with active Ethernet technology; for the actual roll-out GPON is used.

The go-ahead for commercial roll-out was given in March 2009. During the first roll-out period, residential buildings in the districts Au and Neuhausen were connected, and the green light for the investment of several €100 million for an intensive deployment of a fibre optic network in Munich was given. Further development included buildings in Westend, resulting in some 3,000 connected buildings by the end of 2009. Besides answering the increasing demand for higher bandwidths, one of M-net's objectives with this deployment is to substitute the TAL-connections (subscriber access lines provided by Deutsche Telekom) with their own fibre connections. In future, this should reduce significantly the TAL rental fee for the last mile, which amounted to €10.50 per subscriber connection. In 2009, M-net paid approximately €28 million for renting these TAL-connections.

Getting fibre-based Internet access with speeds of 100 Mbps only requires the installation of a hardware box in the basement next to Deutsche Telekom's old distribution point. For the distance between the fibre termination in the basement and the apartments, M-net uses the existing copper infrastructure. The existing in-house cabling is thus further used, reducing costs and allowing for a quick installation of new multimedia connections.



In November 2011, SWM had finished about 50% of the civil engineering required to directly connect buildings to fibre, in view of strengthening the economic position of Munich, amongst other objectives. Next to the already covered districts, the historic old city around the world-famous Hofbräuhaus and Viktualienmarkt was also tackled. Fibre optic connections are available now in the following city districts: Neuhausen, Au, Schwanthalerhöhe, Ramersdorf-Nord, Obergiesing-Süd, Schlachthof, Schwabing-West, in the area of Arcisstraße, the area east of Landshuter Allee,

### Deployment

**Size of network:**

By 2013, 350,000 households will be passed, this represents approximately 50% of all Munich households.

**Technology/architecture:**

FTTH and FTTB in a GPON configuration.

**Third party access:**

Layer 2 bit stream access will be offered from 2012



Nymphenburg and Isarvorstadt. During the next planned deployment works large areas of Schwabing Mitte and Schwabing Süd, Lehel, Haidhausen, Ramersdorf Süd, Obergiesing Nord, Sendling Süd und Neuhausen will be connected to the future-proof high-speed network. Currently SWM has completed about 50% of the necessary civil engineering works required to directly connect buildings with fibre.

Deploying fibre infrastructure in the historic old city around Hofbräuhaus and Viktualienmarkt raised some specific considerations regarding tourism and gastronomy.

## Business Case

### Investment:

Approximately €250 million together with Stadtwerke München. State aid and public funding have not been claimed.

### Business model:

M-net rents the passive infrastructure from SWM Versorgungs GmbH, operates the active network and provides services (including TV-services) to business and private customers.

“With these fibre broadband connections we fulfil a basic requirement for infrastructure of the digital future” explains Jens Prautzsch, spokesperson of the M-net management. “This solution provides the user with access to modern multimedia applications and offers much higher quality and performance compared with other Internet access possibilities.”

Through this high-performance fibre architecture M-net can supply high-quality TV-services with a wide range of national and international TV channels to their customers. The standard selection offers almost 50 analog, approximately 100 digital and many HDTV channels.

Furthermore M-net offers a large number of international packages.



After realising successfully the extension of broadband in city areas inside the “Mittlerer Ring”, the step-by-step deployment of fibre is planned also in city districts outside of the “Mittlerer Ring”.

## End-user Services

### Business customers (monthly fee before VAT):

Fibre-SDSL with symmetrical bandwidth

- Glasfaser-SDSLflat 5000 (Fibre-SDSLflat): 5 Mbps, € 149,00 (Fibre-SDSLflat)
- Glasfaser-SDSLflat 10000 (Fibre-SDSLflat): 10 Mbps, € 349,00
- Glasfaser-SDSLflat 25000 (Fibre SDSLflat): 25 Mbps, € 549,00

### Private customers (monthly fee incl.VAT, based on 24 month contract):

Fibre-DSL with different speeds

- Telephone-Flat €24.90
- Internet-Flat €29.90 up to 25 Mbps
- Double-Flat €34.90 up to 25 Mbps
- High-speed upgrade €9.90 up to 50 Mbps and €19.90 up to 100 Mbps

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Photos provided by M-net

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