

## EXPERT COMMENTARY

# FTTH IN-HOUSE CABLING: DEPENDING ON BUILDING AND INFRASTRUCTURE



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From experience gained in numerous FTTx projects we know that there are many different ways of tackling the cabling between the Building Entry Point (BEP) and a subscriber's home. The chosen solution will depend primarily on the architecture of the optical access network, the size and type of building – detached or multiple dwelling, apartment block or business establishment – as well as on the existing pipes and cables.

In Germany, in multiple dwellings and apartment blocks the conversion from fibre optic to copper generally takes place in the basement. In sizeable buildings there is also the option of installing floor distributors to site the media converters (Optical Network Terminator, ONT) and running up to these with fibre optics.

From there Category 7 data cables into homes ensure high bandwidths and speeds of between 1 and 10 Gbit/s. Quite often in-house transmission is also effected via the existing telephone system or coaxial cable network. These, however, are “transitional technologies”, which as a rule provide a maximum of 100 Mbit/s.

Some German FTTx suppliers therefore use hybrid cables which combine a Category 7 cable with two single mode fibres. This allows them to temporarily incorporate existing networks and migrate to high-speed offerings more easily in the future.

Fibre optics which go right into apartments or detached houses and provide users with virtually unlimited bandwidths are still the exception in this country. In FTTH projects we and our installation partners are committed to innovative solutions which avoid expensive individual operations or even eliminate them altogether, for example extremely compact cables with bend-optimised fibres and, more especially, prefabricated products. Practically any installer can fit and connect the latter quickly, neatly and correctly. Material and installation costs per subscriber are very easy to calculate when prefabricated FTTH installation kits are used.