

# Fiber Access Extension Technology Combats Germany's Fiber Rollout Setback

Existing coaxial cable infrastructure offers an alternative approach to deliver multi-gigabit speeds when fiber can't be deployed because of construction limitations, the availability of ducts, building accessibility or financial barriers.

By Helge Tiainen / InCoax

Recently, key fiber builders in Germany pulled the plug and quashed their fiber rollout plans for bringing ultrafast connectivity to underserved regional municipalities. Since the end of 2020, network operators have built approximately 4.4 million new fiber connections in Germany, highlighting the continued investment. Service providers with funding from a consortium of creditors targeted rural and urban locations.

The federal Digital Strategy and the Gigabit Strategy for Germany from 2022 aim to deliver nationwide fiber optic internet and the latest mobile communications technologies in all areas by 2030. As a first step, Germany intends to increase the supply of fiber connections to 50 percent of all households and companies – urban and rural – by the end of 2025. Blockages to achieving this milestone include labor shortages, rising inflation rates and increasing rollout costs in the country. Currently, German fiber coverage stands at only 26 percent, making it an uphill task. German broadband operators must now swiftly consider utilizing cost-effective alternatives to pulling new fiber cables.

## WHAT'S HAPPENING WITH GERMANY'S FIBER VENTURE?

The COVID-19 pandemic highlighted the necessity for a fiber rollout in Germany when VDSL networks struggled under the weight of demand for connectivity. Investments in digital infrastructure in 2021 reached record numbers and increased to €11 billion, predominantly driven by alternative network operators (altnets) making up 59 percent of the total investment. However, much of Germany's infrastructure is underground, making replacing or upgrading networks logistically complex and costly.

Fiber builders suffered the pain points of the obstacles in front of them and subsequently withdrew from their fiber rollout plans. Most notably, Liberty Networks Germany, a joint venture between Liberty Global and InfraVia Capital Partners, stopped its fiber network deployment across

Germany and filed for bankruptcy. The company, founded in 2021, started its fiber network rollout under the helloFiber brand in the first German regions last year. This must be a worrying sign for Europe's plethora of fiber builders. Rising inflation and interest rates, a shortage of construction capacity, and a lack of access to external capital continue to affect rollout plans.

## ENABLING MDU BROADBAND

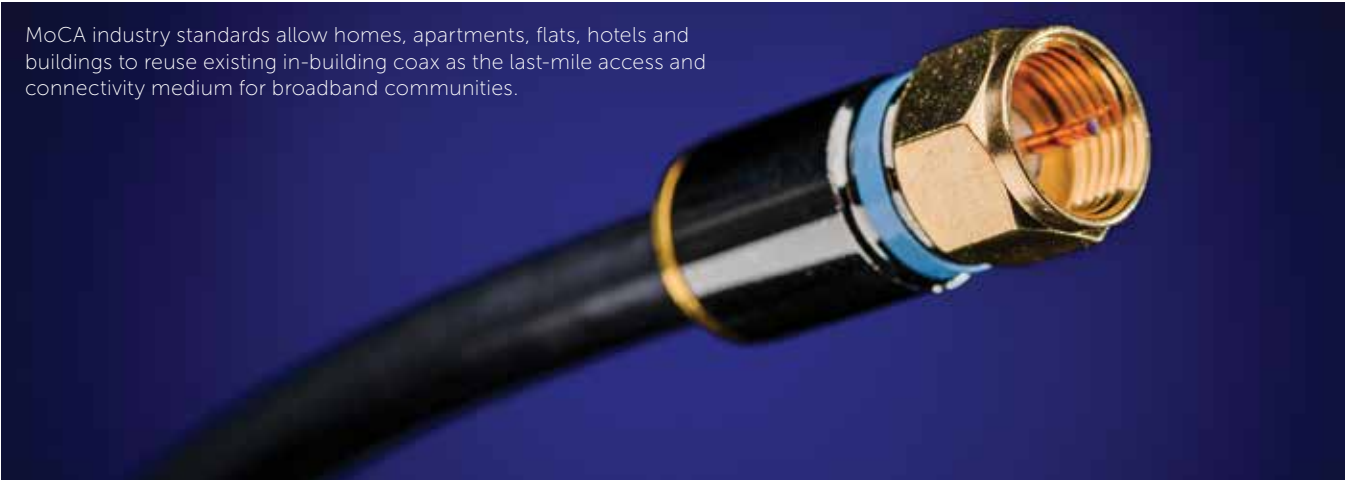
A majority (56 percent) of Germans live in flats, typically underserved in terms of broadband connectivity, especially in the many smaller cities of the country. For operators tasked with upgrading tenants' existing broadband connections, other challenges are prevalent, such as wiring infrastructure changes and contract requirements, including minimum take-up rates.

Installing fiber to every flat can be expensive, labor-intensive and disruptive to customers. Historically, fiber deployments in multiple-dwelling units (MDUs) can be as much as 40 percent of fiber-to-the-building (FTTB) deployment costs. Harnessing existing coaxial cabling infrastructure saves time and is cheaper for operators looking to deliver fiber-like connectivity.

The installation of new cable routing in an MDU is incredibly complex: The process must overcome many barriers. Naturally, MDUs involve more people, and gaining approval from tenants and building owners can take time, especially if anyone has concerns. Only once this formal approval has been confirmed can workers begin to install brand-new cabling and undertake work in multiple units from the ground floor of the building upward.

This extensive work can present additional hurdles, with significant disruption to tenants being a possibility, and building owners must also be mindful of cosmetic damage and noise complaints. Connectivity installations of an MDU are large-scale projects, meaning the potential costs of reforming the network are extensive. Because of its bandwidth

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capacity, an all-fiber solution can provide residents with faster, more attractive connectivity. However, installing full fiber connectivity in an MDU is considerably more complicated than establishing it in single-family units (SFUs) and other homes. This is because in many MDUs, fiber cabling needs to be present or prepared for, creating further expenses.

### AN ALTERNATIVE APPROACH

Operators can opt to use fiber access extension technology for a cost-effective and less complex upgrade of broadband because it utilizes existing in-house coax cable infrastructure. The technology provides multi-gigabit broadband services, positioning it as a clear frontrunner when optical fiber cannot be deployed because of construction limitations, a lack of ducts, building accessibility, and, most important, financial reasons.

InCoax's MoCA Access 2.5-based fiber-access extension technology provides tenants with the necessary symmetrical gigabit network connectivity. MoCA is a global, member-driven, nonprofit trade association developing multi-gigabit broadband coax connectivity standards used in this application. MoCA industry standards allow homes, apartments, flats, hotels and buildings to reuse existing in-building coax as the last-mile access and connectivity

medium for broadband communities. These standards can effectively reduce overall broadband installation costs.

The apartment routers allow internet access through Wi-Fi in all apartments and social areas. Operators can manage the system using existing management tools and InCoax network management software. The installation of InCoax technology can act as an expedient, cost-effective solution to the global MDU broadband access challenge of deploying high-speed, multi-gigabit, fiber broadband. It can improve the quality of day-to-day life for tenants and demonstrate that MoCA Access can be a crucial complement to fiber in bringing multi-gigabit networking to any MDU by reusing existing coax infrastructure.

### A CRUCIAL OPPORTUNITY

Last year in Texas, InCoax and PC People provided symmetrical gigabit connectivity for tenants in 256 apartments at the Stoneridge

Apartments affordable living complex. Preliminary calculations highlighted that the installation cost dropped from \$440 per apartment with fiber to \$125 per apartment by reusing the existing coaxial cabling infrastructure.

This is a crucial opportunity for German operators to reuse existing infrastructure for broadband access: They can seamlessly execute their fiber deployment strategies, using cost-effective solutions to accelerate the addressable number of subscribers and consider remaining problems.

Only by deploying the most suitable connectivity solution can operators reduce overall complexity and expense and still bring ubiquitous connectivity to all corners of the home. Complementary access technologies can be the answer for operators looking to navigate away from costly, complex fiber-to-the-premises deployments and deliver high-quality broadband to all tenants, no matter the location. 🏡



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