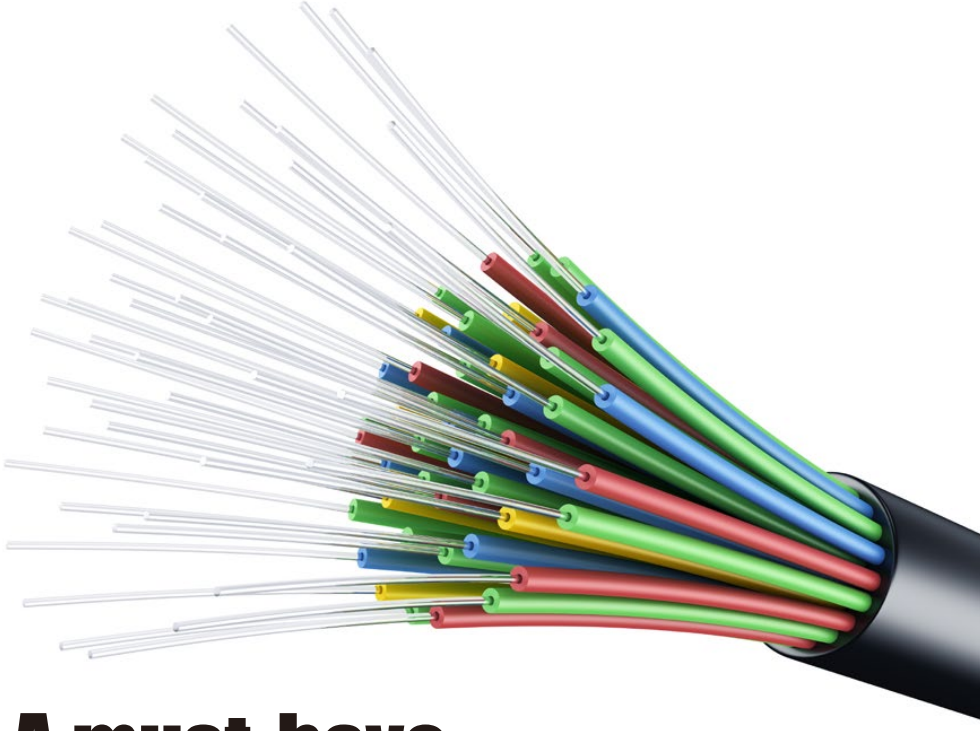

FTTH: A must-have for the digital home

To boost FTTH rollout, accelerate digitization, and raise GDP, Fiber-from-the-Home (FFTH) is the best choice for digital buildings and homes.

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Despite our increasing dependence on broadband networks, broadband doesn't have the same status as electricity and water when it comes to basic utilities.

So, what's stalling digitization and keeping broadband a second-class citizen? Basically, laying optical networks in buildings without FFTH involves lengthy and costly re-construction work that affects users and operators alike.

Three challenges

With slow ROI and high costs, today's mainstream broadband network model – FTTH – can be a tough sell, especially at a time when operators are seeing revenue from legacy services squeezed by OTT services.

Accounting for 10 percent to 20 percent of the total cost, the last mile of FTTH is disproportionately expensive. Equally problematic, property developers often deliberately delay approval times, levy outrageous charges, make unreasonable demands, and even deliberately destroy broadband facilities. Joe Public can also throw the proverbial spanner in the works due to a fear of damage to their homes from cabling or drilling.

The third challenge is a technical one – countless installation scenarios for different

buildings and the prevalence of old buildings massively ramp up complexity and time.

Two prongs

Real estate developers are accustomed to providing conduits and cabling for electricity, telephone, and cable television services for new buildings. They typically cooperate with service providers to connect residences or apartment buildings to existing public facilities outside.

Normally, this involves two telephone, one cable TV, and four electricity conduits. Adding two fiber optic cables to the same trench costs developers very little, and avoids the need to relay fiber optic conduits at a later date, which can take weeks due to license applications, design, coordination, and construction.

Governments should pass standards that require housing developers to provide either FTTH conduits, or actual FTTH connections, when constructing or renovating buildings. Indoor fiber conduits can be laid in the same place as wiring for other facilities, such as electricity, telephone and cable television, to deploy fiber optic cables faster and at lower cost.

FTTH conduits need to follow industry standards like TIA and ANSI, which prescribe bending radius, length, clearance, and termination point location. The correct numbers and sizes of cabinets must also be deployed.

Making it standard

More countries are implementing FTTH policies. China's 2012 code mandates that residential construction companies pre-lay FTTH cables, set aside space for FTTH equipment, and build data communications pipelines, in-wall ducts, and concealed wiring when constructing new buildings. In 2014 and 2015, China laid 50 million and 80 million FTTH lines, respectively.

Many US cities have passed FTTH regulations, including Loma Linda in California. The city's Loma Linda Connected Community Standard (LLCCP) requires that, "All new commercial and residential developments (or re-models involving greater than 50 percent of the structure) must equip new structures with fiber-optics interfaces and copper cabling." The developer must install fiber conduits and neighbourhood distribution frames, with data cabinets in master bedrooms, a fiber optic connection to the data cabinet and distribution frame, two Cat 6 connections and one coaxial connection in each room, and a FON solution. All materials must comply with city regulations.

The EU adopted Directive 2014/61/EU in May 2014, which requires all new and renovated buildings to be FTTH-ready from 2017. All permit applications for new and refurbished buildings will need to be certified as high-speed-ready and broadband-ready by inspection. Moreover, facilities in buildings and residential districts will be open to all broadband service providers.

Many other countries including Morocco are preparing to pass FTTH policies, or are in the process of implementing them, such as Indonesia. Some early adopters like South Korea already have high levels of FTTH coverage.

Although FFTH will burden building developers, laying broadband conduits together with other utilities incurs very low cost, but the benefits are immense, especially in areas with a high concentration of new or renovated residences.

To boost the roll-out of FTTH, accelerate digitization, and raise GDP, we believe that FTTH needs to fall under a new standard for buildings and promoted worldwide.