

The Role of Open Access in Driving Fiber Adoption

Open-access networks face challenges to get off the ground in the U.S., but with the right capital and legislative support, they can offer cost savings, improved customer service, and economic development opportunities.

By Sean McDevitt, Hariprasad Pichai and Harsha Tata / *Arthur D. Little*

Fiber rollout has accelerated globally, a trend that is expected to continue in the future. But fiber adoption is relatively low in the U.S. compared with other countries as a result of less household density. However, a number of supply-side forces are attempting to drive fiber and broadband adoption. Such forces include new fiber and fiber-deep deployments in urban and rural areas of the country.

According to data from the U.S. Council on Foreign Relations and the FTTH Council Europe, household fiber broadband coverage passes approximately 30 percent of all U.S. households, compared with approximately 50 percent of households across the EU. Moreover, less than 50 percent of U.S. households passed have a fiber subscription. This under-penetration is partly due to a lack of supply across the country. Approximately 23 percent of households in the U.S. have access to only one broadband provider. The broad potential for improving broadband is estimated at more than \$13.5 billion in total retail addressable market across 5,800 municipalities.

An infusion of supply-side solutions and capital have emerged to take advantage of this opportunity. Private-equity capital in the past few years has given smaller broadband providers the ability to compete against established players. However, large telecoms continue to deploy large amounts of capital to bolster their fiber-to-the-home (FTTH) offerings, some due to FCC commitments. The MSOs' strategy has primarily been HFC and selective fiber only; however, evolution in this strategy is to be expected.

U.S. VS. EUROPE OAN ADOPTION

Open-access networks (OANs) represent an alternative market model gaining significant traction in Europe and have been credited as instrumental in driving increased fiber adoption. Adoption of OANs has been more modest in the U.S., though they are poised to gain increasing market share in the next few years.

OANs offer several benefits for communities. For example, OANs can lead to lower broadband prices, improved

customer service, increased reliability and the potential to give communities a head start on the adoption of "smart cities."

These benefits, combined with the high valuations that OANs bring to shareholders, have led to rapid adoption in Europe. According to the FTTH Council Europe, alternative operators in Europe, including OANs, contributed to 56 percent of growth in FTTH/fiber-to-the-building penetration in 2020. In addition, open-access fiber deals in Europe accounted for 21 percent of total telecom deal value, and traditional fiber deals led in deal volume only slightly, accounting for about 24 percent of deal value in 2019.

In contrast, the U.S. has publicly owned fiber available in fewer than 500 communities, and counts fewer than 50 OANs, with last mile accounting for about 80 percent according to muninetworks.org.

U.S. ADOPTION CHALLENGES

Traditionally there has been a lack of government support for OANs in the U.S. as the government has generally preferred to work with large telecom operators to execute broadband policy objectives. This issue is amplified by the fact that OANs face intense lobbying by large telecom operators. According to the U.S. Council on Foreign Relations, lobbyists have pushed laws in 22 states to block municipalities from entering the ISP market. This is not the case in Europe, where government agencies and municipalities have invested heavily in the rollout of open-access fiber and supported the initiative as a means of expanding fiber access.

There are also challenges concerning the initial capital deployment required to build out OANs. Successful deployments in Europe have used a range of financing partnership models that were crucial in securing capital. In the U.S., there have not yet been many examples of nontraditional telecom entities, such as utility companies, municipalities, real estate companies, and infrastructure investors coming together to support the initial fiber deployment for OANs. For municipalities to deploy their

own open-access fiber networks independently, they must raise significant amounts of capital.

Failure to hit take rates can result in strained finances for the municipality and the community. Despite these challenges, OANs have gained some traction across the U.S. in places where municipal and cooperative networks have driven early adoption.

OUTLOOK

It is possible that the traditionally unfavorable regulatory situation in the U.S. is about to change. The Biden administration has said that federal spending for building out the broadband network in underserved areas will prioritize spending for networks owned and operated by local governments, nonprofit organizations and cooperatives. In its upcoming broadband infrastructure plan, the administration also has promised to include aid for local municipalities

seeking to build their own OANs. A significant infusion of government support and capital could incentivize players to reconsider the benefits of investing in OANs.

Other emerging factors are likely to accelerate the adoption of OANs in the U.S. First, OANs have shown proof of success. Several case studies of highly successful deployments have resulted in cost savings, improved customer service, and economic development in the area. Take rates for OANs can trend upward of 50 percent in five years – higher than the 30 to 40 percent take rates for traditional models. There also has been a development of newer and more sophisticated financing models that decrease the risk associated with OAN deployment.

There have been a number of successful deployments of OANs across the U.S. and globally. For example, a long-term cooperative agreement in which Ting leases and operates the

FTTH network constructed and owned by the town of Westminster, Maryland, has been successful thus far in providing low-cost internet access to about 6,000 users. Moreover, a case study in Chattanooga, Tennessee, documents that a successful fiber service owned and operated by the city's Electric Power Board has take rates above 50 percent.

These deployments, combined with the rising potential for increased adoption, suggest that in time, OANs have the potential to significantly disrupt the telecom ecosystem in the U.S. and position themselves as the solution for under-penetration of fiber across the country – as long as the policy framework supports such an endeavor. ❖

Sean McDevitt is a partner, Hari Prasad Pichai is a principal and Harsha Tata is an engagement manager at Arthur D. Little, an international management consulting firm.



BOOST YOUR BANDWIDTH BEHIND THE WALL

The InvisiLight® EZ-Hide Behind-the-Wall Module can be hidden behind a wall mount ONT, **reducing the installation footprint by up to 50%** using the smallest available surface mounted fiber.

Not seeing is believing.



NEW
InvisiLight® EZ-Hide
Behind-the-Wall
Module



SCAN HERE
TO LEARN MORE
www.ofsoptics.com