

Fiber Deployers Overcome Hurdles

As pandemic-related disruptions make the United States more dependent than ever on reliable broadband, FTTH deployers find ways to continue building out their networks.

By Masha Zager / *Broadband Communities*

With communications systems deemed essential under state shutdown orders and demand for broadband service skyrocketing, most fiber providers continue to build, maintain and upgrade their networks even as other businesses are shuttered.

Providers and their contractors face new challenges in performing this work, but most have been able to change their procedures to keep employees and customers safe and to keep work progressing on schedule.

In a recent webinar presented by the Fiber Broadband Association, member companies said that fiber deployment was proceeding, that their employees were glad to have work – and to have the opportunity to help customers – and that most residential customers were still eager to have fiber installed or service upgraded at their locations. Business customers are also ordering remote services for employees working from home. Clay Branch, director of network development at C Spire, said C Spire was deploying fiber as fast as ever.

However, some deployers have seen an increase in voluntary cancellations or postponements by businesses that have shut down or householders who are not working. In addition, a few providers have shut down construction and/or installations.

EMERGENCY-RELATED HURDLES

One major hurdle is that many town offices are closed, and permitting departments are unable to operate normally. Sometimes this means

deployment must be suspended in a particular location – especially in very small towns. In other cases, officials are approving permits by telephone or email, according to Steve Sellenriek, president of Sellenriek Construction.

Sellenriek also said the supply chain and the financial resources of construction contractors were precarious. He expressed concern about the availability of parts and materials needed for deployment and advised providers to pay their contractors in a timely fashion, “or you’ll put smaller contractors out of business.”

Mark Tichenor, executive vice president of the installation specialist On Trac, said his company had encountered some issues with utility location services that had closed or were backlogged. Locates must be completed before On Trac can bury drop cables outside premises.

SAFETY PRECAUTIONS

For providers and contractors with field workforces, keeping employees and customers safe is the top priority. Webinar participants mentioned the following strategies:

- Issuing masks, gloves, shoe coverings and sanitizer to field employees and requiring their use
- Sending employees in separate cars or trucks
- Staggering work schedules so employees are less likely to meet
- Communicating clear statements to employees and partners outlining safety measures, precautions, and specialized procedures for interaction with customers and staff

- Calling customers before installers arrive to address their safety concerns (some customers want to reschedule or to go into another room and communicate with the installer by phone)
- Pre-screening customers to make sure they do not pose health risks to technicians
- Encouraging employees to voice any safety concerns, maintain social distancing with customers and decline to work at premises where they feel unsafe
- Where possible, having technicians install cables from the outside of the house through an existing entry point.

TECHNOLOGY TO LIMIT EXPOSURE

Another way to deploy networks safely is by using technology to limit interaction between employees and customers. For example, equipment vendor Clearfield released a new home

Providers and their contractors face new challenges, but most have been able to change their procedures to keep employees and customers safe and to keep work progressing on schedule.

installation kit in April that it says reduces install time by 30 minutes. Potentially, the new kit could keep installers out of customer premises entirely; Clearfield says, “For

WHY HASN'T COVID-19 CRASHED THE INTERNET?

By most accounts, U.S. access networks – especially all-fiber networks – have held up remarkably well under the extraordinary demands imposed by the pandemic’s sudden rearrangement of work, school and home life. There have been no widespread reports of network outages. Though EU authorities asked Netflix and YouTube to stop streaming video in high-definition formats in Europe, no comparable requests have been made in the United States.

BroadbandNow, in an analysis of speed test data from M-Lab, found that, as of April 25, download speeds were within normal (pre-shutdown) ranges in 132 of the largest 200 cities; in another 37 cities, they were less than 10 percent below normal. Upload speeds were more severely affected, likely because of the increase in video conferencing: Only 68 of the 200 cities had upload speeds in the normal range, and 78 had upload speeds less than 10 percent below normal.

In rural areas, taken as a whole, BroadbandNow’s analysis showed that both download and upload speeds dropped after mid-March, but were still comparable to their levels as of early January.

THE IMPORTANCE OF ENGINEERING

In a recent webinar presentation, Andrew Dugan, chief technical officer of CenturyLink, said that CenturyLink had seen an overall 35 percent increase in internet traffic – higher on some days – since the imposition of stay-at-home orders. “That created some slight anxiety,” he said, “but the network handled it really well.”

Dugan cited several reasons for the resilience of CenturyLink’s access network.

- Networks are scaled for peaks, and peak usage has not increased. The increase in residential network usage is largely daytime traffic caused by people working or studying from home. Peak residential use has always been in the evening, when customers watch video or play games, and the new daytime usage does not exceed those evening peaks.
- Networks are built to sustain failure. CenturyLink’s planning guidelines state that its network should maintain a certain amount of redundant capacity as demand grows. That excess capacity, designed as a buffer against fiber cuts or equipment failure, has proved useful as a buffer against unexpected demand.
- Networks are built ahead of demand. CenturyLink expects a continual growth in demand – even if not quite as much growth as occurred this spring – and the network is always several months ahead of the curve.
- Network operators have policies and procedures for dealing with unexpected events. If necessary, for example, engineers can override default routing policies.

Even with all these advantages, Dugan said, “We did have situations we had to deal with quickly. In the first couple of weeks, we had to add capacity in hot spots.” In addition, CenturyLink had to modify its peering arrangements with other networks to accommodate increased traffic.

The experience of recent months “reinforces our fiber-based strategy,” Dugan said. “Fiber has the ability to scale and deal with these events.”

Home installation kits limit employee-customer interaction, and digital construction platforms can limit employee-employee interaction.

those consumers willing to take a do-it-yourself approach, the Home Deployment Kit enables a contactless installation.” Webinar participants were dubious, however, about the prospect of DIY fiber installations. “The jury’s still out on that,” Tichenor said.

Technology can also limit interaction among employees in the field. For example, Sam Pratt, CEO of Render Networks, whose digital construction work management platform is used by a number of fiber deployers, pointed out in a recent blog post that digital construction processes

can greatly reduce the amount of time supervisors and project managers spend in the field, compared with paper-based processes. Electronic interaction is much safer for all concerned.

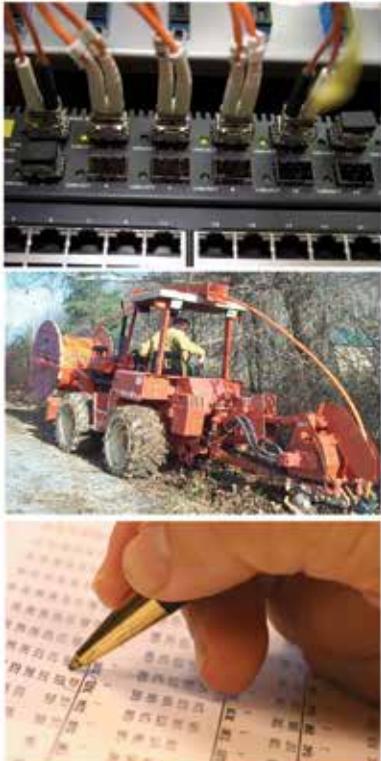
According to Pratt, using a digital construction platform offers several other advantages in dealing with today’s challenges: It shortens the overall time for construction and reduces the need for rework, allowing field crews to pass and connect more customer premises in the same amount of time. In addition, a digital construction platform improves deployers’ ability to manage their

supply chains at a time when they are under increasing stress. He explained, “The ability to digitally allocate and gain greater visibility and control of how construction resources and materials are utilized is key to keep[ing] projects moving.” ❖

On Trac’s COVID-19 statement and pre-installation customer call script are useful guides, available on our website at www.bbcmag.com/pub/doc/ON-TRAC-COVID19-STATEMENT.pdf and www.bbcmag.com/pub/doc/Install-COVID-Screening-SCRIPT.pdf

*Masha Zager is the editor of **BROADBAND COMMUNITIES**. You can reach her at masha@bbcmag.com.*

WideOpen Delivers Open Access Networks



We plan your Gigabit network

- Network business and financial plans
- Financial models and pro formas
- Take rate analyses and cash flow projections
- Funding strategies and financing development
- Network architecture and specs for fiber and wireless

We build your Gigabit network

- Construction management
- Vendor selection for fiber and wireless equipment
- Contractor selection and procurement management
- Service provider selection and negotiation

We operate your Gigabit network

- 24/7/365 network operations center
- Service provider management
- Marketing and public awareness
- Equipment and fiber asset management



WIDEOPEN NETWORKS

THE GIGABIT SOLUTION

www.wideopennetworks.us
Call us at 540.552.2150