

Verizon's Inner Choice

Innerduct Alternatives for MDU Deployments

By Jim Reinhardt

As Verizon Communications began building Verizon FiOS, their largest project to date, they led a race to see who will provide the most fiber to consumers in the coming years.

Fiber-to-the-Premises (FTTP) projects for Multi-Dwelling Units (MDU) are an enormous current and future market-building tool for broadband services in the U.S. While insiders know that FTTP is a long-term investment, operators must find the most cost-efficient manner to invest in these networks so shareholders see a sooner-than-later return on their investment.

Many times, construction crews are quick to approach a new installation project with the same tools and may overlook newer products because of fear of the unknown. But in today's very competitive telecom market, providers must look at deploying fiber in new and economical ways.

Historically, rigid innerduct systems have been the backbone for network construction. Alternatives, however, should be evaluated as part of a proactive plan for fiber network installation. Recently, Verizon Communications employed one of those alternatives in a MDU build-out to condominiums, apartments, and co-op buildings.

Verizon Communications was charged with identifying resources to help make each FTTP project more efficient by requiring less manpower, saving time and being cost-effective in a high-rise MDU complex in White Plains, New York.

Using a flexible, textile innerduct system designed specifically for the network construction industry, a three-person Verizon team installed fiber in an average of three buildings a day. The process involved placing one truck at the maintenance hole, with one individual down in the hole, and another individual outside the hole (according to New York state law) for safety. A single person was stationed in the basement of the target building, where a rope was placed in the conduit from the basement to the street. The textile innerduct was then pulled from the street to the building by hand.

Had conventional innerduct been used, typically coiled on enormous reels, the team may have had to cover each unit's marble floors from the entrance to the freight elevator, pull the innerduct through to the basement and set it up on jack stands. Additionally, the process could have required a pulling truck and a minimum of four people to do the same job.

This alternative allowed the Verizon team to use our own crews while moving at a faster rate. This approach eliminated the daunting task of looking for qualified contractors to supplement the team. Three individuals were able to build out five buildings a day with textile innerduct, versus two buildings for a four-person crew using traditional innerduct.

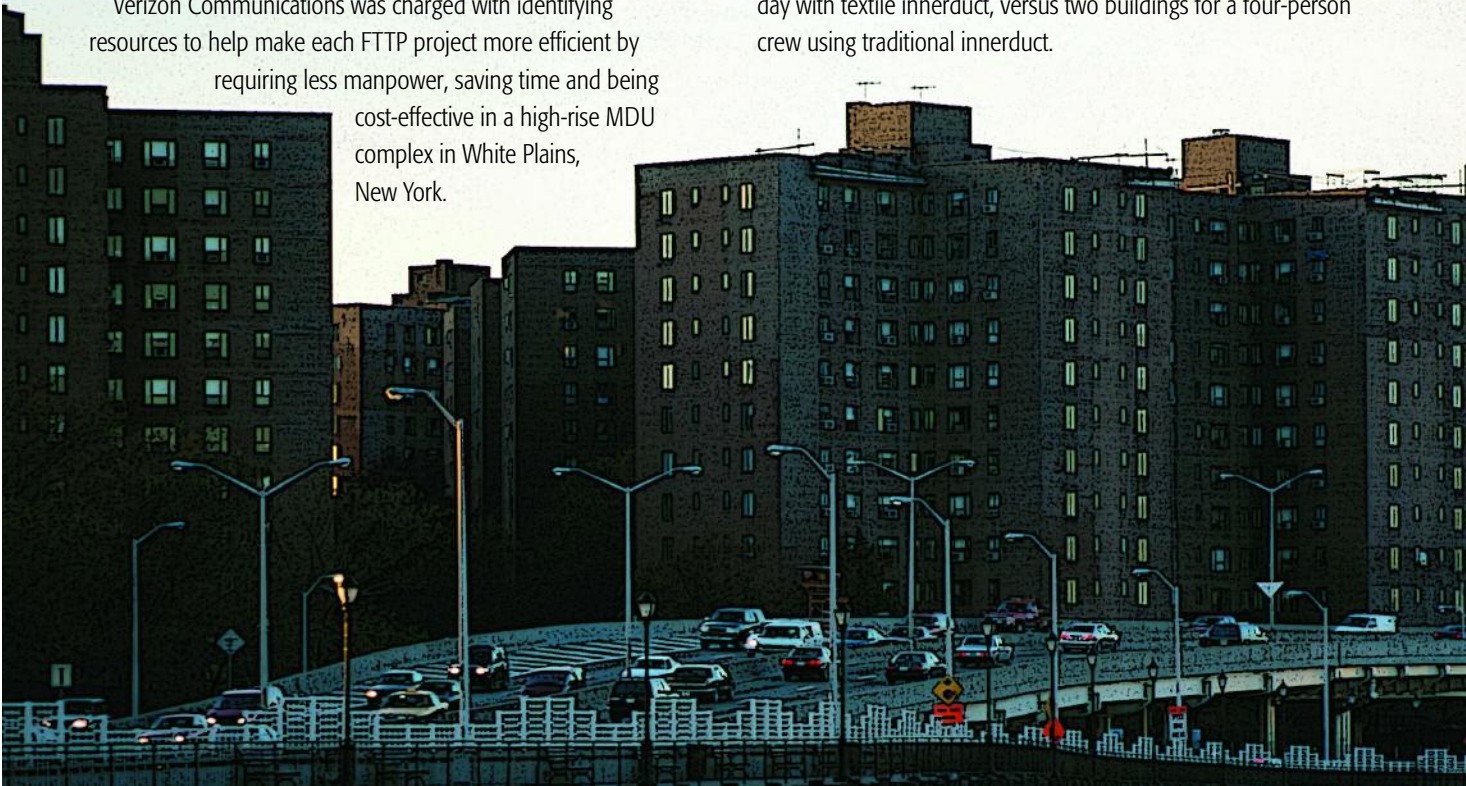




Figure 1: When space is available, this textile innerduct can be placed into any conduit structure.

When space is available, this flexible innerduct, called MaxCell, can be pulled into almost any conduit structure. (See Figure 1) For the White Plains build-out, nearly 20 percent of the units had a spare conduit that the Verizon crew was able to use rather than installing new conduit. The team was able to install textile innerduct over existing cables by hand without damage, instead of using a winch line to pull conventional innerduct and risking damage to the cables. It also prevented the crews from having to set up a conventional reel in the basement on A frames and needing additional manpower to do that work.

To remain competitive, operators must find ways to keep FTTP install projects on budget and on deadline. With

looming deadlines, labor shortage and additional projects on the horizon, it's imperative for companies to search for resources to complete the same amount of jobs with increased efficiency and in a timely, cost-effective manner.

Exploring alternatives to a traditional rigid system, such as pulling flexible textile innerduct during a cabling installation, is a

way to cut project costs and labor at the same time, while increasing productivity.

Jim Reinhardt is construction line manager for Verizon Communications in New York. He has more than 26 years of experience in Westchester County, New York. He can be reached via email at James.T.Reinhardt@Verizon.com.

MaxCell is a flexible, multi-celled, textile innerduct system designed specifically for the network construction industry. For more information, visit www.maxcell.us.

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