

Major U.S. CATV Service Provider Finds Fiber Problems Fast with Fluke Networks Fiber OneShot™ PRO

At a Glance

Customer:

Major U.S.
CATV Service Provider

Location:

East Coast

Challenge:

Maintaining 17,500 miles (28,164 kilometres) of fiber—need to rapidly find and fix any breaks and service outages that occur—to keep millions of subscribers connected and productive 24/7

Results:

Decreased network outage time, and more consistent access to Internet, video, telephone and on-demand applications which leads to better customer service.

Products:

Fiber OneShot PRO

When you've got 17,500 miles (28,164 kilometres) of singlemode fiber cabling plant to maintain—growing by more than 500 miles (805 kilometres) a year—you need a way to rapidly find and fix any breaks and service outages that occur, so you can keep millions of subscribers connected and productive 24/7. In a highly competitive market, it was this goal that led a major East Coast telecommunications, media, and entertainment company to search for an easy-to-use, affordable fiber test tool that would help its technicians quickly identify and repair fiber breaks on its Hybrid Fiber Coax (HFC) network.

The Need: Find Fiber Problems & Restore Service Quickly

This leading CATV and telecommunications company—which offers advanced digital television, voice, and high-speed Internet services, as well as national and local media and programs—has a substantial fiber network, encompassing 66 central offices, often called “hubs.” Each hub feeds 200 to 300 nodes, with the distance from the hub to the most distant node averaging anywhere from 10 miles (16 kilometres) in densely populated areas up to a maximum of 22 miles (35 kilometres) in more rural areas.

The company has two groups of technicians: a group of 32 experienced fiber technicians responsible for maintaining the entire fiber network and a second group consisting of around 5,000 field service technicians, focused on maintaining the company's coaxial cable. The field technicians are experienced fiber-only technicians, identifying and repairing complex fiber problems all over their assigned region, day in and day out. The field service technicians don't have years of fiber experience or high-end fiber tools but because there are more of them in the region, they are typically the first responders to any fiber problem. If they can identify the issue as a fiber break or simple fiber issue, they can handle splices and other typical fiber repair jobs themselves.

This company was looking for was a low-cost fiber troubleshooter that could help its field service technicians locate fiber problems quickly on their own, without deploying an experienced fiber technician. The field service technicians didn't need the high-end, complex Optical Time Domain Reflectometers (OTDRs) that the fiber technicians use: they just needed a speedy, effective way to accurately identify and locate fiber breaks within a 10-mile (16 kilometre) radius of their location.

The Solution: Fluke Networks' Fiber OneShot PRO

This leading CATV and telecommunications service provider found exactly what it needed in Fluke Networks' Fiber OneShot™ PRO, a handheld, fiber-troubleshooting instrument that analyzes singlemode fiber links; verifies active fiber; locates bad splices, severe macrobends, severe microbends, connections and breaks; and determines distances to failures. In contrast with traditional, time-consuming approaches for troubleshooting singlemode fiber, this all-in-one troubleshooter features an intuitive, one-button test capability that rapidly verifies whether a fiber is active and takes less than five seconds to accurately locate fiber problems within a 14.3-mile radius.

“Fiber OneShot PRO is an excellent fiber tool for us. Its distance covers 90% of our metro fiber plant, and it delivers the capabilities we need.”

– Regional Fiber Director
Major U.S. CATV Service Provider





Benefits:

- Time & Cost Savings
- Increased Productivity
- Higher Network Reliability
- Satisfied Subscribers

Its speed, accuracy, ease of use, and affordability make Fiber OneShot PRO an ideal first-response diagnostic tool for all singlemode fiber, and its rugged design makes it highly suitable for use in an outside-plant environment.

With Fiber OneShot PRO, if the field service technician knows that the distance from a hub to the farthest node is supposed to be 10 miles (16 kilometres), and the Fiber OneShot PRO identifies the distance as just 5 miles (8 kilometres), it's immediately clear that a break or severe problem exists at about the 5-mile point. The technician can then drive to the approximate location of the break and perform further testing to locate it precisely. At that point, if the repair is simple, the field service technician can fix the problem without the deployment of a fiber technician—saving substantial time and expense for both groups. Even if the repair is complex, Fiber OneShot PRO saves time and expense by confirming the problem and identifying the fault location.

The low cost of the Fiber OneShot PRO troubleshooter enables the CATV service provider to easily equip all of its field technicians with this productivity-enhancing tool. As a result, instead of spending several hours trying to diagnose the fiber problem, versus any of a number of other potential causes—and then having to wait to schedule a fiber technician to come out and repair the fiber—field service technicians can quickly find and repair the break or problem themselves. The result is decreased network outage time and superior customer service.

Given that this CATV and telecommunications service provider may experience anywhere from 5 to 10 fiber breaks a month, these time and cost savings adds up quickly. Using previous tools and methodology, a field service technician often took 3 to 6 hours to diagnose and locate the fiber break, then an experienced fiber technician took an additional 1 to 2 hours to arrive and repair the problem. With the Fiber OneShot PRO troubleshooter, it's often possible for a field service technician to quickly isolate and repair a fiber break in as little as 10 minutes, and a fiber technician might not be required at all. And if a fiber technician is required, knowing the nature and location of the fault substantially decreases average repair time.

The other major benefit is more satisfied and productive subscribers, resulting in more consistent access to Internet, video, telephone and on-demand applications—and ultimately, more customers and increased revenue. Placing the Fiber OneShot PRO in the hands of its coax technicians enables this leading CATV service provider to significantly shorten the average time to repair a fiber network outage. As a result, any network outages are much shorter, driving increased subscriber satisfaction in both business and residential markets.

As for the field service technicians who now have the benefit of the Fiber OneShot PRO's capabilities, they couldn't be happier.

“Fiber OneShot PRO is a great first-responder fiber diagnostic tool, allowing us to respond to our customers’ needs much more quickly. It’s the perfect tool for our application.”

– Regional Fiber Infrastructure Manager
Major U.S. CATV Service Provider



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