Alcatel-Lucent will save service providers time and cost in maintaining their fiber-optic broadband access networks with the introduction of a Bell Labs breakthrough that provides an easy, fast and affordable method for accurately identifying and pinpointing faults.

The new network monitoring solution uses a technique called Optical Time Domain Reflectometry (OTDR). Developed by Bell Labs, the solution plugs into a network's existing fiber access nodes and is integrated with the Motive Network Analyzer, Alcatel-Lucent's remote management solution for broadband access networks. This approach - unprecedented in the industry - will provide a comprehensive and continuous view of PON networks, which are used to deliver high-speed broadband services to consumers and businesses.

Outages of fiber-optic networks can severely impact both users and the service providers themselves. Alcatel-Lucent's embedded OTDR solution addresses this issue both during the rollout of a new network and once it is in service. During the rollout phase it provides remote validation of the quality of fiber installation work. During operations it continuously monitors all lines, pinpoints the location of network problems and reduces the need for field technicians to make multiple visits to a site.

Erik M. Keith, Principal Analyst, Fixed Access Infrastructure at Current Analysis, said: "Technologies such as Alcatel-Lucent's Embedded OTDR solution are fundamental tools that give service providers a better understanding of what is happening in their fiber access networks. Knowing where a problem occurs allows service providers to send technicians to the right place, speed up problem resolution, and provide customers with a better service experience. As such, this solution is a key enabler for protecting service providers' fiber assets and revenues."

Dave Geary, head of Alcatel-Lucent's Wireline activities, said: "We have embedded OTDR test functionality into our Intelligent Services Access Manager (ISAM) to make it a very cost-effective solution. Moreover, by integrating OTDR in our Motive Network Analyzer where it is combined with a number of complementary technologies, we can provide a comprehensive and end-to-end view of service providers' fiber networks. By keeping the network fully operational, cash flow is maintained and new services can be introduced smoothly, which is an important benefit for any service provider. This makes for a unique value proposition."