



Managing Fiber Optic Network Elements

The Problem:

Broadband and Ethernet network preferences have migrated to mixed fiber optic and copper cable infrastructures over the past years to support higher speeds and extended distances. Each fiber/copper media interface has presented new challenges to management, because in the event of a network failure the sole method of confirming that each conversion device was operational was to inspect individual wiring closets.

Moreover, the need for speed, capacity, instant service and bandwidth provisioning is critical for both service providers and their business users. To support these massive traffic demands, service providers need simple, rapid service provisioning, remote monitoring with alarm notification, remote test capability, flexible bandwidth management and unrivalled performance for “first mile” metro access.

The challenge then lies in providing a simple-to-manage network which provides not only higher speeds and higher service availability but also the ability to manage bandwidth and monitor both line and equipment integrity, while keeping costs down.

The Solution:

Metrobility’s NetBeacon Element Manager manages the interface between fiber and other network media. Utilizing sophisticated management software to monitor Metrobility network elements, network managers can remotely troubleshoot point-to-point transmission failures, ensuring end-to-end quality control. This capability allows information technology personnel to build more complex and more robust network architectures with higher levels of availability.



Network status is viewed easily through a Java-based graphical user interface that emulates the appearance and functions of each remote chassis and provides managers with an “at-a-glance” look at network element status. The NetBeacon server acts as the data collector, querying the management module and receiving alarm and status notifications. Based upon alarm information, the management system can be configured to send email notifications.

NetBeacon monitors not only the modules, but also the overall health of the chassis itself. For example, alarm conditions are sent for loss of AC or DC power, temperature rising out of operating specification, and DC power rising or falling out of operating specification. These notifications can actually indicate a potential failure before it has any effect on data communication.

NetBeacon also offers the ability to initiate active control through sophisticated SNMP-based management tools. Network managers can access each device remotely, adjust operating parameters quickly, and even switch hardware settings across the network from the management console minimizing trips to the wiring closets.

On a higher, strategic level, the ability to scale the required bandwidth will allow the deployment of services only as needed.

The Benefit:

By knowing the status of all the intelligent network elements that connect users to the network, network managers can implement a complete, end-to-end management solution for their entire mixed media network infrastructure. They can automate the administration of the network, implement a proactive management strategy to reduce network downtime, and significantly reduce their operational costs.

Product Information

NetBeacon Element Manager, introduced in March 1999, was the first software of its kind to manage the mixed media network. Since then it has evolved into a truly 'best-of-class' management tool that not only looks at link status, but also, performs remote loopback testing, monitors both the line and equipment conditions throughout the network, and enables bandwidth provisioning

In a following document, we will explore some of the features and enhancements added to the NetBeacon Element Management system since its introduction.

Ordering Information

R501-M	Management Line Card, Single Port
R502-M	Management Line Card, Dual Port (Required for Database Plug-In)
NetBeacon	Management Software for Windows
NetBeacon-DB	Database Plug-In for NetBeacon Windows
NetBeacon-UNIX	Management Software for UNIX
NetBeacon-UNIX-DB	Database Plug-In for NetBeacon UNIX

For additional information Metrobility's products, contact Metrobility Optical Systems at 1.877.526.2278 or 1.603.880.1833, or visit us at www.metrobility.com.