Connectivity to SONET

With the proliferation of Internet access and broadband technology, an important trend in networking is the migration of packet-based technologies from Local Area Networks to Metropolitan Area Networks (MANs). As nearly all data packets begin and end their trip across the Internet as Ethernet frames, carrying data in a consistent packet format from start to finish throughout the entire transport path eliminates the need for additional layers of protocol and synchronization that result in extra costs and complexities.

In addition to efficient handling of IP packets, Ethernet has the advantages of familiarity, simplicity, and low cost. As such, Packet-Based Transport technology, capable of supporting fiber spans of more than 50 miles is essential for the applications, which require seamless communication from start to finish

However, most of the existing fiber plant in metro or in Wide Area Networks (WAN) still follows the incumbent transport technology and SONET is typically deployed over fiber rings.

SONET provides a fast (sub 50ms) protection mechanism that can restore connectivity using an alternate path around the ring in case of fiber cuts or equipment failure. As such, SONET technology is widely deployed in WAN or MAN to support the high reliability and availability required for any backbone network. However, ubiquity of Ethernet infrastructure and its applications create a unique challenge as to how to connect a packet-base shared media -- Ethernet to a circuit-base time-division technology -- SONET backbone without introducing complicated intermediate conversion devices.

CyberPath EtherPath product series provides such a bridge which seamless links end-user Ethernet-based devices to a SONET-based backbone network. As illustrated in Figure 1 (a real life example), an end-user device can seamlessly communicate with a remote server without any intermediate conversion device.

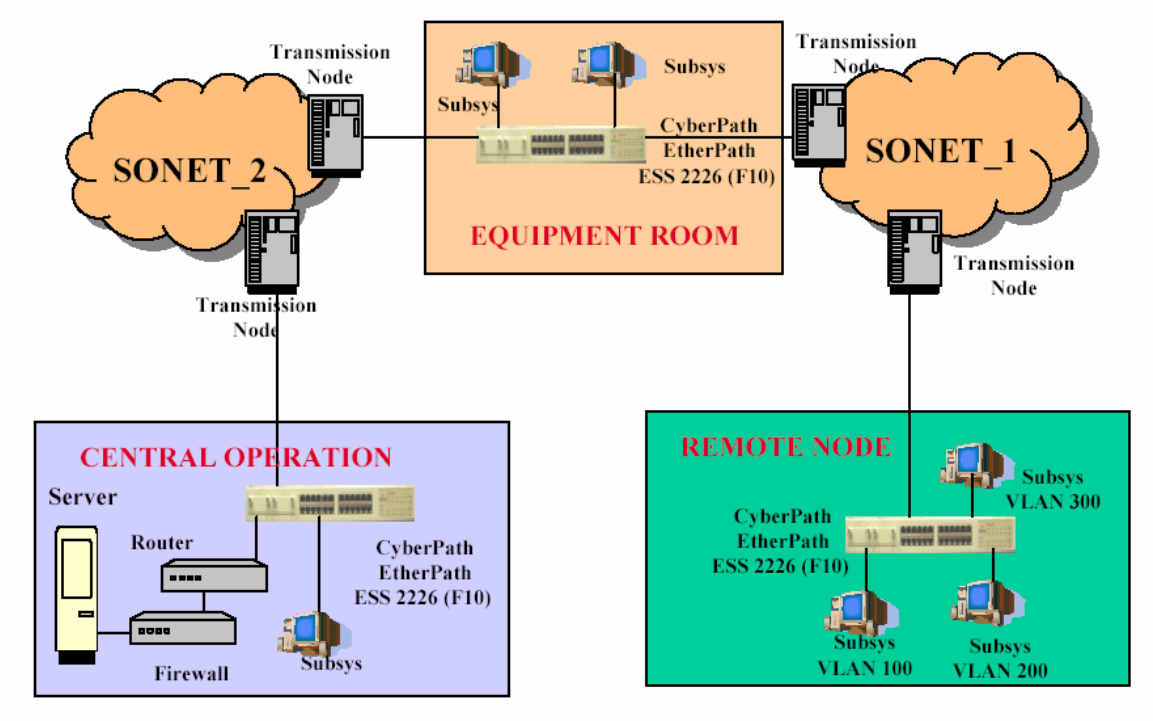

Figure 1: Connectivity to SONET

CyberPath EtherPath ESS2226 (previously referred as ESS F10) managed Layer 2 switches aggregate the traffic from end-user devices to the servers located at a remote central operation room via a SONET network. VLANs supported by EtherPath ESS2226 provide logical separation among different user groups. Since the Ethernet networks formed by EtherPath ESS2226 are inter-connect by a SONET backbone network, user traffic can virtually "add" and/or "drop" on the path also. A CyberPath EtherPath ESS2226 has both Fast Ethernet (FE) links and gigabit links, as long as the SONET transmission node has an Ethernet interface, FE or gigabit, the connectivity to SONET becomes as simply as plug and play. The build-in management capability – CLI and WEB based management interfaces, makes the provision and management of an ESS2226, either locally or remotely, simple and straightforward. In fact, the combination of CyberPath ESS2226 switches and appropriate SONET transmission nodes makes the migration of packet-based technologies from Local Area Networks to Metropolitan Area Networks (MANs) and/or Wide Area Networks (WANs) become reality.

For more information and product datasheet, please refer to CyberPath WEB site: www.cyberpathinc.com.