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MPLS Is the Latest Technology to Impact Business Communications **Are You Ready to Harness Its Power?**

Warren Heuman of CTS Describes the Value of Multi-Protocol Label Switching on Small to Mid-Sized Businesses

It doesn't take a rocket scientist to realize that technology is changing on a daily basis. What's hot today may very well be antiquated tomorrow. Keeping up with technology is quite a task that must happen because many new innovations have the ability to not only increase your profitability but also give you a competitive advantage.

The latest acronym gaining popularity in business communications is MPLS, short for Multi-Protocol Label Switching. MPLS enables businesses to consolidate and prioritize their communications including voice, video, and various grades of data communications onto a single VPN (virtual private network). The VPN service is based on MPLS technology providing any-to-any connectivity, security and Quality of Service (QoS) among geographically diverse sites.

Essentially, MPLS allows companies to allocate different types of traffic specific bandwidth priorities at various times during the day or day of week. Small to mid-sized companies now have the unique flexibility of designing their networks that mirrors their traffic patterns. This technology empowers network managers to enhance communication by diverting and routing traffic around link failures and bandwidth congestion increasing system efficiency as well as employee productivity.

MPLS has attracted attention as growing numbers of businesses look for new ways to lower cost, extend

scalability, improve reliability, and secure their data. It was originally presented as a way of improving the speed of routers but is now emerging as an important technology that offers new capabilities for IP networks. Traffic engineering, the ability to determine the path that traffic takes through their network, and Virtual Private Network support are two primary applications where MPLS is superior to any IP technology.

Therefore, it is important to understand the differences in the way MPLS and IP route data across a network. Traditional IP forwarding uses the IP destination address in the packet's header to make a forwarding decision at each router in the network. These hop-by-hop decisions are based on network layer routing protocols. The routing protocols are designed to find the shortest path through the network and do not consider critical issues such as latency or traffic congestion. MPLS, on the other hand, creates a connection on top of the traditionally connectionless framework of IP routed networks. This architecture facilitates an array of new possibilities for managing traffic on an IP network.

As a result, MPLS offers a number of powerful advantages. For instance, MPLS enables a converged network to support both new and legacy systems providing a path to an IP-based environment. MPLS offers traffic routing to help compress more data into available bandwidth. It guarantees quality of service performance enabling companies to maintain a specified amount of latency for voice and video. MPLS lowers router

processing requirements and enhances network security to make IP as secure as frame relay. Finally, MPLS VPNs are more scalable than IP VPNs and it shortens the configuration and management requirements for the user.

Today's communication networks are rapidly migrating to a converged IP environment and MPLS has become the enabling technology for this migration. MPLS is a proven technology supporting the transition from old to new networks. As a president, owner, or IT manager it's critical to understand MPLS and the value it can bring to your organization. If your business communications provider does not offer MPLS as a viable solution – run away as fast as you can and find a reputable organization that knows the ins and outs of this technology.