

# Unifying your network

How a converged network can cut costs and increase efficiency

**T**oday's networks are rapidly evolving from traditional transmission technologies to IP (Internet protocol) technologies. IP technology provides adaptive and flexible connectivity, making it a fit for a variety of uses. One form of IP technology currently driving that evolution is MPLS, or multiprotocol label switching, says Bill Capraro, President/CEO of CIMCO Communications.

*Smart Business* learned more from Capraro about MPLS and how converged networks can save you money.

## What is MPLS?

MPLS technology converges two separate networks — voice and data — onto one IP telephony network. In essence, it is a traffic manager that supports multiple service models, which is why one network can support both voice and data traffic. Leading carriers around the world have adopted MPLS, which is one of the fastest-growing wide-area network (WAN) technologies. It provides the performance and privacy of legacy WAN technologies and the flexibility and cost advantages of IP networks.

## What traditional telephony technology does MPLS replace?

Today, MPLS is rapidly replacing more traditional technologies, such as Frame Relay and ATM. It provides interoperability with existing networks, both traditional and IP. Previously, each service needed its own network and management system.

Originally, frame relay aimed to make more efficient use of existing physical resources but acquired a negative image because of excessive bandwidth overbooking by telecommunication carriers. It is considered 'under-provisioned,' since a business does not use its frame relay service 100 percent of the time.

MPLS is a private networking capability delivered in a cloud, similar to frame relay, but the labeling capability of MPLS does away with under-provisioning and allows a business quality of service (QoS) across a WAN. Any application working well on a frame relay will work better using MPLS. Using the QoS capabilities of MPLS, performance of such applications as Citrix, SAP, Oracle, Siebel, Peoplesoft, VoIP and



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video can dramatically improve quality and productivity.

## What are the advantages of switching to MPLS?

In addition to decreasing the cost of operating separate voice and data networks, MPLS, which provides a unified network, is very scalable, unlike hardwired traditional telecom technologies. Frame relay was originally designed to operate at speeds of under T3, and ATM has a minimal bandwidth of T1. MPLS-based services can scale from a low-bandwidth to a very high bandwidth with no defined upper limit. This level of flexibility is appealing to small and medium-sized businesses (SMBs) as well as large enterprises.

A unified network also provides businesses other advantages, including:

- Simplification and more convenience for the end-user
- A path for a business to migrate to next-generation IP telephony
- Predetermining and maintaining a consistent QoS on the WAN
- Enhanced network security and privacy of data
- Any-to-any connectivity over the WAN

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## What types of businesses should consider migrating to MPLS technology?

All types and sizes of businesses like the idea of one provider for the triple play of services (voice, data and video) to lower costs. MPLS allows for lower overall costs by allowing legacy networks and technologies to operate in newer environments.

Enterprises and SMBs equally are challenged to equip remote locations in a way that keeps costs under control and minimizes complexity. Many companies have a significant number of employees located outside of the headquarters, and they must ensure that remote employees have all of the same capabilities as employees at headquarters.

Larger enterprises have escalating demands for data services that are fast, secure and low cost. Many *Fortune* 500 global companies are moving to more virtual employees due to increasing costs of office real estate, commuting costs resulting from congestion and gas prices and physically moving employees from one location to another. This trend is enhanced by globalization and new technologies where physically having employees in one location is less necessary.

SMB customers continue to be the most sought-after segment. The cost efficiency of MPLS provides SMBs the capability to expand both data and voice networks to remote locations; something they previously thought was not affordable.

## What industries have taken the most advantage of this new technology?

Among vertical segments, the financial service sector is typically ahead of others in moving to new technology, particularly since passage of Sarbanes-Oxley. Health care is one of the fastest-growing verticals, which is now moving from a technology laggard as the demographics drive overall growth in this sector. With changing technology and many solutions available, any business in any industry can take advantage of MPLS and other IP technologies. <<

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