BEYOND THE 2016 ETHERNET ROADMAP

CommScope's insights regarding the roadmap to the Terabit Mountains, and what it means for our customers:

25G - the new 10G!

The 2016 Roadmap calls for building blocks of 10 Gbps and 25 Gbps per lane direction. 10G and 25G lanes will enable the industry to migrate from 10-40-100G or 25-100-400G. The cost to go from 10G to 25G is negligible—and the power consumption is virtually the same. 25G also uses the same SFP and QSFP infrastructure for switches, adapters, cables, transceivers and connectors. So the current strategy is to focus on building out 25 Gbps lanes, then double that speed with each successive generation.

Downsizing & Upgrading Modules

The 2016 Roadmap includes the microQSFP, a redesigned QSFP module that fits an SFP footprint, and MPO connectors to handle the highest speeds, up to 1.2 Tbps. Eight- and 24-fiber MPO are gaining traction. MPO-8 supports a single 100G spine port or four leaf ports. But, where the number of ports is not a multiple of four, operators need to either re-cable or leave active ports unused. MPO-24 allows for the efficient deployment of multiple parallel ports or combinations of parallel and duplex for staged migration.

Fiber Considerations

The Roadmap envisions continued reliance on singlemode and multimode fiber. The soon-to-be revised OM4 standard addresses wideband multimode fiber (WBMMF), which will allow for the distribution of multiple parallel 10G, 25G or higher rate signals on the same fiber. Using evolving and proven SWDM technologies, WBMMF also supports nonstandard proprietary 40G or other applications but only needs 25 percent of the fibers required for serial applications.

Putting it all together

When used with an MPO-24 platform, WBMMF offers attractive migration capabilities. For example, operators could feed multiple MPO-8 and/or duplex ports from a single MPO-24 trunk. Think about it—the same installed fiber cabling could support your migration from 10G up to 400G using cost-effective optical transceivers!

However these technologies are deployed, it will be critical to be able to monitor, measure and compare the performance of the various configurations as the Roadmap unfolds. So look for automated infrastructure management systems and their intelligent cabling capabilities to play a more prominent role as we continue down the road to faster, more efficient fiber networks.

Turn to CommScope to keep your network on the right path.

Download the complete 2016 Ethernet Alliance Roadmap **here**. Then **subscribe** to CommScope's blog designed to keep you updated on the latest trends, developments and standards.

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