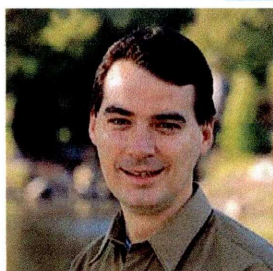


EDITORIAL

More than 10-Gig on twisted pair?

Recently we hosted a web-cast seminar on the topic of 10-Gbit Ethernet total cost of ownership. If you'd like to check it out, it's available on demand at our Web site, www.cablinginstall.com.



The seminar covered many aspects of 10-Gbit Ethernet networking and cabling—some of which may be familiar to you and some of which

may be new. Its purpose is to provide you with information that you can use in the planning stages for an upgrade to 10-Gbit Ethernet.

An interesting thing happened during the seminar's question-and-answer period. One audience member, apparently not content to keep the conversation down to the 10-Gbit level, asked about media choices for 40- and 100-Gbit Ethernet. One of the panelists accurately pointed out that the Institute of Electrical and Electronics Engineers (IEEE) 802.3ba specifications covering 40- and 100-Gbit Ethernet are fiber-exclusive. One can discuss singlemode or multimode choices, but if you're going to deploy a network based on the 802.3ba specs, you'll be using optical fiber as your transmission medium.

Another panelist pointed out, also accurately, that recent testing has indicated shielded twisted-pair cabling may be a suitable medium for the transmission of 40- and 100-Gbit Ethernet signals.

Both panelists were correct. While

the 802.3ba standard recognizes only optical media, engineering types have been busily working over a long period of time to assess the capability of fully shielded twisted-pair cabling systems to support data rates beyond 10 Gbits/sec. In November 2007 we reported on testing conducted at Pennsylvania State University that researchers said showed 100-Gbit/sec traffic could be pushed over Category 7 cabling for 70 meters. The research group, which included Penn State professor of electrical engineering Mohsen Kavehrad, aimed to continue testing as chip-circuitry evolved, in order to ascertain whether or not 100-meter transmission was feasible.

This past summer, Kavehrad convened a seminar at Penn State to discuss the progress that had been made. The seminar included a group that could be considered "A-listers" of twisted-pair circuitry engineering, including several individuals who liaise with the IEEE's 802.3 groups that produce high-speed networking protocols.

In January, we will deliver further detail about the research and discoveries being made concerning the prospect of 40- and 100-Gbit Ethernet traffic over twisted-pair cabling.

Will copper cabling do it again? I wouldn't rule it out. ✕

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