

IEEE P802.3bz: New Ethernet standard ratified

October 2 2016, by Nancy Owano



Image: Wikipedia.

(Tech Xplore)—A new Ethernet standard is born. The IEEE has set the new standard for five times the speed without disruptive cable changes, said *Network World*.

The newly ratified spec is called IEEE P802.3bz.

That last bit about being without disruptive cable changes is highlighted by tech watching sites as important. The standard brings faster Internet over existing cables.

"For some, a re-cabling isn't even possible," said Sachin Gupta, Cisco vice president, product management, in a blog. "For others, unfeasible. For the rest, re-cabling is just costly and disruptive. It is easy to imagine

the value of delivering multi-gigabit speeds to the more than 1.3 billion Cat 5e/6 outlets worldwide if it doesn't require the huge head-ache and expense of a major cable replacement. The promise of NBASE-T has to have nearly every CFO, CTO, building manager and IT group breathing a huge sigh of relief."

Fundamentally, this is what the new standard is about as summarized by *fossBytes*.

"A new Ethernet standard IEEE 802.3bz has been released which boosts the theoretical bandwidth over the existing twisted pair copper wires to 2.5Gbps (2.5GBASE-T) and 5Gbps (5GBASE-T). That's five times the current theoretical bandwidth achieved on cables designed according to the 1000BASE-T [standard](#)."

Aditya Tiwari in *fossBytes* said that this standard has boosted speeds to 2.5Gbps and 5Gbps up to 100m length on the same Cat5e and Cat6 [copper wires](#) currently used. "Large organizations having thousands of meters of copper cabling inside their offices could take a breath of relief because they won't have to reinstall them."

Sebastian Anthony, *Ars Technica*, similarly recognized the advantage. He said that "the vast majority of homes, offices, and institutions use Cat 5e and Cat 6—and upgrading the cabling would be very expensive indeed."

Anthony added, "The new 2.5G/5GBASE-T standard (PDF) will let you run 2.5Gbps over 100 metres of Cat 5e or 5Gbps over 100 metres of Cat 6, which should be fine for most homes and offices. The standard also implements other nice-to-have features, including various Power over Ethernet standards (PoE, PoE+, and UPoE)—handy for rolling out Wi-Fi access [points](#)."

A noteworthy event related to the standard is coming up. Michael

Cooney, *Network World* online news editor, talked about plugfest. "Hand-in-hand with adoption of a low-speed Ethernet standard by the IEEE, proponents of the technology will hold an interoperability plugfest in October to tout the readiness of 2.5GBASE-T and 5GBASE-T [products](#)."

He said it is happening the week of Oct. 10 in New Hampshire, where "the two groups behind the new Ethernet speeds the Ethernet Alliance and the NBASE-T Alliance will work together and share post-event results of the interoperability testing performed."

Cisco shared its applause for the new standard in a recent blog from Gupta. He said, "As new 802.11ac Wave 2 wireless technology is being deployed the need to offload more and more data at higher and higher speeds from the wireless to the wired network has never been so critical."

He also said that, as a founding member of the NBASE-T Alliance, Cisco was proud to celebrate IEEE's approval of the Ethernet standard. "From the start we saw the issue, understood the opportunity and realized the value to customers. Some of our most talented [engineers](#) are investing their time and energy in the alliance."

The NBASE-T Alliance is an industry-wide effort focused for enabling development and deployment of products that support 2.5G and 5GBASE-T Ethernet. The IEEE 802.3bz approved in September is compatible with specs published by the NBASE-T Alliance.

Kamal Dalmia, president, NBASE-T Alliance, said, "The alliance looks forward to continued promotion of this new technology with activities such as plugfests and tradeshow, and exploring additional [applications](#) for its use."

More information: www.nbase.org/nbase-t-alliance-g-ethernet-standard/

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Citation: IEEE P802.3bz: New Ethernet standard ratified (2016, October 2) retrieved 13 May 2024 from <https://techxplore.com/news/2016-10-ieee-p8023bz-ethernet-standard-ratified.html>

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