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**NEW IEEE 802.3bk™ AMENDMENT DESIGNED TO ENABLE HIGHER-DENSITY,
LONGER-REACH EPON APPLICATIONS WITH IMPROVED COST OF OWNERSHIP**

*Market-driven IEEE 802.3bk intended to allow network operators
to serve more users over greater distances in EPON deployments*

PISCATAWAY, N.J., USA, XX Month 2013 – IEEE, the world's largest professional organization advancing technology for humanity, today announced the approval of IEEE 802.3bk™ “Standard for Ethernet Amendment: Physical Layer Specifications and Management Parameters for Extended Ethernet Passive Optical Networks.” This amendment to IEEE 802.3™ “Standard for Ethernet” is intended to enable higher-density and longer-reach applications of Ethernet Passive Optical Networks (EPON), while optimizing the costs of ownership for network operators.

“As operators around the world seek to build higher-density and more cost-effective optical access networks that connect more customers, service providers are grappling with a number of scalability challenges associated with delivery of mobile backhaul and guaranteeing connectivity to remote customers,” said Marek Hajduczenia, chair of the IEEE 802.3bk Extended EPON Task Force and xPON standardization director with ZTE Corporation. “The development of IEEE 802.3bk was an open, market-driven effort to amend the Ethernet standard to allow a given EPON deployment to support more users over longer distances than previously possible.”

Since the standardization of 10 Gb/s EPON (10G-EPON) in IEEE 802.3av™-2009¹, deployments of technologies based on the standard have intensified among large network operators. With the commercial success of 1G-EPON and the commercial availability of its higher-speed version, 10G-EPON, new areas for improvement were identified, such as

¹ IEEE 802.3av™-2009 “Standard for Information technology-- Local and metropolitan area networks-- Specific requirements-- Part 3: CSMA/CD Access Method and Physical Layer Specifications Amendment 1: Physical Layer Specifications and Management Parameters for 10 Gb/s Passive Optical Networks”

addressing cost-effective application of EPON in rural areas with lower customer densities, increasing subscriber density per port in the central office, sharing available links among larger concentrations of users and serving users distant from the nearest network hub. IEEE 802.3bk is intended to address these issues by amending the base IEEE 802.3 Ethernet standard to support optical loss budgets in excess of those previously specified for EPON. In this way, IEEE 802.3bk is designed to enable the expansion of the EPON service area, while reducing cost per subscriber. Additional intended benefits of the extended EPON include reduction in the footprint and power consumption of central office equipment (per customer) and the cost of service upgrades and fiber deployment, as well as an increase in customer density per central office.

~~“XXX,” said NAME, TITLE with Bright House Networks. “XXX.”~~

~~Added David Law, chair of the IEEE 802.3 Ethernet Working Group and distinguished engineer with HP Networking: “We’re excited about new IEEE 802.3bk-based products that will allow service providers to make better use of their already deployed fiber, increasing the number subscribers that can be served per OLT (optical line termination) port,” said Edwin Mallette, distinguished engineer, network architecture and standards, with Bright House Networks. “This will significantly reduce the overall cost of delivering services over an EPON-based first-mile optical access. We are also looking with interest at the next generation of EPON, primarily from the perspective of compatibility with our fiber-optic distribution network that supports 1G-EPON and 10G-EPON today. We hope that this next-generation EPON, once finished, will provide a cost-effective solution for a higher-speed optical access.”~~

“The IEEE 802.3bk-2013 amendment provides the leap forward in the capabilities of today’s EPON deployments, allowing operators to serve more customers on a single optical interface in the central office, while keeping the cost-effective and service-oriented architecture of EPON unchanged-,” ~~said David Law, chair of the IEEE 802.3 Ethernet Working Group and distinguished engineer with HP Networking.~~ “While extending capabilities of existing EPON deployments, the market-driven innovation for EPON as the optical access technology continues. We are already seeing interest in defining the next generation of EPON, and we will be looking at service provider requirements and the state of optical access technologies to provide a cost-effective evolution path for EPON into the future.”

~~Added Paul Nikolich, chair of the IEEE 802 LAN/MAN Standards Committee (LMSC) and IEEE~~

[fellow: “Using IEEE 802 LMSC's highly transparent and open process, the IEEE 802.3bk Extended EPON participants provide an excellent example of how a focused technology community can efficiently produce a high-quality standard to facilitate the deployment of increasingly higher-performance, cost-effective networks for both operators and consumers. Well done.”](#)

For a video of Marek Hajduczenia, chair of the IEEE 802.3bk Extended EPON Task Force, discussing the new standard amendment, please visit

https://www.dropbox.com/s/kini349c023szky/Marek%20Hajduczenia_IEEEP8023bkHD.mov. [Link to be updated]
[https://www.dropbox.com/s/kini349c023szky/Marek%20Hajduczenia_IEEEP8023bkHD](https://www.dropbox.com/s/kini349c023szky/Marek%20Hajduczenia_IEEEP8023bkHD.mov). [Link to be updated]

IEEE 802.3bk is available for purchase at the [IEEE Standards Store](#). [Link to be updated]

For more information about the IEEE 802.3 Ethernet Working Group, please visit <http://standards.ieee.org/develop/wg/WG802.3.html>. To learn more about Ethernet, please visit <http://standards.ieee.org/events/ethernet/> or join the conversation at <http://www.facebook.com/Ethernet40thAnniversaryIEEEESA>.

To learn more about IEEE-SA, visit us on Facebook at <http://www.facebook.com/ieeesa>, follow us on Twitter at <http://www.twitter.com/ieeesa>, connect with us on LinkedIn at <http://www.linkedin.com/groups?gid=1791118> or on the Standards Insight Blog at <http://www.standardsinsight.com>.

Deployment of technology defined by IEEE 802[®] standards is already globally pervasive, driven by the ever-growing needs of networks around the world. New application areas are constantly being considered that might leverage the IEEE 802 family of standards in their networks. To better address the needs of all of these areas, IEEE 802 standards are constantly evolving and expanding. The success of IEEE 802 standards—from their inception through today—has been their fair, open and transparent development process.

About the IEEE Standards Association

The IEEE Standards Association, a globally recognized standards-setting body within IEEE, develops consensus standards through an open process that engages industry and brings

together a broad stakeholder community. IEEE standards set specifications and best practices based on current scientific and technological knowledge. The IEEE-SA has a portfolio of over 900 active standards and more than 500 standards under development. For more information visit <http://standards.ieee.org/>.

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