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IEEE FORMS STUDY GROUP TO ADDRESS 25 Gb/s ETHERNET FOR NEXT-GENERATION DATA CENTERS

New IEEE 802.3™ group to study standardizing single-lane 25 Gb/s Ethernet interconnect technologies to provide greater server bandwidth to cloud-scale data centers

PISCATAWAY, N.J., USA, XX July 2014 – IEEE, the world’s largest professional organization dedicated to advancing technology for humanity, today announced the formation of the IEEE 802.3™ 25 Gb/s Ethernet Study Group to explore the market opportunities and needs for a single-lane 25 Gb/s speed for server interconnects for Ethernet.

Companies building data centers desire IEEE 802.3 standards-based interoperable solutions that will enable and extend a multi-vendor eco-system providing a cost optimized solution. The leveraging of serial lane 25 Gb/s signaling technology—developed to support 100 Gb/s Ethernet—enables cost optimized deployments in newly constructed data centers. This is especially true for the companies that will need server interconnects that support 10 Gb/s Ethernet and beyond.

“The application of single-lane 25 Gb/s signaling technologies provides Ethernet with a solution set that can be leveraged by those companies building the data centers of tomorrow. The new study group expects to lay the groundwork for a new Media Access Control (MAC) rate that will enable cost-optimized single-lane solutions that will increase network deployment efficiency,” said Mark Nowell, chair of the IEEE 802.3 25 Gb/s Ethernet Study Group and senior director, Cisco Systems. “The heavy lifting in developing and standardizing 25 Gb/s signaling technologies has been done as part of the development of 100 Gb/s Ethernet. These technologies can be leveraged to enable a single-lane 25 Gb/s Ethernet solution set for server interconnects for these future data centers.”

The ratification of IEEE 802.3ba™-2010 “Standard for Information Technology—Local and Metropolitan Networks for 40 Gb/s and 100 Gb/s Operation” introduced 4 x 25 Gb/s signaling as

a fundamental building block for 100 Gb/s Ethernet. Since then, the IEEE 802.3 Ethernet Working Group has expanded the use of this basic rate of signaling technology. IEEE 802.3bj™-2014 “Standard for Physical Layer Specifications and Management Parameters for 100 Gb/s Operation Over Backplanes and Copper Cables”, based on 4 x 25 Gb/s electrical signaling, defines 100 Gb/s Ethernet Operation over backplanes and copper twin-axial cables. While currently in progress, the IEEE P802.3bm™ 40 Gb/s and 100 Gb/s Fiber Optic Task Force is drafting a standard that will define 4 x 25 Gb/s operation for signal traces for chip-to-chip and chip-to-module applications, as well as for 25Gb/s operation over four parallel multi-mode fibers.

“Manufacturers and suppliers require standards-based networking to enable and extend the industry’s multi-vendor eco-system,” said David Law, chair of the IEEE 802.3 Ethernet Working Group and distinguished engineer with HP Networking. “This study group will provide the opportunity to explore the possible development of a single-lane 25 Gb/s Ethernet standard supporting those application spaces needing cost-optimized performance beyond 10 Gb/s Ethernet for large scale deployments.”

The IEEE 802.3 25 Gb/s Ethernet Study Group is seeking interested participants for the development of standards. For more information about the study group, please visit [XXX](#).

For more information on the IEEE 802.3 Ethernet Working Group, please visit <http://standards.ieee.org/develop/wg/WG802.3.html>.

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