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Contact:
Shuang Yu, IEEE-SA Marketing Manager
+1 732-981-3424, shuang.yu@ieee.org

IEEE LAUNCHES NEW EFFORT TO ADVANCE ETHERNET PASSIVE OPTICAL NETWORK (EPON) PROTOCOL OVER EXISTING COAXIAL DISTRIBUTION NETWORKS

New IEEE study group investigates 802.3 specifications for running Ethernet over coaxial cable to increase data speeds 10-fold for residential and business subscribers worldwide

PISCATAWAY, N.J., USA, [DATE] – IEEE, the world's largest professional association advancing technology for humanity, today announced it has launched a study group to investigate a new PHY (Physical Layer) standard for operating the Ethernet Passive Optical Network (EPON) protocol transparently over coaxial distribution networks. The newly formed IEEE 802.3 EPON Protocol over Coax (EPoC) Study Group will explore using the IEEE 802.3 Ethernet specifications to significantly boost and broaden the capabilities of Ethernet in existing access networks that currently serve hundreds of millions of residential and business subscribers around the world.

IEEE 802.3 EPON is the market-leading fiber-access technology, and the most successful standard developed by the IEEE 802.3 Working Group in the last decade, with worldwide deployments supporting more than 60 million subscribers today and an anticipated subscriber base of more than 100 million by the end of 2013. These systems support a diverse suite of business and residential services, including IPTV (Internet Protocol Television), VoIP (Voice-over-IP), commercial-grade data services, and mobile backhaul. IEEE 802.3 EPON specifications include symmetric data rates of 1 Gb/s and 10 Gb/s, as well as asymmetric data rates of 10 Gb/s downstream and 1 Gb/s upstream.

“Operating EPON transparently over coax is a significant step forward. It will transform the industry by greatly simplifying operator networks while simultaneously offering subscribers easy and efficient access to dramatically increased bandwidth,” said Howard Frazier, chair, IEEE 802.3 EPoC Study Group and senior technical director, Broadcom Corporation. “The ability to leverage existing Ethernet infrastructures and cable plant investments while offering a ten-fold increase in data speeds is revolutionary.”

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In many locations around the world, fiber stops at the street, basement, or curb with coaxial cable spanning the remaining distance to the subscriber, a significant percentage of whom are in multiple dwelling/tenant units. Pulling fiber is expensive and time consuming and Multiple Service Operators (MSOs) must find ways to lower the cost of upgrading their networks. The new IEEE 802.3 effort will directly address the needs of cable operators who want an end-to-end Ethernet network capable of efficiently supporting next-generation services such as video-over-IP.

The IEEE 802.3 EPoC Study Group enjoys the support of a diverse community of stakeholders from around the world, including components vendors, network equipment suppliers, cable operators, and MSOs.

“This effort is an industry pull not a technology push. We are pleased with the enthusiastic reaction we’ve received from industry who have turned to the IEEE specifically to investigate the potential for using the IEEE 802.3 EPON protocol on existing coaxial cable networks,” said David Law, chair, IEEE 802.3 Working Group and distinguished engineer, HP Networking.

The IEEE 802.3 EPoC Study Group will explore market demand, network compatibility considerations, and available technologies for a PHY specification for operating the IEEE 802.3 EPON protocol over coaxial distribution networks. The IEEE 802.3 EPoC Study Group will meet for the first time in January 2012, with the expectation that results from the investigation could be completed by July 2012.

For more information about the IEEE 802.3 EPoC Study Group, please visit: http://www.ieee802.org/3/epoc/index.html. To learn more about IEEE-SA visit us on Facebook at http://www.facebook.com/ieeesa, follow @ieeesa on Twitter, or connect with us on the Standards Insight Blog at http://www.standardsinsight.com.

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