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IEEE FORMS STUDY GROUP TO ADDRESS AUTO INDUSTRY'S GROWING INTEREST IN ETHERNET FOR COMMUNICATIONS AND CONTROL

New IEEE 802.3™ group to study standardizing Single Twisted Pair 100 Mb/s Ethernet in-vehicle technologies to better match bandwidth requirements of interconnected systems

PISCATAWAY, N.J., USA, XX May 2014 – IEEE, the world's largest professional organization dedicated to advancing technology for humanity, today announced the formation of the IEEE 802.3™ Single Twisted Pair 100 Mb/s Ethernet Study Group to explore the market opportunities and needs for [a 100 Mb/s speed for Ethernet](#) ~~multiple Ethernet speeds~~ in automotive networking.

The IEEE 802.3 Ethernet Working Group has a number of standards projects to support automotive applications. The IEEE P802.3bp™ 1000BASE-T1 1 Gb/s Operation over Single Twisted Pair Copper Cable Task Force and the IEEE P802.3bu™ 1-Pair Power over Data Lines (PoDL) Task Force helped develop draft standards to provide 1 Gb/s full-duplex operation over a single twisted copper wire pair and the delivery of power over the same twisted wire pair, respectively.

Additionally, the IEEE P802.3br™ Interspersing Express Traffic Task Force [is developing](#) ~~developed~~ a draft standard that [will](#) provides [improved](#) hardware ~~level~~ support for IEEE 802.1™ Audio/Video Bridging and Time Sensitive Networks, [which provide predictable, low-jitter delivery of high-priority traffic even over congested links to ensure that high-priority traffic is delivered predictably and with low-jitter.](#)

~~Many users, premium and volume vehicle manufactures, and their suppliers, desire an IEEE 802.3 standards-based solution in order to enable and extend a multi-vendor-supplied eco-system for the automotive industry.~~

~~Not all automotive sub-systems require a 1 Gb/s Ethernet connection. Smaller, less powerful Electronic Control Units (ECUs) may only be able (or need) to support a 100 Mb/s Ethernet~~

~~connection. A reduced data rate will allow for lower-performance, more economical twisted pair wiring to be used. As a result, automotive vendors are looking for an IEEE standardized, interoperable solution at 100 Mb/s speeds~~

Many vehicle manufactures, and their suppliers, desire IEEE 802.3 standards-based interoperable solutions in order to enable and extend a multi-vendor supplied eco-system for the automotive industry. While an increasing number of automotive sub-systems will require a 1 Gb/s Ethernet connection, the stringent economic constraints of the volume vehicle environment only allow the use of a 100 Mb/s Ethernet connection in many of the applications. A reduced data rate will allow for lower cost Electronic Control Units (ECU), and more economical twisted pair wiring. As a result, automotive vendors are looking for an IEEE standardized, interoperable solution at 100 Mb/s.

“A 100 Mb/s single twisted pair solution provides another option for Ethernet used in networking automotive technology systems. The new study group expects to lay the groundwork for ~~will help develop~~ another single twisted pair technology standard and ‘future proof’ these systems, while maintaining traditional Ethernet compatibility with higher-performance 1000BASE-T1 links that may also be used in the car,” said Thomas Hogenmüller, chair of the IEEE 802.3 Single Twisted Pair 100 Mb/s Ethernet Study Group and team manager, E/E-Architecture Engineering Communication Technologies, with Robert Bosch GmbH. “The 100 Mb/s option will also allow for a more rapid adoption of driver assist and other vehicle safety systems into low to mid-range vehicles.”

“An IEEE 802.3 study group is formed when there is interest in studying the potential of initiating an IEEE 802.3 Ethernet standards-development project,” 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 consider the potential for development of a single twisted pair 100 Mb/s Ethernet standard supporting automotive applications, as well as broader transportation and Internet of Things applications, combined with the provision of power enabled by the standard under development in the existing IEEE P802.3bu 1-Pair Power over Data Lines (PoDL) Task Force.”

The IEEE 802.3 Single Twisted Pair 100 Mb/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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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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