P802.3bp

Submitter Email: david_law@ieee.org
Type of Project: Amendment to IEEE Standard 802.3-2012
PAR Request Date: 08-Oct-2012
PAR Approval Date:
PAR Expiration Date:
Status: Unapproved PAR, PAR for an Amendment to an existing IEEE Standard

1.1 Project Number: P802.3bp
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use

2.1 Title: IEEE Standard for Ethernet Amendment Physical Layer Specifications and Management Parameters for 1 Gb/s Operation over Fewer than Three Twisted Pair Copper Cable

3.1 Working Group: Ethernet Working Group (C/LM/WG802.3)
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3.2 Sponsoring Society and Committee: IEEE Computer Society/LAN/MAN Standards Committee (C/LM)
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4.1 Type of Ballot: Individual
4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 11/2013
4.3 Projected Completion Date for Submittal to RevCom: 05/2014

5.1 Approximate number of people expected to be actively involved in the development of this project: 50
5.2.a. Scope of the complete standard: This standard defines Ethernet local area, access and metropolitan area networks. Ethernet is specified at
selected speeds of operation; and uses a common media access control (MAC) specification and management information base (MIB). The Carrier Sense Multiple Access with Collision Detection (CSMA/CD) MAC protocol specifies shared medium (half duplex) operation, as well as full duplex operation. Speed specific Media Independent Interfaces (MIIs) provide an architectural and optional implementation interface to selected Physical Layer entities (PHY). The Physical Layer encodes frames for transmission and decodes received frames with the modulation specified for the speed of operation, transmission medium and supported link length. Other specified capabilities include: control and management protocols, and the provision of power over selected twisted pair PHY types.

5.2.b. Scope of the project: The scope of this project is to specify additions to and appropriate modifications of IEEE Std 802.3 to add a point-to-point 1 Gb/s Physical Layer (PHY) specifications and management parameters for operation on fewer than three pairs of twisted copper cables.

5.3 Is the completion of this standard dependent upon the completion of another standard: No
5.4 Purpose: This document will not include a purpose clause. **Changes in purpose:**
5.5 Need for the Project: Adoption of Ethernet into new market areas in automotive, industrial controls and automation, transportation (aircraft, railway and heavy trucks) has generated a need for a 1 Gb/s solution that will operate over fewer than three twisted pair copper cables over a lower-performance channel as well as other applications, such as carbon footprint sensitive applications, that will benefit by a reduction in the number of wire pairs and magnetics. IEEE Std 802.3 does not currently support 1 Gb/s operation over fewer than four pairs of twisted copper cable.

5.6 Stakeholders for the Standard: Stakeholders identified to date includes but are not limited to: users and producers of systems and components for the automotive, industrial controls, transportation (aircraft and rail) industries.

Intellectual Property
6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?: No
6.1.b. Is the Sponsor aware of possible registration activity related to this project?: No

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7.1 Are there other standards or projects with a similar scope?: No
7.2 Joint Development
Is it the intent to develop this document jointly with another organization?: No

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8.1 Additional Explanatory Notes (Item Number and Explanation):