

P802.3bw

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Type of Project: Amendment to IEEE Standard 802.3-2012

PAR Request Date: 12-May-2014

PAR Approval Date:

PAR Expiration Date:

Status: Unapproved PAR, PAR for an Amendment to an existing IEEE Standard

1.1 Project Number: P802.3bw

1.2 Type of Document: Standard

1.3 Life Cycle: Full Use

2.1 Title: Standard for Ethernet Amendment Physical Layer Specifications and Management Parameters for 100 Mb/s Operation over a Single Balanced Twisted Pair Cable (100BASE-T1)

3.1 Working Group: Ethernet Working Group (C/LM/WG802.3)

Contact Information for Working Group Chair

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3.2 Sponsoring Society and Committee: IEEE Computer Society/LAN/MAN Standards Committee (C/LM)

Contact Information for Sponsor Chair

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Contact Information for Standards Representative

Name: James Gilb

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3.3 Joint Sponsor: IEEE Computer Society/LAN/MAN Standards Committee (C/LM)

Contact Information for Sponsor Chair

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Contact Information for Standards Representative

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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: 07/2015

4.3 Projected Completion Date for Submittal to RevCom: 02/2016

5.1 Approximate number of people expected to be actively involved in the development of this project: 40

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 Standard for Ethernet to add a point-to-point full duplex 100 Mb/s Physical Layer (PHY) specifications and management parameters for operation over single twisted pair balanced cabling.

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.

5.5 Need for the Project: Adoption of Ethernet into the new market area of automotive has generated a need for a 100 Mb/s solution that will operate over single balanced twisted pair cabling on 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 100 Mb/s operation over single balanced twisted pair cabling.

5.6 Stakeholders for the Standard: Automotive, Other Transportation, Industrial, Silicon Manufacturers.

Intellectual Property

6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?: Yes

If yes please explain: The proposed standard is expected to be substantially based on previously published material copyrighted by Broadcom Corporation. Assurance of copyright permission is in possession of the WG Chair.

6.1.b. Is the Sponsor aware of possible registration activity related to this project?: No

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

8.1 Additional Explanatory Notes (Item Number and Explanation):