

P802.3bv

Submitter Email: bob.grow@ieee.org

Type of Project: Amendment to IEEE Standard 802.3-2012

PAR Request Date: 03-Apr-2014

PAR Approval Date:

PAR Expiration Date:

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

1.1 Project Number: P802.3bv

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 1000 Mb/s Operation Over Plastic Optical Fiber

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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4.1 Type of Ballot: Individual

4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 11/2015

4.3 Projected Completion Date for Submittal to RevCom: 05/2016

5.1 Approximate number of people expected to be actively involved in the development of this project: 20

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: This amendment adds physical layer (PHY) specifications for IEEE Std 802.3 operation at 1000 Mb/s using plastic optical fiber as the point-to-point data transmission medium. Appropriate management parameters will be enhanced or added in support of the PHY specifications.

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: Plastic optical fiber (POF) provides significant advantages over glass optical fiber (IEEE Std 802.3 already contains multimode and single mode glass fiber specifications at multiple speeds of operation). POF is a medium used in current automotive networks

and with such networks migrating to Ethernet, maintaining POF as a medium option is a requirement for many manufacturers. Other markets like home networking benefit from the characteristics of POF as a medium option. POF requires virtually no training to terminate, its non-conductive cable construction increases installation options and its noise-immunity increases the application space for Ethernet.

5.6 Stakeholders for the Standard: Stakeholders identified to date include but are not limited to: users and producers of systems and components for the automotive, home networking, medical and similar industries where plastic optical fiber provides a viable alternative transmission medium to existing specified medium alternatives.

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

7.1 Are there other standards or projects with a similar scope?: Yes

If Yes please explain: The project will consider leveraging information for use of plastic optical fibre contained in the noted ETSI technical specification.

and answer the following

Sponsor Organization: ETSI

Project/Standard Number: TS 105 175-1

Project/Standard Date: 01-Oct-2011

Project/Standard Title: Access, Terminals, Transmission and Multiplexing (ATTM);

Plastic Optical Fibre System Specifications

for 100 Mbit/s and 1 Gbit/s

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):