P802.3bv

Submitter Email: david_law@ieee.org
Type of Project: Amendment to IEEE Standard 802.3-2012
PAR Request Date: 18-May-2014
PAR Approval Date:
PAR Expiration Date:
Status: Unapproved PAR, PAR for an Amendment to an existing IEEE Standard

1.1 Project Number: P802.3bv
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
Name: David Law
Email Address: david_law@ieee.org
Phone: +44 1631 563729
Contact Information for Working Group Vice-Chair
Name: Adam Healey
Email Address: adam.healey@avagotech.com
Phone: 6107123508

3.2 Sponsoring Society and Committee: IEEE Computer Society/LAN/MAN Standards Committee (C/LM)
Contact Information for Sponsor Chair
Name: Paul Nikolich
Email Address: p.nikolich@ieee.org
Phone: 857.205.0050
Contact Information for Standards Representative
Name: James Gilb
Email Address: gilb@ieee.org
Phone: 858-229-4822

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 standardized 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 distinct advantages in applications where long link length is not a requirement; and where ease of installation is important (e.g., home networking). POF requires virtually no installation training and only simple tools to

terminate. POF is also used in harsh environments (e.g., industrial and automotive networking) where its robustness provide significant advantages. Automotive and industrial networks are migrating toward using Ethernet, so maintaining POF as a medium option is a requirement for many manufacturers. POF's non-conductive cable construction and noise immunity increase installation options and the application space for Ethernet. Current networks in the target markets require operation at a gigabit per second data rate.

5.6 Stakeholders for the Standard: ~~Stakeholders identified to date include but are not limited to: u~~Users and producers of systems and components for the home networking, industrial, automotive, medical and other industries where plastic optical fiber provides a preferred alternative transmission medium to existing IEEE Std 802.3 media 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

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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 fiber contained in the noted VDE document.~~ The VDE document listed below was withdrawn. Proponents accepted encouragement of IEEE-SA to do the work in IEEE 802.3.
and answer the following
Sponsor Organization: ~~VDE~~ Verband der Elektrotechnik, Elektronik und Informationstechnik (Association for Electrical, Electronic and Information Technologies)
Project/Standard Number: VDE V 0885-763
Project/Standard Date: 01-Sep-2013
Project/Standard Title: Physical layer parameters and specification for high speed operation over plastic optical fibers type HS-BASE-P.

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): ~~7.1 VDE is Verband der Elektrotechnik Elektronik Informationstechnik (Association for Electrical, Electronic & Information Technologies). The VDE document was withdrawn at the request of IEEE/IEEE 802.3. Its specifications will be considered in development of this standard.~~