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P802.3bg

Submitter Email: david_law@ieee.org

Type of Project: Amendment to IEEE Standard 802.3-2008

PAR Request Date: 28-Jan-2010

PAR Approval Date:

PAR Expiration Date:

Status: Unapproved PAR, PAR for an Amendment to an existing IEEE Standard 802.3-2008

1.1 Project Number: P802.3bg

1.2 Type of Document: Standard

1.3 Life Cycle: Full Use

2.1 Title: Standard for Information technology--Telecommunications and information exchange between systems--Local and metropolitan area networks--Specific requirements Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer SpecificationsAmendment: Physical Layer and Management Parameters for Serial 40 Gb/s Ethernet Operation Over Single Mode 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: +44 131 665 7264

Contact Information for Working Group Vice-Chair

Name: Wael Diab

Email Address: wael.diab@gmail.com

Phone: 4154468066

3.2 Sponsoring Society and Committee: IEEE Computer Society/Local and Metropolitan Area Networks (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

None

4.1 Type of Ballot: Individual

4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 01/2011

4.3 Projected Completion Date for Submittal to RevCom: 09/2011

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

5.2 Scope: The scope of this project is to add a single-mode fiber Physical Medium Dependent (PMD) option for serial 40 Gb/s operation by specifying additions to, and appropriate modifications of, IEEE Std 802.3-2008 as amended by the IEEE P802.3ba project (and any other approved amendment or corrigendum).

5.3 Is the completion of this standard dependent upon the completion of another standard: Yes
If yes please explain: Yes, this project will define a new PMD, and will build upon the 40Gb/s MAC, PCS sub-layer, PMA sub-layer, logical interfaces, electrical interfaces, and management registers defined in IEEE P802.3ba 40Gb/s and 100Gb/s Ethernet. The IEEE P802.3ba project is near completion with an expected RevCom submittal date of June 2010. The addition of 40Gb/s serial PMD operation to IEEE P802.3ba would result in delays to IEEE P802.3ba that would impact the industry.

5.4 Purpose: This project will define a 40 Gb/s serial PMD that supports a link distance of at least 2km over single-mode fiber that is optically compatible with existing carrier 40Gb/s client interfaces (OTU3/STM-256/OC-768/40G Packet over SONET (POS)), which will enable interconnection between equipment in carrier networks or as uplink interconnections from enterprises, data centers, or other network operators into carrier networks.

5.5 Need for the Project: The project is needed to provide multiple system operators and telecommunications operators with an IEEE 802.3 Ethernet 40 Gb/s serial PHY that provides optical compatibility with existing carrier 40 Gb/s client interfaces.

5.6 Stakeholders for the Standard: Stakeholders identified to date include, but are not limited to, users and producers of systems and components for telecommunications carriers, data centers, networking systems, and multiple system operators (MSOs).

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?: No

7.2 International Activities

a. Adoption

Is there potential for this standard (in part or in whole) to be adopted by another national, regional or international organization?: No

b. Joint Development

Is it the intent to develop this document jointly with another organization?: No

c. Harmonization

Are you aware of another organization that may be interested in portions of this document in their standardization development efforts?: No

8.1 Additional Explanatory Notes (Item Number and Explanation): OTU3, STM-256 and OC-768 are terms of use rather than abbreviations. They are all 40 Gb/s frame formats used in optical transport networks.

OTU3 is an Optical channel Transport Unit type 3 as defined in ITU-T Recommendation G.709 (<http://www.itu.int/rec/T-REC-G.709/en>) with a signalling rate of 43 Gb/s.

STM-256 is a Synchronous Transport Module as defined in ITU-T Recommendation G.707 (<http://www.itu.int/rec/T-REC-G.707/en>) with a signalling rate of 39.8 Gb/s.

OC-768 is the SONET equivalent of an STM-256 as defined in ATIS-0900105.2008 (<http://www.atis.org/docstore/product.aspx?id=24927>) with a signalling rate of 39.8 Gb/s.

SONET is the Synchronous Optical NETwork as defined in ATIS-0900105.2008

(<http://www.atis.org/docstore/product.aspx?id=24927>)

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