

NGEABT Study Group Architecture Ad Hoc Proposed PAR

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Version 2

Background

- This deck presents the proposed PAR originally prepared by Yong Kim (Broadcom), and reviewed a number of times at the NGEABT Study Group Architecture AdHoc meetings.

2.1 Project Title

IEEE Standard for Ethernet Amendment:
Media Access Control Parameters, Physical
Layers and Management Parameters for 2.5G/s
and 5Gb/s Operation.

Other PAR Fields (1)

4.1 Type of Ballot: Individual

4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot:
01/2017

4.3 Projected Completion Date for Submittal to RevCom: 08/2017

5.1 Approximate number of people expected to be actively involved in the development of this project: 30

5.2 Scope: <next slide>

5.3 Is the completion of this standard dependent upon the completion of another standard: No.

5.4 Purpose: This document will not include purpose clause

5.2 Scope (a) & (b)

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 defines Ethernet Media Access Control (MAC) parameters, physical layer specifications, and management parameters for the transfer of Ethernet format frames at 2.5G/s and 5Gb/s over balanced twisted pair transmission media used in structured cabling.

5.5 Need for the Standard

- There is a need for greater than 1 Gb/s Ethernet connectivity over structured twisted pair wiring to serve existing and growing needs of IEEE 802.11ac based enterprise wireless access points. Availability of 2.5G/s and 5Gb/s signaling technologies enables interconnect solutions for enterprise wireless access points to switch applications to be served over structured Cat5e or better twisted pair cabling.

Other PAR Fields (2)

5.6 Stakeholders for the Standard: Users and producers of systems and components for the enterprise wired and wireless networks.

6.1 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 Joint Development: No.

8.1 Additional Explanatory Notes (Item Number and Explanation) :

This amendment will comply with IEEE Std 802, IEEE Std 802.1AC and IEEE Std 802.1Q

Next Steps

- Straw Poll on PAR contents.
- If it passes, SG Chair to transfer this text into the IEEE PAR tool, and bring back to the group for review.

Thank you.