

IEEE 802.3 Working Group March 2015 Plenary Week

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Current IEEE 802.3 activities

IEEE 802.3 Task Forces

- IEEE P802.3bn EPON Protocol over Coax (EPoC)
- IEEE P802.3bp 1000BASE-T1
- IEEE P802.3bq 40GBASE-T
- IEEE P802.3br Interspersing Express Traffic
- IEEE P802.3bs 400 Gb/s Ethernet
- IEEE P802.3bt DTE Power via MDI over 4-Pair
- IEEE P802.3bu 1-Pair Power over Data Lines (PoDL)
- IEEE P802.3bv Gigabit Ethernet Over Plastic Optical Fiber
- IEEE P802.3bw 100BASE-T1
- IEEE P802.3 (IEEE 802.3bx) Maintenance #11 (revision)
- IEEE P802.3by 25 Gb/s Ethernet

IEEE 802.3 Study Groups

- IEEE 802.3 Next Generation Enterprise Access BASE-T PHY
- IEEE 802.3 25GBASE-T

IEEE 802.3 Industry Connection Ad Hoc

- Next Generation Ethernet Passive Optical Networking (NGEPON)

IEEE 802.3 Maintenance

Meeting plan

- Consider new maintenance requests

- Reviewing status of outstanding maintenance requests

- Progress IEEE P802.3 (IEEE 802.3bx) Maintenance #11 (revision)

 - Draft D2.1 sent out for 1st Working Group recirculation ballot

 - Consideration of comments received against draft D2.1

 - Prepare request for approval to proceed to Sponsor ballot

- Consider any other maintenance business

Web page

<http://www.ieee802.org/3/maint/index.html>

IEEE P802.3bn EPON Protocol over Coax (EPoC) Task Force

Description

Provide an amendment to the IEEE 802.3 Ethernet standard to add physical layer specifications and management parameters for symmetric and/or asymmetric operation of up to 10 Gb/s on point-to-multipoint Radio Frequency (RF) distribution plants comprising either amplified or passive coaxial media. It also extends the operation of Ethernet Passive Optical Networks (EPON) protocols, such as MultiPoint Control Protocol (MPCP) and Operation Administration and Management (OAM)

Web site: <http://www.ieee802.org/3/bn/index.html>

Status

Met during the January 2015 meeting series

Draft D1.3 sent out for 4th Task Force review

Meeting plan

Consideration of comments received against draft D1.3

Continue work towards technically complete draft for working group ballot

IEEE P802.3bp 1000BASE-T1 Task Force

Description

Specify additions to and appropriate modifications of IEEE Std 802.3 to add a point-to-point 1 Gb/s Physical Layer (PHY) specifications and management parameters for operation over a single twisted pair copper cables.

Web site: <http://www.ieee802.org/3/bp/index.html>

Status

Met during the January 2015 meeting series

Met during an additional February 2015 interim

Draft D1.3 sent out for 4th Task Force review

Meeting plan

Consideration of comments received against draft D1.3

Continue towards technically complete draft for working group ballot

IEEE P802.3bq 40GBASE-T Task Force

Description

Specify a Physical Layer (PHY) for operation at 40 Gb/s on balanced twisted-pair copper cabling, using existing Media Access Control, and with extensions to the appropriate physical layer management parameters.

Web site: <http://www.ieee802.org/3/bq/index.html>

Status

Met during the January 2015 meeting series

Draft D1.2 sent out for 3rd Task Force review

Draft D1.2 also to be submitted for Working Group preview

See also IEEE P802.3 25GBASE-T Study Group

Meeting plan

Consideration of comments received against draft D1.2

Prepare for request to proceed to Working Group ballot

IEEE P802.3br Interspersing Express Traffic Task Force

Description

Specify additions to and appropriate modifications of IEEE Std 802.3 to add support for interspersing express traffic over a single physical link.

Web site: <http://www.ieee802.org/3/br/index.html>

Status

Met during the January 2015 meeting series

Draft D1.9 submitted for Working Group preview

Meeting plan

Prepare for request to proceed to Working Group ballot

IEEE P802.3bs 400 Gb/s Ethernet Task Force

Description

Define Ethernet Media Access Control (MAC) parameters, physical layer specifications, and management parameters for the transfer of Ethernet format frames at 400 Gb/s

Web site: <http://www.ieee802.org/3/bs/index.html>

Status

Met during the January 2015 meeting series

Selecting set of baseline proposals to satisfy project objectives

Generation of "Big Tickets Item" (BTI) list

Meeting plan

Continue to work on selection of a set of baseline proposals

Review of progress in addressing BTI list

Evaluate modification of timeline, based on resolution of BTI's

IEEE P802.3bt DTE Power via MDI over 4-Pair Task Force

Description

Augment the capabilities of the IEEE Std 802.3 standard with 4-pair power and associated power management information. The project will augment the methodology for the provision of power via balanced cabling to connected Data Terminal Equipment with 802.3 interfaces. Optional augmented power limit will be made available for certain structured cabling systems. Compatibility with existing equipment will be maintained.

Web site: <http://www.ieee802.org/3/bt/index.html>

Status

Met during the January 2015 meeting series

Selecting set of baseline proposals to satisfy project objectives

Meeting plan

Continue to work on selection of a set of baseline proposals

IEEE P802.3bu 1-Pair Power over Data Lines (PoDL) Task Force

Description

Single twisted pair Ethernet links are in development (e.g. IEEE P802.3bp) and some applications (e.g., automotive sensors, industrial devices) require power delivery over the link. A new standard is required to provide power over single twisted pair links where IEEE Std 802.3 Clause 33 Data Terminal Equipment (DTE) Power via Media Dependent Interface (MDI) cannot be used.

Web site: <http://www.ieee802.org/3/bu/index.html>

Status

Met during the January 2015 meeting series

Selecting set of baseline proposals to satisfy project objectives

Meeting plan

Continue to work on selection of a set of baseline proposals

IEEE P802.3bv Gigabit Ethernet Over Plastic Optical Fiber Task Force

Description

Specify an amendment to the IEEE 802.3 Ethernet standard to add physical layer (PHY) specifications for operation at 1000 Mb/s using standardized plastic optical fiber as the point-to-point data transmission medium.

Web site: <http://www.ieee802.org/3/bv/index.html>

Status

IEEE P802.3bv PAR approved by IEEE-SA Standards Board

Approval date 10th December 2014

First meeting during January 2015 meeting series

Selecting set of baseline proposals to satisfy project objectives

Meeting plan

Continue to work on selection of a set of baseline proposals

IEEE P802.3bw 100BASE-T1 Task Force

Description

Specify additions to IEEE Std 802.3 Standard for Ethernet to add a point-to-point full duplex 100 Mb/s Physical Layer (PHY) specifications for operation over single twisted pair balanced cabling.

Web site: <http://ieee802.org/3/bw/index.html>

Status

Met during the September 2015 meeting series

Additional February 2015 interim meeting

Draft D1.3 sent out for 1st Working Group recirculation ballot

Meeting plan

Consideration of comments received against draft D1.3

Prepare request for conditional approval to proceed to Sponsor ballot

IEEE P802.3by 25 Gb/s Ethernet Task Force

Description

Define Ethernet Media Access Control (MAC) parameters, physical layer specifications, and management parameters for the transfer of Ethernet format frames at 25 Gb/s for server to switch interconnections

Web site: <http://ieee802.org/3/by/public/index.html>

Status

IEEE P802.3by PAR approved by IEEE-SA Standards Board

Approval date 10th December 2014

First meeting during January 2015 meeting series

Selecting set of baseline proposals to satisfy project objectives

Draft D0.1 sent out for 1st Task Force review

Meeting plan

Continue to refine set of baseline proposals

Goal of generating D1.0 out of the meeting

IEEE 802.3 Next Generation Enterprise Access BASE-T PHY Study Group

Description

Develop PAR and CSD for next generation enterprise BASE-T Access

Web site: <http://www.ieee802.org/3/NGEBASET/index.html>

Status

First meeting during January 2015 meeting series

Completed draft objectives, CSD and PAR for proposed project

Meeting plan

Progress approval of objectives, CSD and NesCom submittal of PAR for IEEE P802.3bz Standard for Ethernet Amendment: Media Access Control Parameters, Physical Layers and Management Parameters for 2.5 Gb/s and 5 Gb/s Operation

IEEE 802.3 Next Generation Enterprise Access BASE-T PHY Study Group (con't)

Scope of proposed project

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

Draft PAR

http://www.ieee802.org/3/NGEBASET/NGEABT_PAR_DRAFTa_15-Jan-15.pdf

Draft CSD

http://www.ieee802.org/3/NGEBASET/802d3_NGEABT_CSD_SG_approved.pdf

Draft Objectives

http://www.ieee802.org/3/NGEBASET/ngeabt_objectives_draft_SG_approved.pdf

IEEE 802.3 25GBASE-T Study Group

Description

Develop PAR and CSD modifications to IEEE P802.3bq to add 25GBASE-T to that project.

Web site: <http://www.ieee802.org/3/25GBASET/public/index.html>

Status

First meeting during January 2015 meeting series

Completed draft IEEE P802.3bq 40GBASE-T PAR modification request

Completed a set of CSD responses, and a set of proposed objective modification, in support of the IEEE P802.3bq PAR modification request

Meeting plan

Progress approval of IEEE P802.3bq 40GBASE-T PAR modification request and supporting CSD responses

IEEE 802.3 25GBASE-T Study Group (con't)

Scope of proposed modified IEEE P802.3bq project

Specify Physical Layers (PHYs) for operation at 25 Gb/s and 40 Gb/s on balanced twisted-pair copper cabling, using existing Media Access Control, and with extensions to the appropriate physical layer management parameters.

Draft PAR

http://www.ieee802.org/3/25GBASET/draft_P802.3bq_PAR_modification_300115.pdf

Draft CSD

http://www.ieee802.org/3/25GBASET/draft_P802.3bq_modified_CSD.pdf

Draft Objectives

http://www.ieee802.org/3/25GBASET/draft_P802.3bq_modified_objectives.pdf

IEEE 802.3 Industry Connections Next Generation Ethernet Passive Optical Network (NG-EPON) Ad Hoc

Description

The activity has been chartered to generate a report which will detail: (a) operators' requirements, (b) technological and economic tradeoffs of various approaches to next generation EPON, (c) the state of the art for optical subscriber access network technology, and (d) potential solutions that merit further consideration.

Web site: http://www.ieee802.org/3/ad_hoc/ngepon/index.html

Status

Meeting during January 2015 meeting series

Additional February 2015 interim meeting

Data gathering and review of draft report

Meeting plan

Draft D2.0 circulated to Working Group in preparation for approval request

Seek Working Group approval of draft report

IEEE 802.3 Officers

IEEE 802.3 Chair: David Law <dlaw@hp.com>

IEEE 802.3 Vice Chair: Adam Healey <adam.healey@avagotech.com>

IEEE 802.3 Secretary: Pete Anslow <panslow@ciena.com>

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IEEE 802.3 Treasurer: Valerie Maguire <valerie_maguire@siemon.com>

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IEEE P802.3bp 1000BASE-T1: Steve Carlson <scarlson@hspdesign.com>

IEEE P802.3bq 40GBASE-T: Dave Chalupsky <david.chalupsky@intel.com>

IEEE P802.3br Interspersing Express Traffic: Ludwig Winkel <ludwig.winkel@siemens.com>

IEEE P802.3bs 400 Gb/s Ethernet: John D'Ambrosia <john_dambrosia@dell.com>

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IEEE P802.3bu 1-Pair Power over Data Lines (PoDL): Dave Dwelley <ddwelley@linear.com>

IEEE P802.3bv Gigabit Ethernet Over Plastic Optical Fiber: Bob Grow <bob.grow@ieee.org>

IEEE P802.3bw 100BASE-T1: Thomas Hogenmueller <thomas.hogenmueller@de.bosch.com>

IEEE P802.3by 25 Gb/s Ethernet: Mark Nowell <mnowell@cisco.com>

IEEE 802.3 Study Group chairs

IEEE 802.3 Next Generation Enterprise Access BASE-T PHY: Dave Chalupsky <david.chalupsky@intel.com>

IEEE 802.3 25GBASE-T: Dave Chalupsky <david.chalupsky@intel.com>

Preliminary IEEE 802.3 Meeting Plan

| | Sun | Mon | Tue | Wed | Thu |
|----|-----|---|---|---|--|
| AM | | IEEE P802.3by IEEE 802.3 Opening Plenary | IEEE P802.3bp IEEE P802.3br IEEE P802.3bu IEEE P802.3by | IEEE P802.3bn IEEE P802.3bs IEEE P802.3bt IEEE P802.3bv IEEE P802.3bw BASE-T | IEEE P802.3bn IEEE P802.3br IEEE P802.3bs IEEE P802.3bt IEEE P802.3bv IEEE P802.3bw BASE-T |
| PM | | IEEE P802.3bp IEEE P802.3bu IEEE P802.3by Maintenance NGEPON Ad Hoc | IEEE P802.3bn IEEE P802.3bp IEEE P802.3bs IEEE P802.3bt IEEE P802.3by | IEEE P802.3bn IEEE P802.3bs IEEE P802.3bt IEEE P802.3bv IEEE P802.3bw BASE-T | IEEE 802.3 Closing Plenary |
| | | Real-time Ethernet on IEEE 802.3 Networks | | | |
| | | Introduction to EPoC tutorial part 2 | | | |
| | | Expanding User Experiences | | | |

BASE-T: IEEE P802.3bq / IEEE 802.3 25GBASE-T
 Study Group / IEEE 802.3 Next Generation
 Enterprise Access BASE-T PHY Study Group

IEEE 802.3 Standards

IEEE Std 802.3TM-2012 (30th Aug 12 / 28th Dec 12)*

IEEE Std 802.3bkTM-2013 (23rd Aug 13 / 30th Aug 13)*

IEEE Std 802.3bjTM-2014 (12th Jun 14 / 3rd Sep 14)

IEEE Std 802.3bmTM-2015 (16th Feb 15 / TBD)

IEEE Std 802.3.1TM-2013 (14th Jun 13 / 2nd Aug 13)*

* Available through Get IEEE 802

<http://standards.ieee.org/getieee802/802.3.html>

Note 1: Dates are Approval date / Publication date

Current project drafts

IEEE P802.3bq/D1.2 40GBASE-T

Working Group ballot preview draft

IEEE P802.3br/D1.9 Interspersing Express Traffic

Working Group ballot preview draft

IEEE P802.3bw/D1.3 100BASE-T1

Working Group ballot 1st recirculation ballot draft

IEEE P802.3/D2.1 (IEEE 802.3bx) Maintenance #11 (revision)

Working Group ballot 1st recirculation ballot draft

IEEE 802.3 Next Generation Ethernet Passive Optical Network report/D2.0

Circulated to Working Group in preparation for approval request