IEEE 802.3 Working Group
July 2021 Plenary Week

David Law
Chair, IEEE 802.3 Working Group
dlaw@hpe.com

Web site: www.ieee802.org/3

IEEE 802.3 Maintenance

Progress

Maintenance requests

No new maintenance requests received since May 2021 meeting

Reviewed status of outstanding maintenance requests

ISO/IEC JTC1 SC6

Progressed IEEE Std 802.3cv-2021, IEEE Std 802.3ct-2021 and IEEE Std 802.3cp-2021 adoption

IEEE P802.3 (IEEE 802.3dc) revision project

Reviewed revision project plans

Approval granted to proceed to Working Group Ballot

Next steps

Conduct IEEE P802.3 (IEEE 802.3dc) D2.0 initial Working Group ballot

Web page

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

IEEE P802.3ck 100 Gb/s, 200 Gb/s, and 400 Gb/s Electrical Interfaces Task Force

Description

This project is to specify additions to and appropriate modifications of IEEE Std 802.3 to add Physical Layer specifications and Management Parameters for 100 Gb/s, 200 Gb/s, and 400 Gb/s electrical interfaces based on 100 Gb/s signaling

Web site: http://ieee802.org/3/ck/index.html

Progress

IEEE P802.3ck D2.1 first Working Group recirculation ballot comment resolution

Developing responses for 123 comments received

Next steps

Complete responses to IEEE P802.3ck D2.1 comments

Conduct IEEE P802.3ck D2.2 second Working Group recirculation ballot

IEEE P802.3cs Increased-reach Ethernet optical subscriber access (Super-PON) Task Force

Description

Define physical layer specifications and management parameters for optical subscriber access supporting point-to-multipoint operations using wavelength division multiplexing over an increased-reach (up to at least 50 km) passive optical network (PON)

Web site: http://ieee802.org/3/cs/index.html

Progress

IEEE P802.3cs D2.2 second Working Group recirculation ballot comment resolution

Developed responses for 11 comments received

Next steps

Conduct IEEE P802.3cs D2.3 third Working Group recirculation ballot

IEEE P802.3cw 400 Gb/s over DWDM Systems Task Force

Description

Define physical layer specifications and management parameters for the transfer of Ethernet format frames at 400 Gb/s at reaches greater than 10 km over DWDM systems.

Web site: http://ieee802.org/3/cw/index.html

Progress

IEEE P802.3cw D1.1 second Task Force review underway

Next steps

Continue baseline selection to satisfy the project objectives

IEEE P802.3cw D1.1 second Task Force review comment resolution

Conduct IEEE P802.3cw D1.2 third Task Force review

IEEE P802.3cx Improved PTP timestamping accuracy Task Force

Description

Define optional enhancements to Ethernet support for time synchronization protocols to provide improved timestamp accuracy in support of ITU-T Recommendation G.8273.2 'Class C' and 'Class D' system time error performance requirements.

Web site: http://ieee802.org/3/cx/index.html

Progress

IEEE P802.3cx D1.1 second Task Force review comment resolution

Developed responses for 10 comments received

Considered 1 contribution

TX/RX_num_unit_change xMII signals proposal

Contribution accepted as part of D1.1 comment resolution

Next steps

Conduct IEEE P802.3cx D1.2 third Task Force review

IEEE P802.3cy Greater than 10 Gb/s Electrical Automotive Ethernet Task Force

Description

Specify additions to and appropriate modifications of IEEE Std 802.3 to add greater than 10 Gb/s electrical Physical Layer specifications for symmetrical and asymmetrical operation and management parameters for media and operating conditions for applications in the automotive environment.

Web site: http://ieee802.org/3/cy/index.html

Progress

Considered 3 contributions

Link Segment IL Baseline Proposal, Return Loss Limit Proposal, and Additional Limits on Echo

Adopted baseline for link segment (IL, RL, micro-reflections)

Next steps

Continue baseline selection to satisfy the project objectives

IEEE P802.3cz Multi-Gigabit Optical Automotive Ethernet Task Force

Description

Specify additions to and appropriate modifications of IEEE Std 802.3 to add Physical Layer specifications and management parameters for multi-gigabit optical Ethernet for application in the automotive environment.

Web site: http://ieee802.org/3/cz/index.html

Progress

Completed IEEE P802.3cz D1.1 second Task Force review comment resolution

Considered 9 contributions

Holistic approach for VCSEL wavelength selection, Estimated minEMB for OM3 at 1300nm, Bit Error Ratio (BER) test mode proposal, Loopback modes proposal, BASE-U EEE proposal, Status on silicon photonics link budget, Modal noise penalty and link budget proposal for 25, 10, 5 and 2.5 Gb/s, A Single PMD to Cover 840-990 nm with OM3 fiber, and Current situation on wavelength selection

Next steps

Continue baseline selection to satisfy the project objectives

Conduct IEEE P802.3cz D1.2 third Task Force review

IEEE P802.3da 10 Mb/s Single Pair Multidrop Segments Enhancement Task Force

Description

Specify additions and modifications of the Physical Layer (including reconciliation sublayers), management parameters, Ethernet support for time synchronization protocols, and optional power delivery supporting multiple powered devices on the 10 Mb/s mixing segment.

Web site: http://ieee802.org/3/da/index.html

Progress

Considered 2 contributions of FEC

Control of FEC in Multidrop: Introducing the MSL Client

Technical and implementation details on the FEC for 802.3da

Considered 1 contributions of on the mixing segment

SPE Multidrop Enhancements Mixing Segment Considerations

Next steps

Continue baseline selection to satisfy the project objectives

IEEE P802.3db 100 Gb/s, 200 Gb/s, and 400 Gb/s Short Reach Fiber Task Force

Description

Specify additions to and appropriate modifications of IEEE Std 802.3 and adds Physical Layer specifications and management parameters for 100 Gb/s, 200 Gb/s, and 400 Gb/s Ethernet optical interfaces for server attachment and other intra-data center applications using 100 Gb/s signaling over optical fiber

Web site: http://ieee802.org/3/db/index.html

Progress

IEEE P802.3db D1.1 second Task Force review comment resolution

Developing responses for 79 comments received

Considered 4 contributions

Big Picture for VR, and Interoperability, Extending wavelength for -VR PMD, Background on TDECQ Equalizer and Equalizer Options for 50 m PMD, and Minimum TX Launch Power in OMA Shall Be Constrained by TECQ

Next steps

Complete responses to IEEE P802.3db D1.1 comments

Conduct IEEE P802.3db D1.2 second Task Force review

IEEE P802.3dd Power over Data Lines of Single Pair Ethernet (Maintenance #17) Task Force

Description

Implement editorial and technical corrections, refinements, and clarifications to Clause 104, Power over Data Lines (PoDL) of Single Pair Ethernet, and related portions of the IEEE Std 802.3 Ethernet standard. No new features are added by this project.

Web site: http://ieee802.org/3/dd/index.html

Progress

Adopted timeline

Agreed to progress draft to Task Force review

Next steps

Conduct IEEE P802.3dd D1.0 first Task Force review

IEEE 802.3 Beyond 400 Gb/s Ethernet Study Group

Description

Develop a Project Authorization Request (PAR) and Criteria for Standards Development (CSD) responses for:

(1) Beyond 400 Gb/s Ethernet

(2) Physical Layer specifications for existing Ethernet rates based on Physical Layer specifications for beyond 400 Gb/s Ethernet.

Web site: https://ieee802.org/3/B400G/index.html

Progress

Considered 6 contributions

Project Documentation Revisited, Case for inclusion of a 200GBASE-DR objective, Enabling dense 200GbE and 400GbE, Coherent-Lite for Beyond 400GigE, Considerations on the 10km @ 800Gb/s objective, and 16-lane 1.6TbE AUI Objective Proposal: A test & measurement perspective

Adopted objectives related to 200 Gb/s and 400 Gb/s AUIs & PMDs

Adopted objective related to 16 lane AUI for 1.6 Tb/s

Study Group granted six-month extension and re-chartered until next plenary

Next steps

Continue developing PAR, CSD responses and objectives

IEEE 802.3 Enhancements to Point to Point Single Pair Ethernet Study Group

Description

Develop a Project Authorization Request (PAR) and Criteria for Standards Development (CSD) responses for Enhancements to point to point Single Pair Ethernet to

(1) Support Time Sensitive Networking (TSN), and

(2) Support increasing traffic and speed needs with long reach point to point higher speed single pair PHY

Web site: https://ieee802.org/3/SPEP2P/index.html

Progress

For item (1) of scope:

IEEE P802.3de PAR and CSD approved by IEEE 802 Executive Committee

IEEE P802.3de PAR placed on September 2021 NesCom agenda

Study Group re-chartered until next plenary

Will only meet if need to address issue with approval of IEEE P802.3de PAR by NesCom

For item (2) of scope:

See Greater than 10 Mb/s long-reach point-to-point Single Pair Ethernet PHY call for interest

Greater than 10 Mb/s long-reach point-to-point Single Pair Ethernet PHY call for interest

Progress

Study Group formation approved

The scope of the Study Group is to develop Project Authorization Requests (PAR) and Criteria for Standards Development (CSD) responses for Greater than 10 Mb/ s long reach point to point Single Pair Ethernet PHYs and Associated Powering

Next steps

Development of PAR, CSD responses and objectives

IEEE 802.3 Officers, Subgroup Chairs and Vice-Chairs

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

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

IEEE 802.3 Secretary: Jon Lewis <jon.lewis@dell.com>

IEEE 802.3 Executive Secretary: Steve Carlson <scarlson@ieee.org>

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

IEEE 802.3 Task Force chairs

IEEE P802.3ck 100 Gb/s, 200 Gb/s, and 400 Gb/s Electrical Interfaces: Elizabeth Kochuparambil <edonnay@cisco.com>

IEEE P802.3cs Increased-reach Ethernet optical subscriber access: (Super-PON): Claudio DeSanti <cds@ieee.org>

IEEE P802.3cw 400 Gb/s over DWDM systems: John D'Ambrosia <jdambrosia@ieee.org>

IEEE P802.3cx Improving PTP Timestamping Accuracy on Ethernet Interfaces: Steve Gorshe <steve.gorshe@microchip.com>

IEEE P802.3cy Greater than 10 Gb/s Electrical Automotive Ethernet Task Force: Steve Carlson <scarlson@ieee.org>

IEEE P802.3cz Multi-Gigabit Optical Automotive Ethernet Task Force: Bob Grow <bob.grow@ieee.org>

IEEE P802.3da 10 Mb/s Single Pair Multidrop Segments Enhancement Task Force: Chad Jones <cmjones@cisco.com>

IEEE P802.3db 100 Gb/s, 200 Gb/s, and 400 Gb/s Short Reach Fiber Task Force: Robert Lingle <rlingle@ofsoptics.com>

IEEE P802.3 (IEEE 802.3dc) Ethernet revision (Maintenance #16) Task Force: Adam Healey <adam.healey@broadcom.com>

IEEE P802.3dd Power over Data Lines of Single Pair Ethernet (Maintenance #17) Task Force: George Zimmerman <george@cmephyconsulting.com>

IEEE 802.3 Task Force vice-chairs

IEEE P802.3ck 100 Gb/s, 200 Gb/s, and 400 Gb/s Electrical Interfaces: Kent Lusted <kent.c.lusted@intel.com>

IEEE P802.3ct 100 Gb/s over DWDM systems: Tom Issenhuth <tissenhuth@outlook.com>

IEEE P802.3cw 400 Gb/s over DWDM systems: Tom Issenhuth <tissenhuth@outlook.com>

IEEE 802.3 Study Group chairs

IEEE 802.3 Beyond 400 Gb/s Ethernet Study Group John D'Ambrosia <jdambrosia@ieee.org>

IEEE 802.3 Enhancements to Point-to-Point Single Pair Ethernet Study Group: George Zimmerman <george@cmephyconsulting.com>

Upcoming meetings

Please see http://www.ieee802.org/3/calendar.html

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