IEEE 802.3 Working Group
July 2020 Plenary Week

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Web site: www.ieee802.org/3

IEEE 802.3 Maintenance

Progress

- Reviewed new maintenance requests
- Reviewed status of outstanding maintenance requests
- ISO/IEC JTC1 SC6
  - Submitted outstanding IEEE 802.3 standards for adoption under PSDO
  - Liaised IEEE 802.3 drafts in Standards Association ballot for review
- IEEE 802.3 revision project
  - Reviewed potential IEEE 802.3 revision project plans
  - Reviewed and forwarded IEEE P802.3 (IEEE 802.3dc) revision PAR for approval

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 D1.2 Task Force review comment resolution

- Developing responses for 300 comments received

Virtual Meetings are impacting progress

- Resultant delay, but no official new timeline yet

Next steps

Complete responses to IEEE P802.3ck D1.2 comments

Conduct Task Force review on IEEE P802.3ck D1.3

Continue work towards technically complete draft for working group ballot

IEEE P802.3cp Bidirectional 10 Gb/s, 25 Gb/s, and 50 Gb/s Optical Access PHYs Task Force

Description

Define physical layer specifications and management parameters for symmetric bidirectional 10 Gb/s, 25 Gb/s, and 50 Gb/s operation over single strand of single mode fiber of at least 10 km

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

Progress

IEEE P802.3cp D2.0 Initial Working Group ballot comment resolution

- Developed responses for 289 comments received

Next steps

Progress IEEE P802.3cp D2.1 first Working Group recirculation ballot

IEEE P802.3cr Isolation (Maintenance #14) Task Force

Description

Replace references to the IEC 60950 series of standards (including IEC 60950-1 "Information technology equipment - Safety - Part 1: General requirements") with appropriate references to the IEC 62368 "Audio/video, information and communication technology equipment" series and make appropriate changes to the standard corresponding to the new references

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

Progress

IEEE P802.3cr D3.0 Initial Standards Association ballot comment resolution

- Developing responses for 48 comments received

Next steps

Complete responses to IEEE P802.3cr D3.0 comments

Progress IEEE P802.3cr D3.1 first Standards Association 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 D1.0 Task Force review comment resolution

No comments received

One contribution on proposed new annex

Physical Coding Sublayer, Physical Media Attachment, Reconciliation Sublayer, and Multipoint MAC Control Sublayer for SuperPON

Next steps

Conduct Task Force review on IEEE P802.3cs D1.1

Continue work towards technically complete draft for working group ballot

IEEE P802.3ct 100Gb/s over DWDM systems Task Force

Description

Define physical layer specifications and management parameters for the transfer of Ethernet format frames at 100 Gb/s at reaches greater than 10 km over DWDM systems

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

Progress

IEEE P802.3ct D2.0 Initial Working Group ballot comment resolution

Developing responses for 141 comments received

Next steps

Complete responses to IEEE P802.3ct D2.0 comments

Progress IEEE P802.3ct D2.1 first Working Group recirculation ballot

IEEE P802.3cu 100 Gb/s and 400 Gb/s over SMF at 100 Gb/s per Wavelength Task Force

Description

Define additions to and appropriate modifications of IEEE Std 802.3 to add PHY specifications and Management Parameters for 100 Gb/s and 400 Gb/s Ethernet optical interfaces for reaches up to 10 km based on 100 Gb/s per wavelength optical signaling.

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

Progress

IEEE P802.3cu D3.0 sent out for initial Standards Association ballot

- Did not meet during July 2020 plenary session

Next steps

Progress IEEE P802.3cu D3.0 initial Standards Association ballot

IEEE P802.3cv Maintenance #15: Power over Ethernet Task Force

Description

Editorial and technical corrections, refinements, and clarifications to Clause 145, Power over Ethernet, and related portions of the standard. No new features will be added by this project.

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

Progress

IEEE P802.3cv D2.0 Initial Working Group ballot comment resolution

Developed responses for 51 comments received

Next steps

Progress IEEE P802.3cv D2.1 first 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

Considered 1 contribution

A Methodology to Obtain OSNR Penalty vs Optical Inter-Channel Crosstalk

Next steps

Continue baseline selection to satisfy the project objectives

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

Considered 4 contributions

- Summary of Contributed Solutions
- Path delay variance from multi PCS lane distribution
- Improving PTP Timestamping Accuracy on Ethernet Interfaces
- Multilane Timestamp Error Analysis Spreadsheet

Next steps

Continue baseline selection to satisfy the project objectives

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 4 contributions

- Considerations for a Multi-Speed Standard
- Network architecture use cases for data rates beyond 10Gb/s
- Evaluation of channel micro reflections
- Link Segment Measurements

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

Considered 6 contributions

- Next steps towards the PHY specification
- Test methods for VCSEL characterization
- Characterization report of Vendor A VCSELs
- Characterization report of Vendor B VCSELs
- Characterization report of Vendor C VCSELs
- Characterization report of Vendor D VCSELs

Next steps

Continue baseline selection to satisfy the project objectives

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 5 contributions

- Multidrop Classification
- Mixing Segment Recovery/Redundancy Termination
- Enhanced Multidrop with Interoperability - what do we need?
- LLDP overview and use cases
- SPE Multidrop Enhancements Mixing Segment Considerations Update

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

Adopted:

Clause 119 as the PCS/FEC and Clause 120 as the PMA for all 200 Gb/s and 400Gb/s PHYs

Clause 82 as the PCS, Clause 91 as the FEC, and Clause 135 as the PMA for all 100 Gb/s PHYs

Next steps

Continue baseline selection to satisfy the project objectives

IEEE 802.3 New Ethernet Applications (NEA) Ad Hoc

Description

The goal of this activity is to assess requirements for new Ethernet-based applications, identify gaps not currently addressed by IEEE 802.3 standards, and facilitate building industry consensus towards proposals to initiate new standards development efforts

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

Progress

IEEE 802.3 NEA ICAID (renewal) approved by IEEE 802.3 Working Group

Next steps

Progress IEEE 802.3 NEA ICAID approval by IEEE 802 and IEEE-SA Standards Board

Current activity

- Development of Beyond 400 Gb/s Ethernet CFI Consensus Deck

Develop Annual Report to Industry Connections Committee (ICCom)

IEEE 802.3 SCC18 Ad Hoc

Progress

- Progressed request for Category C liaisons with IEC 63315 ED1 Audio/Video, Information and Communication Technology Equipment – Safety – DC power transfer between ICT equipment ports using ICT cabling at ≤ 60 Vd.c
- Reviewed new IEEE 802.3 PDCC (Power Delivery Coordinating Committee) Ad Hoc scope
  - Review output and build consensus on draft input for liaisons regarding power delivery over cabling cited in IEEE 802.3 standards and projects, e.g.:
    - Build consensus on responses to public input proposals received as part of the next edition of NFPA70; and
    - Consider any other NFPA related items of interest, such as proposed Tentative Interim Amendments (TIAs); and
    - Build consensus on draft input to IEC TC64/PT716, and proposed direction of the IEEE 802.3 Category C liaison expert; and
  - Build consensus on draft input to IEC TC108/PT63315, and proposed direction of the IEEE 802.3 Category C liaison expert. The output of this Ad Hoc is subject to approval of the 802.3 Working Group.

Next steps

- Continue to monitor activities within scope

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>
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IEEE P802.3ca 25 Gb/s and 50 Gb/s EPON: Curtis Knittle <c.knittle@cablelabs.com>
IEEE P802.3ch Multi-Gig Automotive Ethernet PHY: Steve Carlson <scarlson@ieee.org>
IEEE P802.3ck 100 Gb/s, 200 Gb/s, and 400 Gb/s Electrical Interfaces: Elizabeth Kochuparambil <edonnay@cisco.com>
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IEEE P802.3cs Increased-reach Ethernet optical subscriber access: (Super-PON): Claudio DeSanti <cds@ieee.org>
IEEE P802.3ct 100 Gb/s and 400 Gb/s over DWDM systems: John D'Ambrosia <jdambrosia@ieee.org>
IEEE P802.3cu 100 Gb/s and 400 Gb/s over SMF at 100 Gb/s per Wavelength: Mark Nowell <mnowell@cisco.com>
IEEE P802.3cv Power over Ethernet (Maintenance #15): Chad Jones <cmjones@cisco.com>
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 802.3 Task Force vice-chairs

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

Upcoming meetings

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

IEEE 802.3 Call and Meeting Calendar

NOTE: Calendar set to detected computer time zone: Europe/London

Today August 2020 — Print Week Month Agenda

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27 15:00 802 Seat 2 - 802.3 NEA Ad hoc - B	28 15:00 802.3ck Telephonic Interims - re: [	29 15:00 802.3ck Telephonic Interims - re: [18:00 SCC18 Ad Hoc Weekly	30 15:00 802 Seat 2 - Joint IEEE P802.3ct / 17:00 IEEE P802.3db Short Reach Fiber T	31	1 Aug
2	3	4 13:00 IEEE P802.3cz ad hoc 15:00 P802.3cr Isolation telephonic interi	5 15:00 IEEE P802.3cy ad hoc series 18:00 SCC18 Ad Hoc Weekly	6 15:00 802 Seat 2 - Joint IEEE P802.3ct / 17:00 IEEE P802.3dB Task Force (potenti	7	8
9	10	11 15:00 P802.3cu ad hoc teleconference	12 15:00 802.3da 10SPE Multidrop Segment 18:00 SCC18 Ad Hoc Weekly	13 15:00 802 Seat 2 - Joint IEEE P802.3ct / 18:00 IEEE P802.3cs Ad Hoc call	14	15
16	17	18 13:00 IEEE P802.3cz ad hoc	19 15:00 IEEE P802.3cy ad hoc series 18:00 SCC18 Ad Hoc Weekly	20 15:00 802 Seat 2 - Joint IEEE P802.3ct / 17:00 IEEE P802.3dB Task Force (potenti	21	22
23	24	25	26 15:00 802.3da 10SPE Multidrop Segment 18:00 SCC18 Ad Hoc Weekly	27 15:00 802 Seat 2 - Joint IEEE P802.3ct / 18:00 IEEE P802.3cs Ad Hoc call	28	29
30	31	1 Sep 13:00 IEEE P802.3cz ad hoc	2 15:00 IEEE P802.3cy ad hoc series 18:00 SCC18 Ad Hoc Weekly	3 15:00 802 Seat 2 - Joint IEEE P802.3ct / 17:00 IEEE P802.3dB Task Force (potenti	4	5

Events shown in time zone: United Kingdom Time — Google Calendar