IEEE 802.3 Working Group
November 2020 Plenary Week

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Web site: www.ieee802.org/3
IEEE 802.3 Maintenance

Progress

Maintenance requests
  Reviewed new maintenance requests
  Reviewed status of outstanding maintenance requests
  Remaining request will be reviewed at next meeting

ISO/IEC JTC1 SC6
  Developed responses to China NB comments on IEEE Std 802.3-2018 FDIS ballot
  Liaised IEEE 802.3 drafts in Standards Association ballot for review

IEEE 802.3 revision project
  Reviewed IEEE P802.3 (IEEE 802.3dc) revision project plans
  Reviewed potential Power over Data Lines (PoDL) maintenance PAR

Web page
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

Progress
IEEE P802.3ck D1.3 Task Force review comment resolution
   Developing responses for 278 comments received
Virtual Meetings are impacting progress
   Updated timeline with Working Group ballot planned to start in March 2021

Next steps
Complete responses to IEEE P802.3ck D1.3 comments
Conduct Task Force review on IEEE P802.3ck D1.4
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


Progress

IEEE P802.3cp D2.2 Working Group recirculation ballot comment resolution
- Developed responses for 31 comments received

Working Group conditional approval granted to proceed to Standards Association ballot
- Currently 9 unsatisfied TR comments and 1 ER comment from 3 Disapprove voters

Next steps

Progress IEEE P802.3cp D2.3 third 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


Progress
IEEE P802.3cr D3.3 third Standards Association recirculation ballot complete
- No comments received
- Working Group approval granted to proceed to RevCom submittal

Next steps
Progress IEEE P802.3cr D3.3 submission to RevCom
IEEE P802.3cs Increased-reaching 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)


Progress

IEEE P802.3cs D1.2 Task Force review comment resolution

- Developed responses for 76 comments received

Next steps

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


Progress
IEEE P802.3ct D3.0 Initial Standards Association ballot comment resolution
Developing responses for 91 comments received

Next steps
Complete responses to IEEE P802.3ct D3.0 comments
Progress IEEE P802.3ct D3.1 first Standards Association 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.

Progress
IEEE P802.3cu D3.1 first Standards Association recirculation ballot comment resolution
  Developed responses for 20 comments received
Initiated IEEE P802.3cu D3.2 second Standards Association recirculation ballot
Working Group conditional approval granted to proceed to RevCom submittal
  Currently 3 unsatisfied TR comments from 1 commenter

Next steps
Complete IEEE P802.3cu D3.2 second Standards Association recirculation 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.

Progress
IEEE P802.3cv D2.2 second Working Group recirculation ballot complete
100% approval with no comments received
Approval granted to proceed to Standards Association ballot
Initiated IEEE P802.3cv D3.0 initial Standards Association ballot

Next steps
Complete IEEE P802.3cv D3.0 initial Standards Association 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.


Progress
Selecting and refining baseline proposals to develop D1.0 to initiate Task Force Review

Next steps
Continue baseline selection to satisfy the project objectives
Due to common aspects between the IEEE P802.3cw and IEEE P802.3ct projects, will Initiate IEEE P802.3cw task force review upon completion of considerations of Task Review comments submitted against IEEE P802.3ct D3.0
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.


Progress
Considered 5 contributions
- Adopted baselines for:
  - Multi-PCS lane delay distribution variance
  - Transmitter skew
  - Timestamping point
  - Higher accuracy PCS delay registers

Next steps
Develop initial draft for 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.


Progress
Considered 5 contributions on trade-off between link segment and PHY complexity
Discussed strawman adoption of scaled solution from IEEE Std 802.3ch-2020
Updated to-do list with future contributions on higher-performance link segment for December ad hoc series

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.

Progress
Heard 8 presentations
Adopted initial baseline for 2.5 Gb/s, 5 Gb/s, 10 Gb/s and 25 Gb/s PCS and PMA
Adopted Timeline (revised from previously published draft)
Picked PHY type names (e.g., 25GBASE-AU)

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.


Progress

Considered 5 contributions

- TSSI Baseline, New PHY clause from 147 10BASE-T1S, Mixing segment, D-PLCA issues and solutions, and Connectors

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


Progress

Considered three contributions

Two regarding the 100 m objective and one regarding an un-retimed, linear interface

Adopted a Task Force Timeline

Adopted a set of 100 m objectives for 100 Gb/s wavelengths over 1, 2, and 4 pairs of MMF

Next steps

Continue baseline selection to satisfy the project objectives
Beyond 400 Gb/s Ethernet call for interest

Progress
IEEE 802.3 approval to form Study Group
The scope of the Study Group is to 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.

Next steps
Progress approval of Study Group by IEEE 802 EC
IEEE 802.3 Officers, Subgroup Chairs and Vice-Chairs

IEEE 802.3 Chair: David Law <dlaw@hpe.com>
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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>
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IEEE P802.3cx Improving PTP Timestamping Accuracy on Ethernet Interfaces: Steve Gorshe <steve.gorshe@microchip.com>
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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>

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

Please see [http://www.ieee802.org/3/calendar.html](http://www.ieee802.org/3/calendar.html)