IEEE 802.3 Working Group
March 2022 Plenary Session

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Web site: www.ieee802.org/3

IEEE 802.3 Maintenance

Progress

- Maintenance requests
  - No new maintenance requests received since January 2022 interim meeting
  - Reviewed status of outstanding maintenance requests
- IEEE P802.3 (IEEE 802.3dc) revision project
  - Completed first Standards Association recirculation ballot comment resolution
    - Developed reposes to the 20 comments received
  - Initiated second Standards Association recirculation ballot
  - Obtained conditional approval to submit IEEE P802.3 (IEEE 802.3dc) to RevCom

Next steps

- Complete IEEE P802.3 (IEEE 802.3dc) D3.2 second Standards Association recirculation ballot
- Progress IEEE P802.3 (IEEE 802.3dc) to RevCom submission

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

Initial Standards Association ballot comment resolution completed before meeting

Initiated first Standards Association recirculation ballot

Next steps

Complete IEEE P802.3ck 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

Completed first Standards Association recirculation ballot comment resolution

- Developed responses to the 6 comments received

Next steps

Conduct IEEE P802.3cs D3.2 second Standards Association 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

- Completed fifth Task Force review comment resolution
- Developed reposes to the 19 comments received
  - 19 Comments (3 Technical, 16 Editorial) from 2 individuals (includes Chief Editor)
- Big Ticket Item: Transmitter Quality Metric
  - 400GBASE-ZR performance versus Tx Error Vector Magnitude (EVM) contribution

Next steps

- Continue to seek contributions on Transmitter Quality Metric
  - Test data submitted to validate EVM or detailed proposals for other approaches
- Re-evaluate timeline

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 second Working Group recirculation ballot comment resolution

- Developing responses for 44 comments received

Obtained conditional approval to progress IEEE P802.3cx to Standards Association ballot

Next steps

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

Progress IEEE P802.3cx to RevCom Standards Association ballot

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

Resolved 55 comments to Task Force review of IEEE P802.3cy draft D0.5

Chartered IEEE P802.3cy draft D1.0 for 3rd Task Force review

Adopted PAM training frame baseline

Considered 4 contributions

- Link Segment, PHY Feasibility and Objectives and FEC Related Comments

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

IEEE P802.3cz PAR split (division of existing work item)

IEEE P802.3cz PAR modification request and CSD approved by IEEE 802 Executive Committee

PAR https://mentor.ieee.org/802-ec/dcn/22/ec-22-0039-01-00EC-draft-ieee-p802-3cz-par-modification.pdf

CSD https://mentor.ieee.org/802-ec/dcn/22/ec-22-0038-00-00EC-draft-ieee-p802-3cz-csd-modification.pdf

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

PAR: https://mentor.ieee.org/802-ec/dcn/22/ec-22-0037-01-00EC-draft-ieee-p802-3dh-par.pdf

CSD: https://mentor.ieee.org/802-ec/dcn/22/ec-22-0036-00-00EC-draft-ieee-p802-3dh-csd.pdf

Both PARs placed on the April 2022 NesCom agenda

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

Progress (continued)

- Approval granted for IEEE P802.3cz to proceed to Working Group ballot

Next steps

- Conduct IEEE P802.3cz D2.0 initial Working Group ballot

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 contribution

Multi-drop System Model Assembly and Discovery

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

Initial Standards Association ballot initiated prior to plenary session

Next steps

Complete IEEE P802.3db initial Standards Association ballot

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

IEEE P802.3dd initial Standards Association ballot comment resolution

- Developed responses for 7 comments received

Initiated first Standards Association recirculation ballot

Next steps

Complete IEEE P802.3dd D3.1 first Standards Association recirculation ballot

IEEE P802.3de Time Synchronization for Point to Point Single Pair Ethernet Task Force

Description

Specify additions to and appropriate modifications of the IEEE Std 802.3 MAC Merge function and the Time Synchronization Service Interface (TSSI) to support 10 Mb/s Single Pair Ethernet point to point PHYs

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

Progress

IEEE P802.3de second Working Group recirculation ballot comment resolution

- Developed responses for 2 comments received

Approval granted to proceed to Standards Association ballot

Next steps

Conduct IEEE P802.3de D3.0 initial Standards Association ballot

IEEE P802.3df 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet Task Force

Description

Define Ethernet MAC parameters, physical layer specifications, and management parameters for the transfer of Ethernet format frames at 800 Gb/s and 1.6 Tb/s over copper, multi-mode fiber, and single-mode fiber, and use this work to define derivative physical layer specifications and management parameters for the transfer of Ethernet format frames at 200 Gb/s and 400 Gb/s.

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

Progress

Considered 12 contributions

Adopted new objective to define a physical layer specification that supports 400 Gb/s operation over 4 pairs of SMF with lengths up to at least 2 km

Adopted baselines for 100G-based AUI/KR/CR, 100G-based MMF Objectives and for modulation format for 200Gbps / lane for 500m and 2km SMF Reach objectives

Next steps

Continue baseline selection to satisfy the project objectives

IEEE 802.3 Greater than 10 Mb/s Long Reach Single Pair Ethernet Study Group

Description

Develop a Project Authorization Request (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

Web site: https://ieee802.org/3/GT10MSPE/index.htmlProgress

Progress

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

PAR: https://mentor.ieee.org/802-ec/dcn/22/ec-22-0017-03-00EC-draft-ieee-p802-3dg-par.pdf

CSD: https://mentor.ieee.org/802-ec/dcn/22/ec-22-0018-00-00EC-draft-ieee-p802-3dg-csd.pdf

IEEE P802.3dg PAR placed on the March 2022 NesCom agenda

Study Group rechartered

Backup if PAR not approved by IEEE SA Standards Board

IEEE 802.3 Officers, Subgroup Chairs and Vice-Chairs

IEEE 802.3 Chair: David Law <dlaw@hpe.com>
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IEEE P802.3cz Multi-Gigabit Optical Automotive Ethernet: Bob Grow <bob.grow@ieee.org>
IEEE P802.3da 10 Mb/s Single Pair Multidrop Segments Enhancement: Chad Jones <cmjones@cisco.com>
IEEE P802.3db 100 Gb/s, 200 Gb/s, and 400 Gb/s Short Reach Fiber: Robert Lingle <rlingle@ofsoptics.com>
IEEE P802.3 (IEEE 802.3dc) Revision to IEEE Std 802.3-2018 (Maintenance #16): Adam Healey <adam.healey@broadcom.com>
IEEE P802.3dd Power over Data Lines of Single Pair Ethernet (Maintenance #17): George Zimmerman <george@cmephyconsulting.com>
IEEE P802.3de Time Synchronization for Point-to-Point Single Pair Ethernet: George Zimmerman <george@cmephyconsulting.com>
IEEE P802.3df 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet: John D'Ambrosia <jdambrosia@ieee.org>

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IEEE 802.3 Study Group vice-chair

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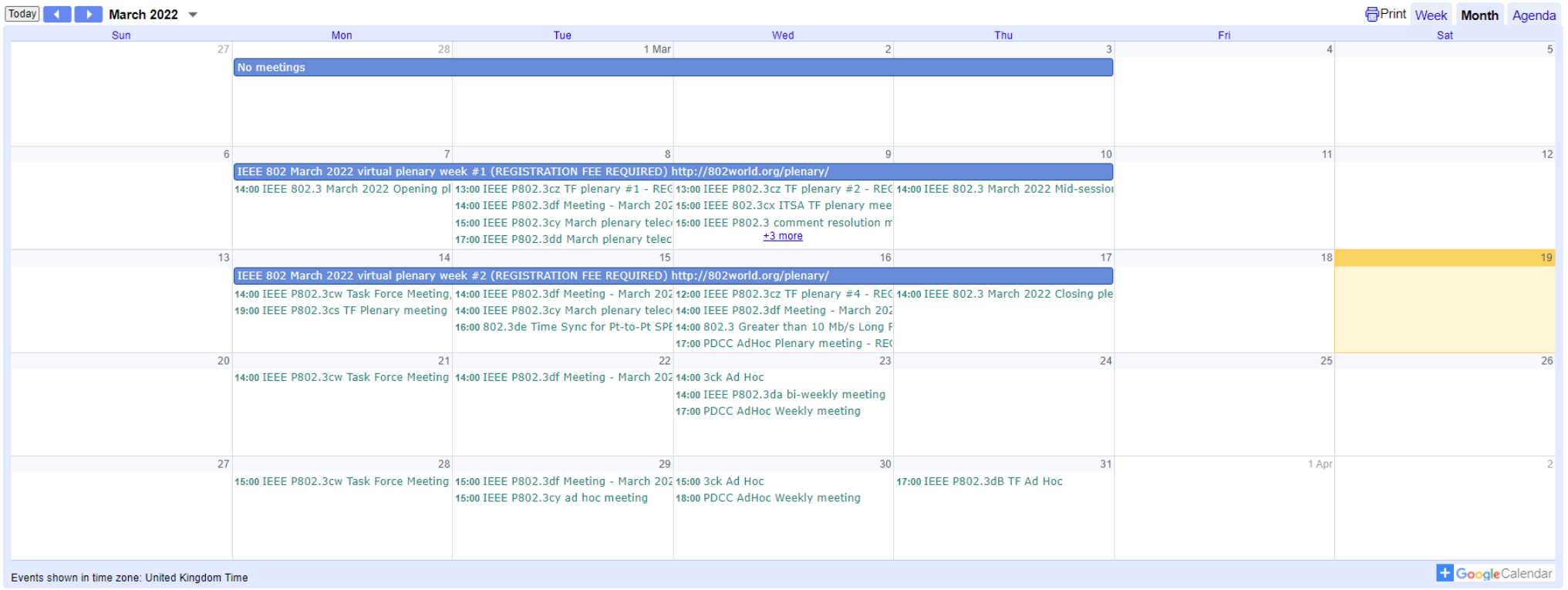
Upcoming meetings

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

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



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