IEEE 802.3 Working Group
March 2025 Plenary Session

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Web site: www.ieee802.org/3

Current IEEE 802.3 activities

IEEE 802.3 Task Forces

- IEEE P802.3da 10 Mb/s Single Pair Multidrop Segments Enhancement
- IEEE P802.3dg 100 Mb/s Long-Reach Single Pair Ethernet
- IEEE P802.3dj 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet
- IEEE P802.3dk Greater than 50 Gb/s Bidirectional Optical Access PHYs
- IEEE P802.3dm Asymmetrical Electrical Automotive Ethernet
- IEEE P802.3.2 (IEEE 802.3.2a) YANG Data Model (Revision)

IEEE 802.3 Study Group

- IEEE 802.3 Ethernet Powering Cabling Restrictions
- IEEE 802.3 Pin Optimized PHY Interface

IEEE 802.3 Open Source

- IEEE 802.3 Channel Operating Margin (COM)

IEEE 802.3 Ad Hocs

- IEEE 802.3 New Ethernet Applications
- IEEE 802.3 Power Distribution Coordinating Committee (PDCC)

IEEE 802.3 Maintenance

Progress

- Did not meet during plenary session
  - Overlapping time commitments of potential attendees
  - Plan to meet shortly after the plenary session to maximise attendance.
- Approval to submit draft IEEE P802.3-2022/Cor 2 (IEEE 802.3dr) PAR to NesCom
  - Title: Corrigendum 2: Multi-Gigabit Optical Automotive Ethernet Transmitter Distortion Figure of Merit
  - Scope: Transmitter Distortion Figure of Merit normalization factors specified in Table 166–16
  - Need: The normalization factors in Table 166–16 are intended to yield Transmitter Distortion Figure of Merit (TDFOM) equal to 0 dB in Equation (166–16) for an ideal transmitter. However, the current values of the normalization factors in Table 166–16 do not achieve this result and need to be corrected.

Web page

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

Maintenance closing report

https://www.ieee802.org/3/minutes/mar25/0325_maint_close_report.pdf

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 122 of the 124 comments received during first Working Group recirculation ballot

Next steps

The two remaining comments will be considered during a 20 March 2025 meeting

Conduct second Working Group recirculation ballot of IEEE P802.3da draft D2.2

Task Force closing report

https://www.ieee802.org/3/minutes/mar25/802d3da_task_force_close_report_0325.pdf

IEEE P802.3dg 100 Mb/s Long-Reach Single Pair Ethernet Task Force

Description

Specify additions to and appropriate modifications of IEEE Std 802.3 to add 100 Mb/s Physical Layer specifications and management parameters for operation, and associated optional provision of power, using a single balanced pair of conductors

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

Progress

Adopted baselines for PCS block coding, registers, and fault signalling

Adopted draft text, chartered editor to produce D1.0 in preparation for Task Force Review

Next steps

Conduct Task Force Review for IEEE P802.3dg draft D1.0

Task Force closing report

https://www.ieee802.org/3/minutes/mar25/802d3dg_close_report_Mar2025.pdf

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

Description

Define Ethernet MAC parameters for 1.6 Tb/s. Define physical layer specifications, and management parameters for the transfer of Ethernet format frames at 800 Gb/s and 1.6 Tb/s over copper and single-mode fiber physical medium dependent (PMD) sublayers based on 200 Gb/s or greater per lane signaling technologies. Using these new definitions for 800 Gb/s and 1.6 Tb/s, define physical layer specifications and management parameters for the transfer of Ethernet format frames at 200 Gb/s and 400 Gb/s, when applicable.

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

Progress

Considered all comments submitted against IEEE P802.3dj draft D1.4, all remaining TBDs closed

Considered ITU-T (1.6 Tb/s OTN mapping) and OIF (High Density Connector Project) liaison letters

Approval to request Draft Sharing relationship with Ultra Ethernet Consortium (UEC)

Next steps

Generate IEEE P802.3dj draft D1.5 and conduct sixth Task Force review

Pre-submit IEEE P802.3dj draft D1.5 to IEEE 802.3 Working Group in support of an expected request to progress project to Working Group Ballot at IEEE 802.3 May 2025 interim meeting

Task Force closing report

https://www.ieee802.org/3/minutes/mar25/2503_3dj_closed_report.pdf

IEEE P802.3dk Greater than 50 Gb/s Bidirectional Optical Access PHYs Task Force

Description

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

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

Progress

Received approval to progress IEEE P802.3dk draft D2.0 to Working Group ballot

Next steps

Conduct IEEE P802.3dk draft D2.0 initial Working Group ballot

Task Force closing report

https://www.ieee802.org/3/minutes/mar25/802d3dk_Task_Force_close_report.pdf

IEEE P802.3dm Asymmetrical Electrical 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 electrical media and operating conditions that are optimized for automotive end-node camera links for operation up to 10 Gb/s in one direction and with a lower data rate in the other direction

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

Progress

12 Technical presentations

2 Motions to adopt baseline text:

- Selection of PAM2 for 2.5 Gb/s transmitter and Clause 46 additions

Extensive discussion on path forward

- Duplex methodology is a key difference

Next steps

Continue towards baseline selection to satisfy the project objectives

Task Force closing report

https://www.ieee802.org/3/minutes/mar25/0325_3dm_close_report.pdf

IEEE 802.3 Single-Pair Ethernet Powering Cabling Restrictions Study Group

Description

Develop a Project Authorization Request (PAR) and Criteria for Standards Development (CSD) responses for clarification on the cabling requirements for Ethernet powering

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

Progress

Approval to submit draft IEEE P802.3dp PAR to NesCom

Title: Amendment: Cabling Restrictions for Single Pair Power over Ethernet (SPoE)

Scope: Specification of requirements and restrictions for supporting the IEEE 802.3 ‘plug-and-play’ interoperability mode for Single-Pair Power over Ethernet (SPoE) due to current carrying capacity limitations in cabling.

Need: The IEEE 802.3 Working Group (WG) needs to address the insufficiency of the current carrying capacity of certain cabling installed and proposed for SPoE applications.

The IEEE 802.3 WG became aware that ISO/IEC JTC 1/SC 25/WG 3 is drafting standards and technical reports (e.g. ISO/IEC 11801-1/AMD1 and ISO/IEC TR 11801-9911) that support the use and reuse of balanced multi-pair cabling systems in one pair applications, resulting in a standards-imposed restriction of 0.75 A per conductor. Additionally, they are defining a 23 American Wire Gauge (AWG) single-pair channel that only supports 0.75 A per conductor which is insufficient for the IEEE 802.3 'plug-and-play' interoperability model.

Next steps

Progress approval of draft IEEE P802.3dp PAR

Study Group for Interest closing report

https://www.ieee802.org/3/minutes/mar25/802d3_EPCR_close_report_0325.pdf

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

Established a liaison relationship between IEEE 802.3 and Open Compute Project (OCP) Foundation, Ultra Ethernet Consortium (UEC), UALink Consortium, Storage Networking Industry Association (SNIA)/Small Form Factor (SFF) Committee, and Ethernet Alliance, with the following individuals appointed as the IEEE 802.3 Standards Committee External Liaison coordinator (aka Liaison Officer):

- John D'Ambrosia as the IEEE 802.3 Liaison Officer to OCP Foundation
- Mark Nowell as the IEEE 802.3 Liaison Officer to UEC
- Kent Lusted as the IEEE 802.3 Liaison Officer to UALink Consortium
- Tom Palkert as the IEEE 802.3 Liaison Officer to SNIA/SFF Committee
- Peter Jones as the IEEE 802.3 Liaison Officer to Ethernet Alliance

Next Steps

Future Meetings

See IEEE 802.3 Call and Meeting Calendar

Closing report

https://www.ieee802.org/3/minutes/mar25/0325_NEA_close_report.pdf

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: Chad Jones <cmjones@cisco.com>
IEEE 802.3 Treasurer: Valerie Maguire <vmaguire@ieee.org>

IEEE 802.3 Task Force chairs

IEEE P802.3da 10 Mb/s Single Pair Multidrop Segments Enhancement: Chad Jones <cmjones@cisco.com>
IEEE P802.3dg 100 Mb/s Long-Reach Single Pair Ethernet: George Zimmerman <george@cmephyconsulting.com>
IEEE P802.3dj 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet: John D'Ambrosia <jdambrosia@ieee.org>
IEEE P802.3dk Greater than 50 Gb/s Bidirectional Optical Access PHYs: Yuanqiu Luo <yuanqiu.luo@futurewei.com>
IEEE P802.3dm Asymmetrical Electrical Automotive Ethernet: Jon Lewis <jon.lewis@dell.com>
IEEE P802.3.2 (IEEE 802.3.2a) YANG Data Model (Revision): Marek Hajduczenia <mxhajduczenia@gmail.com>

IEEE 802.3 Study Group chair

IEEE 802.3 Ethernet Powering Cabling Restrictions: Chad Jones <cmjones@cisco.com>
IEEE 802.3 Pin Optimized PHY Interface Study Group (acting): Jason Potterf <jpotterf@cisco.com>

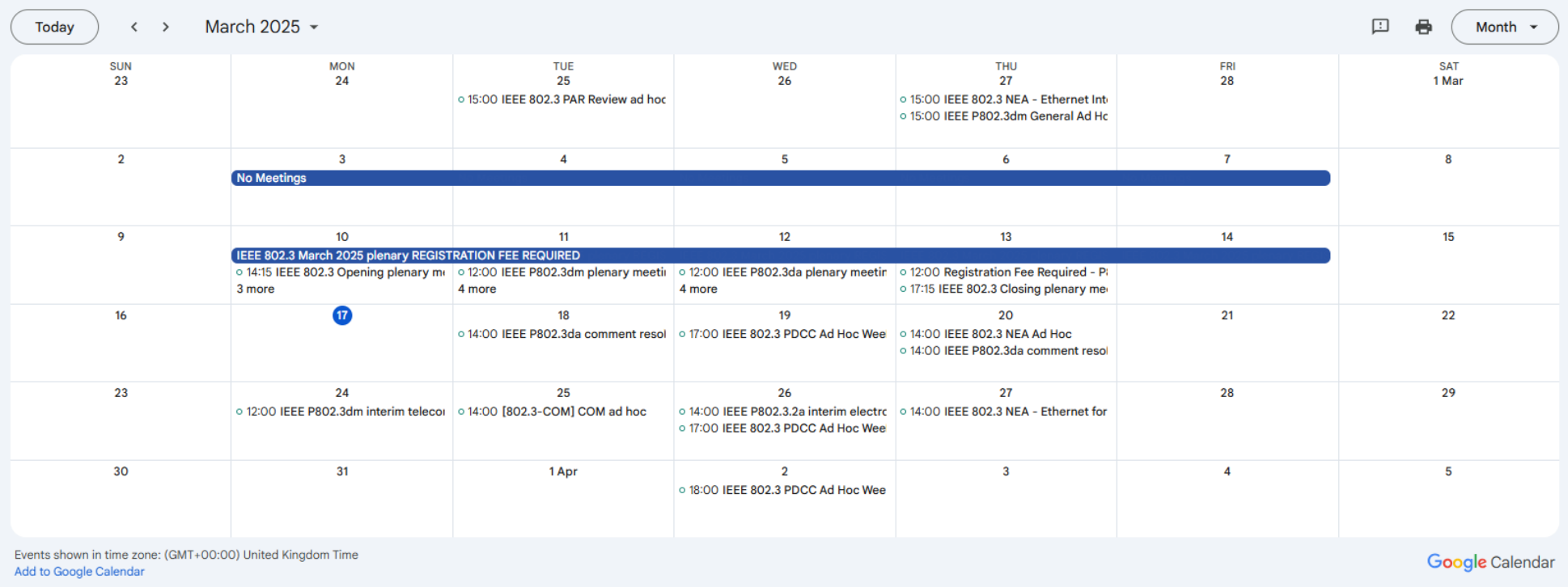
IEEE 802.3 Task Force vice-chairs

IEEE P802.3dj 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet: Mark Nowell <mnowell@cisco.com>
IEEE P802.3dm Asymmetrical Electrical Automotive Ethernet: Natalie Wienckowski <natalie@ivnsolutionsllc.com>

Upcoming meetings

Please see http://www.ieee802.org/3/calendar.html for latest calendar of meetings

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



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