IEEE 802.3 Working Group
July 2024 Plenary Session

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

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 P802.3-2022/Cor 1 (IEEE 802.3dn) Multi-Gigabit Automotive MDI return loss
- IEEE P802.3.1 (IEEE 802.3.1b) SMIv2 Data Models (Revision)
- IEEE P802.3.2 (IEEE 802.3.2a) YANG Data Model (Revision)

IEEE 802.3 Study Group

- IEEE 802.3 Single-Pair Ethernet Powering Cabling Restrictions Study Group

IEEE 802.3 Ad Hoc

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

IEEE 802.3 Maintenance

Progress

- Maintenance requests
  - Reviewed seven new maintenance requests

Web page

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

Maintenance closing report

https://ieee802.org/3/minutes/jul24/0724_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

Completed IEEE P802.3da draft D1.3 Task Force review comment resolution

- Considered nine contribution relating to resolving comments

Approve a request for a first IEEE P802.3da PAR extension

Next steps

Conduct IEEE P802.3da draft D1.4 Task Force review

Task Force closing report

https://ieee802.org/3/minutes/jul24/802d3da_task_force_close_report_0724.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 dual-mode PCS encoding and FEC to allow FEC and non-FEC (low latency) modes with same baud rate
- Adopted MII sequence ordered sets, and 8N/(8N+1)B encodings
- Discussed contributions relating to potential new MII specification
  - Preparing for NEA presentation
- Updated Timeline

Next steps

- Continue baseline selection to satisfy the project objectives

Task Force closing report

- https://ieee802.org/3/minutes/jul24/802d3dg_close_report_Jul2024.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 42 technical contributions

- Split into parallel tracks (Logic, Optics, Electrical) on Tuesday to cover all the work (will be necessary in future meetings)

Logic:

- Consensus formed on handling Time Sync and inner FEC deskew in next draft

Optics:

- Strong consensus on path forward reconciling ITU-T work and IEEE work on SMF Chromatic Dispersion
- ITU-T liaison identifies clear path forward on Coherent Transmitter Quality Metric
  - Planned collaborative work ahead to form a complete proposal

Electrical:

- Maximum Likelihood Sequence Detection reference receiver selected for CR and KR PHYs
- Strong support for proposed AUI chip-to-chip reference receiver parameters values, refinement expected going forward
- Strong support for first set of proposed CR/KR COM parameter values and for remaining values, refinement expected going forward

Next steps

Complete Task Force review of IEEE P802.3dj draft D1.1

Task Force closing report

https://ieee802.org/3/minutes/jul24/2407_3dj_closed_report%20(002).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

Adopted updates to 100G BR10 specifications and and values for 100G BR40 TBDs

Adopted baseline proposal for 100G BR20

Next steps

Continue baseline selection to satisfy the project objectives

Task Force closing report

https://ieee802.org/3/minutes/jul24/802d3dk_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

Considered 15 technical contributions

Chartered ‘Link segment and noise models’ and ‘Use Case’ Ad Hocs

Next steps

Continue towards baseline selection to satisfy the project objectives

Task Force closing report

https://ieee802.org/3/minutes/jul24/0724_3dm_close_report.pdf

IEEE P802.3-2022/Cor 1 (IEEE 802.3dn) Multi-Gig Automotive MDI return loss Task Force

Description

Corrections to MDI return loss Equations (149–27) and (165–42) and to Figure 165–38 ‘MDI return loss calculated limit in Equation (165–42)’

Progress

Considered comments received during IEEE 802.3dn initial Standards Association ballot

Conditional approval granted to proceed to RevCom submittal

Next Steps

Complete IEEE 802.3dn Standards Association ballot process

Progress IEEE 802.3dn to RevCom submittal

Task Force closing report

https://ieee802.org/3/minutes/mar24/802d3dn_task_force_closing_report_March2024.pdf

IEEE P802.3.1 (IEEE 802.3.1b) SMIv2 data model (revision) Task Force
IEEE P802.3.2 (IEEE 802.3.2a) YANG data model (revision) Task Force

Description

Address accumulated maintenance changes as well as appropriate updates to the IEEE Std 802.3.1 Structure of Management Information version 2 (SMIv2) MIB modules to support IEEE Std 802.3 amendments published since IEEE Std 802.3.1 was last revised in 2013.

Addresses accumulated maintenance changes as well as appropriate updates to the IEEE Std 802.3.2 YANG modules to support IEEE Std 802.3 amendments published since IEEE Std 802.3.2 was first published.

Progress

IEEE 802.3.1b initial Standards Association ballot opened before plenary session

- IEEE 802.3.1b Task Force, therefore, did not meet during plenary session

IEEE 802.3.2a third Working Group recirculation ballot received no comments

- Approval granted to proceed to Standards Association ballot

Next Steps

Complete IEEE 802.3.1b Standards Association ballot process

Conduct IEEE 802.3.2a initial Standards Association ballot

Task Force closing report

https://ieee802.org/3/minutes/jul24/802d3_task_force_802.3.1_802.3.2_closing.pdf

IEEE 802.3 Single-Pair Ethernet Powering Cabling Restrictions Study Group

Progress

- Single-Pair Ethernet Powering Cabling Restrictions Call for Interest considered
- Approval of formation of an IEEE 802.3 PAR Study Group to develop a Project Authorization Request (PAR) and Criteria for Standards Development (CSD) responses for clarification on the cabling requirements for Ethernet powering.

Next steps

- Start development of PAR, CSD responses and objectives

Call for Interest closing report

- https://ieee802.org/3/minutes/jul24/0724_SPEPCR_close_report.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

No meetings held during the July 2024 plenary session

Next Steps

Develop consensus on a liaison and/or white paper addressing future needs of optical fiber to address signaling for intensity-modulation, direct detection (IMDD) Optics greater than 200 Gb/s

Interested individuals should contact Earl Parsons

IEEE 802.3 Power Distribution Coordinating Committee (PDCC) Ad Hoc

Description

- 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 public inputs and public comments for the next edition of NFPA70; and
  - Build consensus on input to IEC 60364-7-716, and proposed direction of the IEEE 802.3 Category C liaison expert to IEC TC64/MT2; and
  - Build consensus on input to IEC TC108/PT63315, and proposed direction of the IEEE 802.3 Category C liaison expert; and
  - Build consensus on input to ITU-T SG5; and
  - Build consensus on input to IEC SC25/WG3
- Web site: https://ieee802.org/3/ad_hoc/PDCC/index.html

Progress

- Single-Pair Ethernet Powering Cabling Restrictions Call for Interest consensus building presentation
- Considered contribution about compatibility of PSEs with non-PD MDI

Next steps

- Continue to monitor activities within scope

Ad Hoc closing report

https://ieee802.org/3/minutes/jul24/PDCC_adhoc_close_report_0724.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 Task Force: Jon Lewis <jon.lewis@dell.com>
IEEE P802.3-2022/Cor 1 (IEEE 802.3dn) Multi-Gigabit Automotive MDI return loss: Brett McClellan <bmc@marvell.com>
IEEE P802.3.1 (IEEE 802.3.1b) SMIv2 Data Models (Revision): Marek Hajduczenia <mxhajduczenia@gmail.com>
IEEE P802.3.2 (IEEE 802.3.2a) YANG Data Model (Revision): Marek Hajduczenia <mxhajduczenia@gmail.com>

IEEE 802.3 Task Force vice-chair

IEEE P802.3dj 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet: Mark Nowell <mnowell@cisco.com>

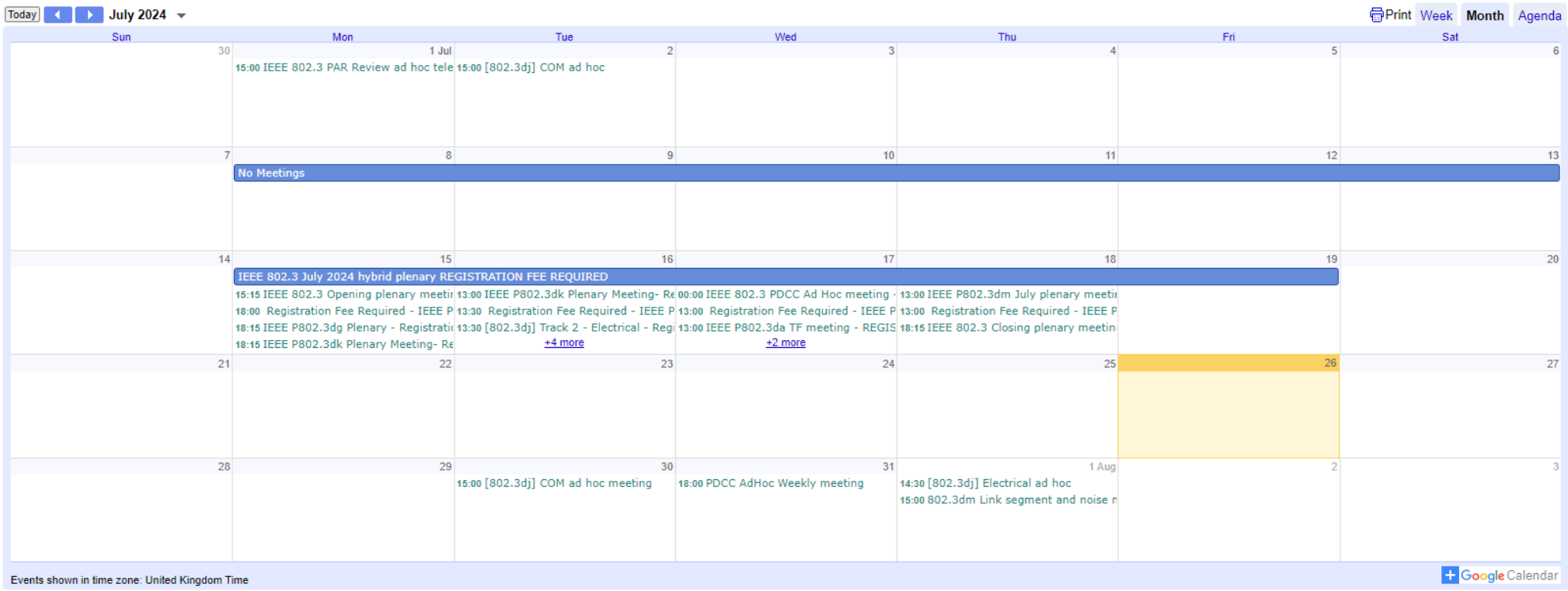
IEEE 802.3 Study Group chair

IEEE 802.3 Single-Pair Ethernet Powering Cabling Study Group: Chad Jones <cmjones@cisco.com> (acting)

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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