# IEEE 802.3 Working Group
# November 2024 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 P802.3.1 (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 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

- Maintenance requests
  - Reviewed 35 maintenance requests

## Web page

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

## Maintenance closing report

https://www.ieee802.org/3/minutes/nov24/1124_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

Approve granted to progress to Working Group ballot

## Next steps

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

## Task Force closing report

https://www.ieee802.org/3/minutes/nov24/802d3da_task_force_close_report_1124.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

Request for draft-sharing relationship with Profibus & Profinet International (PI) approved

Adopted Baselines for: PCS encoding, EEE parameters, Auto-Negotiation

Progressed discussion on PMA link training

## Next steps

Continue baseline selection to satisfy the project objectives

## Task Force closing report

https://www.ieee802.org/3/minutes/nov24/802d3dg_close_report_Nov2024.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

- All 436 comments received during third Task Force review were considered
- Considered 30 technical contributions
  - Split into parallel tracks (Logic, Optics, Electrical) on Tuesday and Wednesday to cover all the work
- Logic:
  - Reviewed two technical presentations
  - Resolved all 34 comments (13 different topics)
- Optics:
  - Resolved all 126 comments. Resolved two major areas where many TBDs were left:
    - TDECQ and associated parameters for Optical PHYs based on Inner FEC and ETCC (Coherent TQM approach) definition
- Electrical:
  - Resolved all 80+ comments !!!
  - Closed many/most TBDs
  - Decisions on jitter methodology, output voltage range, interference tolerance test

## Next steps

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

## Task Force closing report

https://www.ieee802.org/3/minutes/nov24/2411_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

### Draft

- D1.0 comment resolution
- Discussed presentation to address several comments
- Resolved 31 comments against D1.0
- Motion passed to create D1.1 by incorporating comment resolution

### Timeline update

- Motion passed to adopt an updated timeline of draft development

### Objectives

- Deleted objectives for 200GBASE-BR10, 200GBASE-BR20, and 200GBASE-BR40 PHYs

## Next steps

Continue baseline selection to satisfy the project objectives

## Task Force closing report

https://www.ieee802.org/3/minutes/nov24/802d3dk_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

Heard 26 Presentations

One Motion to adopt an MDI return loss equation

Chartered a general Ad Hoc to progress consensus

Reviewed potential PHY naming options

Numerous straw polls to narrow on the possibilities

## Next steps

Continue towards baseline selection to satisfy the project objectives

## Task Force closing report

https://www.ieee802.org/3/minutes/nov24/1124_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

PAR and CSD draft 2.1 created

Determined that the chair needs to write one objective based on the project request that reflects the goal of this effort

## Next steps

Start development of PAR, CSD responses and objectives

## Study Group for Interest closing report

https://www.ieee802.org/3/minutes/nov24/802d3_EPCR_close_report_1124.pdf

# IEEE 802.3 Pin Optimized PHY Interface Study Group

## Progress

MII Optimized for an Exposed Interconnect call for interest considered

Approval of formation of an IEEE 802.3 PAR Study Group to PAR Study Group to develop a Project Authorization Request (PAR) and Criteria for Standards Development (CSD) responses for Ethernet Media Independent Interfaces (MII) optimized for an exposed interconnect.

## Next steps

Start development of PAR, CSD responses and objectives

## Call for Interest closing report

https://www.ieee802.org/3/minutes/nov24/Potterf_MII_CFI_Closing_Presentation_2024-11-14-final-v02.pdf

# IEEE 802.3 Channel Operating Margin (COM) Open Source project

## Progress

IEEE 802.3 and IEEE 802 LMSC approval of request for a Tier 3 IEEE SA Open project to [1] develop reference software code implementations and configuration spreadsheets of the Channel Operating Margin (COM) equations and methods in IEEE Std. 802.3 and Amendments (e.g. Annex 93A and 178A) and [2] provide branch support to enable participants to development new features and new capabilities for use by industry

## Next steps

Seek IEEE SA Open Source Committee (OSCOM) approval of request

## Channel Operating Margin (COM) Code Open Source Proposal

https://mentor.ieee.org/802-ec/dcn/24/ec-24-0280-00-00EC-com-open-source-proposal-open-source-project-request.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

NEA Industry Connections Activity Initiation Document (ICAID) renewal approved

Two presentations:

- Future SMF Needs
- Call for a “State of the ODN” Project

## Next Steps

Future Meetings

See IEEE 802.3 Call and Meeting Calendar

## Closing report

https://www.ieee802.org/3/minutes/nov24/1124_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 P802.3.1 (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 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>

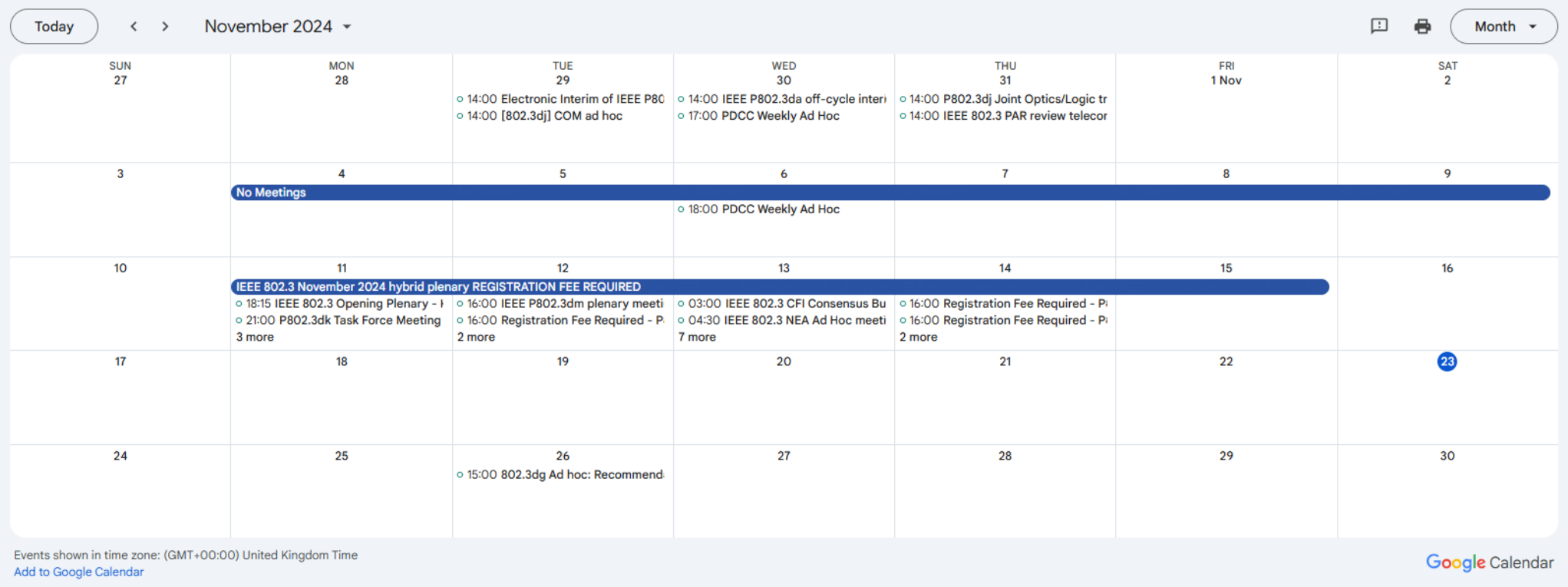
**IEEE 802.3 Task Force vice-chairs**

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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