

IEEE 802.3 Working Group November 2023 Plenary Session

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Current IEEE 802.3 activities

IEEE 802.3 Task Forces

IEEE P802.3cw 400 Gb/s over DWDM systems

IEEE P802.3da 10 Mb/s Single Pair Multidrop Segments Enhancement

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

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

IEEE P802.3dh Multi-Gigabit Automotive Ethernet over Plastic Optical Fiber

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 P802.3.1 (IEEE 802.3.1b) Revision to IEEE Std 802.3.1-2013 Ethernet MIBs

IEEE P802.3.2 (IEEE 802.3.2a) Revision to IEEE Std 802.3.2-2019 YANG Data Model Definitions

IEEE 802.3 Study Group

IEEE 802.3 Improved Support of Asymmetric Applications for Cameras (ISAAC)

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 eight new maintenance requests

- Reviewed status of outstanding maintenance requests

IEEE P802.3-2022/Cor 1 (IEEE 802.3dn) Multi-Gigabit Automotive MDI return loss PAR

Draft PAR: <https://mentor.ieee.org/802-ec/dcn/23/ec-23-0210-00-00EC-ieee-p802-3-2022-cor-1-draft-par.pdf>

Scope of the proposed changes: 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)’

Need: There are sign errors in MDI return loss Equations (149–27) and (165–42) and in Figure 165–38 ‘MDI return loss calculated limit in Equation (165–42)’ that need to be corrected

IEEE 802.3 and IEEE 802 LMSC approval granted to submit draft PAR to NesCom

Web page

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

Maintenance closing report

https://ieee802.org/3/minutes/nov23/1123_maint_close_report.pdf

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

Updated the Broad Market Potential response to reflect the approval of the IEEE Std 802.3ct-2021 100 Gb/s over DWDM systems standard, and the Distinct Identity CSD response to reflect the removal of G.698.2 addition of 200G and 400G work item from the ITU-T SG15 program

Updated CSD: <https://mentor.ieee.org/802-ec/dcn/23/ec-23-0211-00-00EC-ieee-p802-3cw-modified-csd.pdf>

Conditional approval granted to proceed to Standards Association ballot

Sixth Working Group recirculation ballot of draft D2.6 closed 29 November 2023

Next steps

Complete IEEE P802.3cw/D2.6 sixth Working Group recirculation ballot process

Conduct further Working Group recirculation ballot(s) as necessary

Proceed to initial Standards Association ballot if conditions are met

Task Force closing report

https://ieee802.org/3/minutes/nov23/1123_3cw_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 six contribution: T-Connector Resistance, MPoE Unit Loads, 625 kHz Wake Signaling Relative Costs, Multidrop Low Power Status Update, Mixing Segment Specifications, Clause 169 'Power over Multidrop Single Pair Ethernet' updates

Adopted baseline proposal for Clause 169 'Power over Multidrop Single Pair Ethernet'

Approved starting IEEE P802.3da/D1.0 initial Task Force review in early January 2024

Next steps

Conduct IEEE P802.3da/D1.0 initial Task Force review

Task Force closing report

https://ieee802.org/3/minutes/nov23/802d3da_task_force_close_report_1123.pdf

IEEE P802.3df 400 Gb/s and 800 Gb/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 over copper, multi-mode fiber, and single-mode fiber physical medium dependent (PMD) sublayers based on 100 Gb/s per lane signaling technology.

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

Progress

IEEE P802.3df D3.1 first Standards Association recirculation ballot comment resolution

Completed responses to 40 comments received

Conditional approval granted to progress to RevCom submittal

Next steps

Complete IEEE P802.3df/D3.2 second Standards Association recirculation ballot process

Conduct further Standards Association recirculation ballot(s) as necessary

Proceed to RevCom submittal if conditions are met

Task Force closing report

https://ieee802.org/3/minutes/nov23/2311_3df_closed_report.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

Considered contributions related to PHY considerations and baselines, and potential new MII specification

Discussed items needed to model & make PHY decisions, work program to define parameters

Expressed a majority wishing to progress work on a new MII specification, targeting a decision on adding an objective in March based on contributions progress

Next steps

Continue baseline selection to satisfy the project objectives

Task Force closing report

https://ieee802.org/3/minutes/nov23/802d3dg_close_report_Nov2023.pdf

IEEE P802.3dh Multi-Gigabit Automotive Ethernet over Plastic Optical Fiber 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 using graded-index plastic optical fiber for application in the automotive environment.

Web site: <https://ieee802.org/3/dh/index.html>

Progress

Considered contributions related to vibration test results by connector butt coupling, further frequency response data, update on IEC/SC86A/WG1 Millan meeting, timeline, and possibility the project will not be finished by the end of PAR expiration

- Proposed timeline not adopted, concerns that project depends on external standardization (IEC 60793-2-40)

- PAR withdrawal discussed

IEEE 802.3 Working Group approved withdrawal of the IEEE P802.3dh PAR

- PAR timeline

 - Project approved on 2 Jun 2020 as part of the original IEEE P802.3cz PAR

 - Split from the IEEE P802.3cz PAR as IEEE P802.3dh PAR on 13 May 2022

IEEE P802.3dh Multi-Gigabit Automotive Ethernet over Plastic Optical Fiber Task Force (continued)

IEEE 802.3 Working Group approved withdrawal of the IEEE P802.3dh PAR (continued)
PAR item 5.3

5.3 Is the completion of this standard contingent upon the completion of another standard? Yes
Explanation: IEC 60793-2-40:2021 has been proposed for early revision to address automotive applications. Wavelength of operation will be considered as well as bandwidth and attenuation specifications and mechanical properties.

https://ieee802.org/3/dh/P802d3dh_PAR.pdf

IEC 60793-2-40 status

IEC TC 86 Fibre optics (Category B liaison) liaison report

IEC SC86A WG1 has no update on progress towards standardizing an A4j (POF) multimode fiber for automotive applications

<https://ieee802.org/3/minutes/nov23/IEC%20TC86%20Liaison%20Report%20for%20November%202023%20IEEE%20802.3%20Plenary.pdf>

Next steps

Progress withdrawal of the IEEE P802.3dh PAR

Task Force closing report

https://ieee802.org/3/minutes/nov23/802d3dh_task_force_report_Nov_2023_Closing.pdf

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

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

Consider 31 technical contributions

Additional presentations will be heard during 28 and 29 November 2023 contingent interim meeting

Key decisions

Logic

Filled in some holes found in the previously adopted logic baselines

Adopted “FECo” as the only FEC for the 500m SMF PMDs (200GBASE-DR1, 400GBASE-DR2, 800GBASE-DR4, 1.6TBASE-DR8)

Optical

Adopted an additional 800 GbE optical objective (4 wavelength, 500m)

Adopted a majority of the optical PMD baselines:

- 200GBASE-DR1, 400GBASE-DR2, 800GBASE-DR4, 1.6TBASE-DR8
- 200GBASE-FR1-2, 400GBASE-DR2-2, 800GBASE-DR4-2, 1.6TBASE-DR8-2
- 800GBASE-FR4
- 800GBASE-LR4

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

Key decisions (continued)

Electrical

- Adopt a two package approach for electrical KR and C2C AUI

- Adopted key package parameters or backplane and CR objectives

- Adopted host and cable assembly insertion loss budgets

- Adopted DER_0 and both host and cable assembly insertion loss budgets for CR objectives

- Adopted the “TP1-TP4 IL” column in the table and MCB insertion loss

Additional objective

- Define a physical layer specification that supports 800 Gb/s operation over 4 wavelengths over a single SMF in each direction with lengths up to at least 500 m

Next steps

- Continue baseline selection to satisfy the project objectives

Task Force closing report

https://ieee802.org/3/minutes/nov23/2311_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

Major items discussed included include mid-span connector specification, update on ITU-T G.652 fiber Chromatic Dispersion and how to do 200 Gb/s BiDi, and 100 Gb/s BiDi subclause proposals

Baselines for 100 Gb/s BiDi subclauses adopted

Next steps

Continue baseline selection to satisfy the project objectives

Task Force closing report

https://ieee802.org/3/minutes/nov23/802d3dk_Task_Force_close_report.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

Completed Task Force review of IEEE P802.3.1b and IEEE P802.3.2a drafts

Completed responses to 5 comments received on IEEE P802.3.2a

No comments received on IEEE P802.3.1b

Approval granted to proceed initial Working Group ballot

Next Steps

Conduct initial Working Group ballots of IEEE P802.3.1b/D1.0 and IEEE P802.3.2a/D1.0

Task Force closing report

https://ieee802.org/3/minutes/nov23/802d3_task_force_802.3.1_802.3.2_closing.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

One presentation on Enhanced Ethernet for AI and HPC applications

84 attendees (IMAT record)

Next steps

Consider any future requests

Closing report

https://ieee802.org/3/minutes/nov23/1123_NEA_close_report.pdf

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 responses to public input proposals received as part of the next edition of NFPA70; and consider any other NFPA related items of interest, such as proposed Tentative Interim Amendments (TIA)

- Build consensus on draft input to IEC TC64/PT716, and proposed direction of the IEEE 802.3 Category C liaison expert

- Build consensus on draft input to IEC TC108/PT63315, and proposed direction of the IEEE 802.3 Category C liaison expert

Web site: https://ieee802.org/3/ad_hoc/PDCC/index.html

Progress

Progress request for Category C liaison with IEC TC64 MT2

Considered questions from ITU-T SG5 Chair regarding 'alternative' Ethernet port implementations

Next steps

Continue to monitor activities within scope

Task Force closing report

https://ieee802.org/3/minutes/nov23/PDCC_adhoc_close_report_1123.pdf

IEEE 802.3 Ethernet for Automotive Imaging Sensors (ISAAC) 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 for an electrical physical layer specification and related functionality of a client optimized for automotive end-node cameras

Progress

PAR & CSD items were discussed with consensus on most items

There is still discussion ongoing concerning >10 Gb/s

Objectives

Approved several key objectives including 2.5 Gb/s, 5 Gb/s and 10 Gb/s data rates over the link segments and supporting both balanced-pair cabling and unbalance coaxial cabling

Study Group rechartered

Next steps

Continue development of PAR, CSD responses and objectives

Study Group closing report

https://ieee802.org/3/minutes/nov23/1123_ISAAC_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>

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IEEE 802.3 Treasurer: Valerie Maguire <vmaguire@ieee.org>

IEEE 802.3 Task Force chairs

IEEE P802.3cw 400 Gb/s over DWDM systems: John D'Ambrosia <jdambrosia@ieee.org>

IEEE P802.3da 10 Mb/s Single Pair Multidrop Segments Enhancement: Chad Jones <cmjones@cisco.com>

IEEE P802.3df 400 Gb/s and 800 Gb/s Ethernet: John D'Ambrosia <jdambrosia@ieee.org>

IEEE P802.3dg 100 Mb/s Long-Reach Single Pair Ethernet: George Zimmerman <george@cmephyconsulting.com>

IEEE P802.3dh Multi-Gigabit Automotive Ethernet over Plastic Optical Fiber: Yuji Watanabe <yuji.watanabe@agc.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 P802.3.1 (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 for Automotive Imaging Sensors Study Group: Jon Lewis <jon.lewis@dell.com>

IEEE 802.3 Task Force vice-chairs

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

IEEE P802.3df 400 Gb/s and 800 Gb/s Ethernet: Mark Nowell <mnowell@cisco.com>

IEEE P802.3dh Multi-Gigabit Automotive Ethernet over Plastic Optical Fiber: Luisma Torres <luismanuel.torres@kdpof.com>

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

Today

November 2023

Print Week Month Agenda

Sun	Mon	Tue	Wed	Thu	Fri	Sat
29	30	31	1 Nov 13:00 IEEE P802.3cw Electronic Interim S 14:00 IEEE802.3dh Ad Hoc meeting	2 14:00 P802.3dj joint optics/logic track ad	3	4
5	6	7	8	9	10	11
No meetings						
12	13	14	15	16	17	18
IEEE 802.3 November 2023 hybrid plenary week hybrid plenary week REGISTRATION FEE REQUIRED in-person or remote https://web.cvent.com/event/adea36b 20:00 IEEE 802.3 WG Opening Plenary - I 00:00 IEEE P802.3dk TF Meeting - Nov 20:00 IEEE 802.3 Maintenance Task Force 18:00 IEEE P802.3cw / df / dj Joint TF Mt 23:00 IEEE P802.3cw / df / dj Joint TF Mt 03:00 IEEE 802.3 PDCC meeting (REGIS 06:30 IEEE 802.3 NEA Ad Hoc meeting - I 18:00 IEEE P802.3dg TF - 802 Plenary (R 23:00 IEEE P802.3da TF meeting (REGIS 18:00 IEEE P802.3cw / df / dj Joint TF Mt 18:00 IEEE P802.3cw / df / dj Joint TF Mt 19:00 IEEE Std 802.3.1-2013REV/IEEE S 23:00 IEEE 802.3 WG Closing Plenary - R						
19	20	21	22	23	24	25
		18:00 PDCC AdHoc Weekly meeting				
26	27	28	29	30	1 Dec	2
	14:00 Contingent Meeting - IEEE P802.3d	14:00 Contingent Meeting - IEEE P802.3d 18:00 PDCC AdHoc Weekly meeting				

Events shown in time zone: United Kingdom Time

+ Google Calendar

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To subscribe to this calendar using other calendar applications use this [iCalendar subscription link URL](#).

As an example, for Outlook follow these [instructions](#) using the above iCalendar subscription link URL as the address of the internet calendar to add to Outlook.

Version 1.1 IEEE 802.3 Ethernet Working Group closing report – November 2023 Plenary

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