IEEE 802.3 Working Group
July 2023 Plenary Session

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Web site: www.ieee802.org/3

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 five new maintenance requests received since March 2023 plenary meeting
  - Reviewed status of outstanding maintenance requests

Web page

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

Maintenance closing report

https://ieee802.org/3/minutes/jul23/0723_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

Developed a liaison letter to OIF regarding error vector magnitude (EVM)

Second Working Group recirculation ballot of draft D2.2 closed 9 July 2023

Comment resolution planned for the week of 24 July 2023

Next steps

Complete IEEE P802.3cw/D2.2 second Working Group recirculation ballot process

Conduct further Working Group recirculation ballots as necessary

Task Force closing report

https://ieee802.org/3/minutes/jul23/2307_3dj_closing_report.pdf#page=5

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: Editor's report, Impulse noise in multidrop link, Verification of Consensus Model Simulation, LLDP Proposal and baseline, Clause 169 MPoE Features and baseline, 10BASE-T1S multidrop EEE proposal and baseline

Adopted one baseline proposal, deferred two until September

Proposed objective modifications

Reviewed OPEN ALLIANCE liaison letter submitting 10BASE T1S wake/sleep specification

Next steps

Continue baseline selection to satisfy the project objectives

Task Force closing report

https://ieee802.org/3/minutes/jul23/802d3da_task_force_close_report_0723.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 D2.1 first Working Group recirculation ballot comment resolution

Completed responses to 55 comments received, 100% approval after comment resolution

Unconditional approval granted to progress to Standards Association ballot

Next steps

Complete IEEE P802.3df/D3.0 initial Standards Association ballot process

Conduct Standards Association recirculation ballots as necessary

Task Force closing report

https://ieee802.org/3/minutes/jul23/2307_3dj_closing_report.pdf#page=5

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 link segment parameters Interference parameters, next-level PHY considerations and analysis, and potential new MII specification

Adopted TCL and modified link segment alien crosstalk parameters

Discussed considerations and way forward for PHY analysis

Expressed support for adding a “new MII” objective, but did not write one yet

Revised timeline

Next steps

Continue baseline selection to satisfy the project objectives

Task Force closing report

https://ieee802.org/3/minutes/jul23/802d3dg_close_report_Jul2023.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 liaison letter response from ISO TC 22/SC 32/WG 10

Review of action list

Next steps

Continue baseline selection to satisfy the project objectives

Task Force closing report

https://ieee802.org/3/minutes/jul23/802d3dh_task_force_report_Jul_2023_Closing.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, whenapplicable.

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

Progress

Progress with 15 Straw Polls and 14 Motions taken

Optical: Clear direction identified for interest in supporting (1) Inner code FEC Bypass (2) use of BCH FEC for Coherent LR1 (10 km) PMD (3) use of CDQ methodology for SMF channel to be used for optical baselines

Electrical: adopted DER_0 budget for all AUI interfaces in a PHY, CR die to die loss budget

Logic: Adopted convolution interleaver, 4 code-word interleave for 200 Gb/s / 400 Gb/s, adopted logic layers / FEC for 10 km single wavelength PMD, inner FEC for 1.6 Tb/s, stateless encoding 200 Gb/s / 400 Gb/s (aligns with 800 Gb/s /1.6 Tb/s)

Developed a liaison letter to OIF regarding 800LR

Next steps

Continue baseline selection to satisfy the project objectives

Task Force closing report

https://ieee802.org/3/minutes/jul23/2307_3dj_closing_report.pdf#page=6

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 100 Gb/s 40 km experimental results, BR40 wavelength plan, dynamic range, optics safety requirements, baseline proposals of 100 Gb/s BiDi 10 km and 20 km specs and draft outline

Next steps

Continue baseline selection to satisfy the project objectives

Task Force closing report

https://ieee802.org/3/minutes/jul23/802d3dk_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

Reviewed and approved baseline IEEE P802.3.1b and IEEE P802.3.2a drafts

- Derived from approved standards and any outstanding maintenance requests

Reviewed two contributions to IEEE P802.3.2a to add LLDP extensions and MAC Merge

Reviewed the response letter to BBF liaison on YANG ONU management.

Next Steps

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

Task Force closing report

https://ieee802.org/3/minutes/jul23/802d3_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

The IEEE 802.3 New Ethernet Applications Ad Hoc did not meet during this plenary session

The IEEE 802.3 New Ethernet Applications ICAID status report to ICCom was reviewed and approved for submission at the IEEE 802.3 Working Group closing plenary meeting

IEEE 802.3 Improved Support of Asymmetric Applications for Cameras (ISAAC) Study Group formation approval was successful conclusion of NEA consensus building activity

Next steps

Consider any future requests

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

Items considered included the IEEE 802.3 IEC TC 64 Category A liaison request, the recent ITU-T SG5 plenary along with ITU-T K.147 and K.44Imp, and IEC PT 60364-7-716 FDIS ballot comments. A liaison letter to IEC PT 60364-7-716 regarding clarification of IEC TC 64 documents and conflict with IEC TC 108 documents was drafted.

Next steps

Continue to monitor activities within scope

Task Force closing report

https://ieee802.org/3/minutes/jul23/PDCC_adhoc_close_report_0723.pdf

IEEE 802.3 Ethernet for Automotive Imaging Sensors call for interest

Progress

IEEE 802.3 Improved Support of Asymmetric Applications for Cameras (ISAAC) Study Group formation approved to develop a Project Authorization Request (PAR) and Criteria for Standards Development (CSD) responses for an electrical physical layer specification and related functionality of a client optimized for automotive end node cameras

Next steps

Start development of PAR, CSD responses and objectives

IEEE 802.3 Officers, Subgroup Chairs and Vice-Chairs

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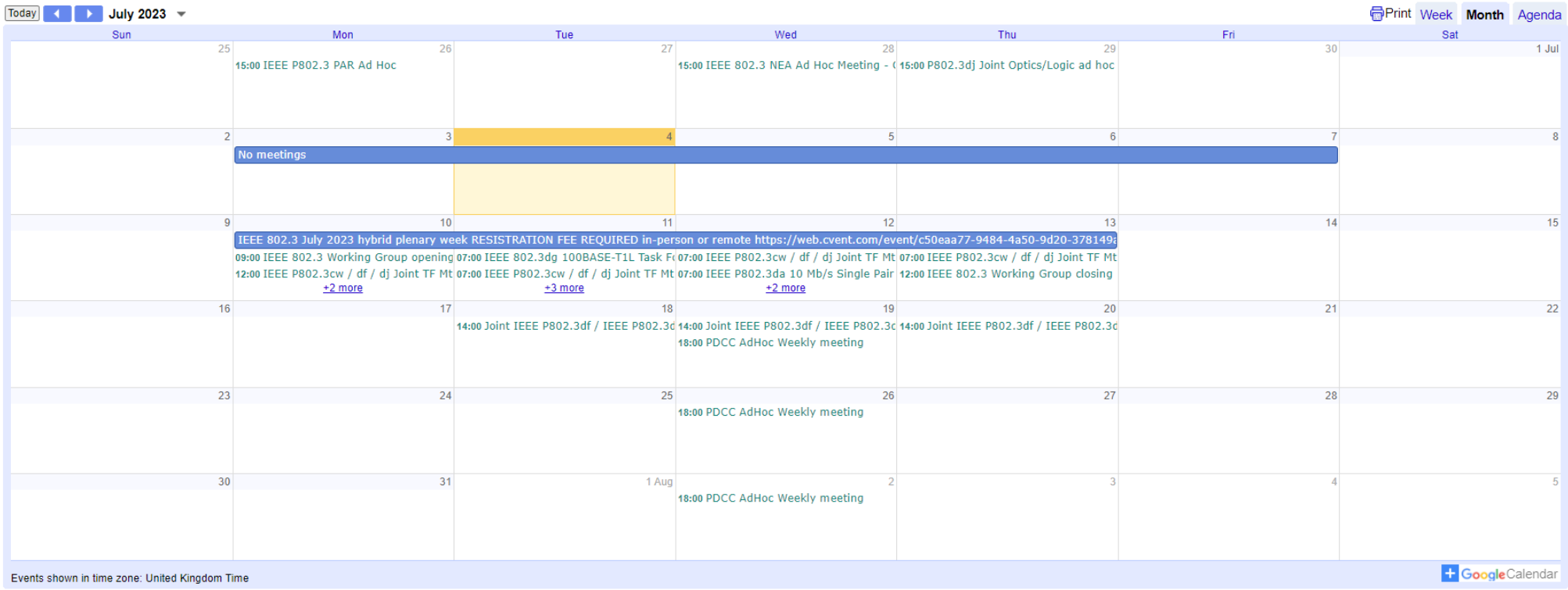
IEEE P802.3dj 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet: Mark Nowell <mnowell@cisco.com>

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



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