IEEE 802.3 Working Group
July 2022 Plenary Session

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Web site: www.ieee802.org/3

Current IEEE 802.3 activities

IEEE 802.3 Task Forces

IEEE P802.3ck 100 Gb/s, 200 Gb/s, and 400 Gb/s Electrical Interfaces Task Force

IEEE P802.3cs Increased-reach Ethernet optical subscriber access (Super-PON) Task Force

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

IEEE P802.3cx Improved PTP Timestamping Accuracy Task Force

IEEE P802.3cy Greater than 10 Gb/s Electrical Automotive Ethernet Task Force

IEEE P802.3cz Multi-Gigabit Optical Automotive Ethernet Task Force

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

IEEE P802.3db 100 Gb/s, 200 Gb/s, and 400 Gb/s Short Reach Fiber Task Force

IEEE P802.3de Time Synchronization for Point-to-Point Single Pair Ethernet Task Force

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

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

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

IEEE 802.3 Ad Hoc

IEEE 802.3 New Ethernet Applications Ad Hoc

IEEE 802.3 Power Distribution Coordinating Committee (PDCC) Ad Hoc

IEEE 802.3 Maintenance

Plan

    Consider new maintenance requests

    Review status of outstanding maintenance requests

    Adoption of IEEE 802.3 standards by ISO/IEC SC6

    Consider any other maintenance business

Web page

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

IEEE P802.3ck 100 Gb/s, 200 Gb/s, and 400 Gb/s Electrical Interfaces Task Force

Description

This project is to specify additions to and appropriate modifications of IEEE Std 802.3 to add Physical Layer specifications and Management Parameters for 100 Gb/s, 200 Gb/s, and 400 Gb/s electrical interfaces based on 100 Gb/s signaling

Web site: http://ieee802.org/3/ck/index.html

Status

3rd Standards Association recirculation ballot of draft D3.3 complete

Plan

Consideration of comments received against draft D3.3

Progress conditional approval to proceed to RevCom submittal

IEEE P802.3cs Increased-reach Ethernet optical subscriber access (Super-PON) Task Force

Description

Define physical layer specifications and management parameters for optical subscriber access supporting point-to-multipoint operations using wavelength division multiplexing over an increased-reach (up to at least 50 km) passive optical network (PON)

Web site: http://ieee802.org/3/cs/index.html

Status

4th Standards Association recirculation ballot of draft D3.4 complete

Plan

Consideration of comments received against draft D3.4

Progress approval to proceed to RevCom submittal

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

Status

Draft D2.0 submitted for Working Group preview

Plan

Progress approval to proceed to Working Group ballot

IEEE P802.3cx Improved PTP timestamping accuracy Task Force

Description

Define optional enhancements to Ethernet support for time synchronization protocols to provide improved timestamp accuracy in support of ITU-T Recommendation G.8273.2 'Class C' and 'Class D' system time error performance requirements.

Web site: http://ieee802.org/3/cx/index.html

Status

5th Working Group recirculation ballot of draft D2.5.1 complete

Meeting plan

Consideration of comments received against draft D2.5.1

Progress approval to proceed to Standards Association ballot

IEEE P802.3cy Greater than 10 Gb/s Electrical Automotive Ethernet Task Force

Description

Specify additions to and appropriate modifications of IEEE Std 802.3 to add greater than 10 Gb/s electrical Physical Layer specifications for symmetrical and asymmetrical operation and management parameters for media and operating conditions for applications in the automotive environment.

Web site: http://ieee802.org/3/cy/index.html

Status

Draft D2.0 submitted for Working Group preview

Plan

Progress approval to proceed to Working Group ballot

IEEE P802.3cz Multi-Gigabit Optical 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 multi-gigabit optical Ethernet using graded-index glass optical fiber for application in the automotive environment.

Web site: http://ieee802.org/3/cz/index.html

Status

1st Working Group recirculation ballot of draft D2.1 complete

Meeting plan

Consideration of comments received against draft D2.1

Progress approval to proceed to Standards Association ballot

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

Status

Selecting set of baseline proposals to satisfy project objectives

Meeting plan

Continue to work on selection of a set of baseline proposals

IEEE P802.3db 100 Gb/s, 200 Gb/s, and 400 Gb/s Short Reach Fiber Task Force

Description

Specify additions to and appropriate modifications of IEEE Std 802.3 and adds Physical Layer specifications and management parameters for 100 Gb/s, 200 Gb/s, and 400 Gb/s Ethernet optical interfaces for server attachment and other intra-data center applications using 100 Gb/s signaling over optical fiber

Web site: http://ieee802.org/3/db/index.html

Status

2nd Standards Association recirculation ballot underway

Plan

Progress conditional approval to proceed to RevCom submittal

IEEE P802.3de Time Synchronization for Point-to-Point Single Pair Ethernet Task Force

Description

Specify additions to and appropriate modifications of the IEEE Std 802.3 MAC Merge function and the Time Synchronization Service Interface (TSSI) to support 10 Mb/s Single Pair Ethernet point to point PHYs

Web site: http://ieee802.org/3/de/index.html

Status

1st Standards Association recirculation ballot of draft D3.1 complete

No comments received

Plan

Progress approval to proceed to RevCom submittal

IEEE P802.3df 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/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 and 1.6 Tb/s over copper, multi-mode fiber, and single-mode fiber, and use this work to define derivative physical layer specifications and management parameters for the transfer of Ethernet format frames at 200 Gb/s and 400 Gb/s

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

Status

Selecting set of baseline proposals to satisfy project objectives

Meeting plan

Continue to work on selection of a set of baseline proposals

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

Status

IEEE P802.3dg PAR approved on 24 Mar 2022

Selecting set of baseline proposals to satisfy project objectives

Meeting plan

Continue to work on selection of a set of baseline proposals

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

Status

IEEE P802.3dh PAR approved on 13 May 2022

Selecting set of baseline proposals to satisfy project objectives

Meeting plan

Continue to work on selection of a set of baseline proposals

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

Status

Activities since last plenary

One High-performance Ethernet meeting

Seven joint meetings with IEEE 802.1 Nedica regarding Cut Through Forwarding

Three High Speed bi-directional optics meetings

May Interim meeting

Lane Bonding and ICAID renewal

Meeting plan

Progress ICAID renewal

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

Meeting plan

Delegation to ISO/IEC JTC1 SC25/WG3 September 2022 meeting

Direction of IEEE 802.3 delegation to ISO/IEC JTC1 SC25/WG3 September 2022 meeting

Greater than 50 Gb/s Bidirectional Optical Access PHYs call for interest

In the past, the IEEE 802.3 Ethernet Working Group has standardized bidirectional optical PHYs at speeds ranging from 100 Mb/s to 50 Gb/s over one single mode fiber, that are intended for optical access applications. Due to the growth of bandwidth demand, there is now a need for similar systems that run at higher speeds over the same fiber connections. This Call for Interest is to assess the support for the formation of a study group to explore the development of these higher speed bidirectional PHYs.

The call for interest will take place during the IEEE 802.3 Opening Plenary on the morning of Monday 11 July 2022. A call for interest consensus building meeting has been scheduled to occur from 20:00 to 21:30 ET on the evening of Tuesday 12 July 2022. The vote to determine if a Study Group will be formed will take place at the IEEE 802.3 Closing Plenary on the afternoon of Thursday 14 July 2022.

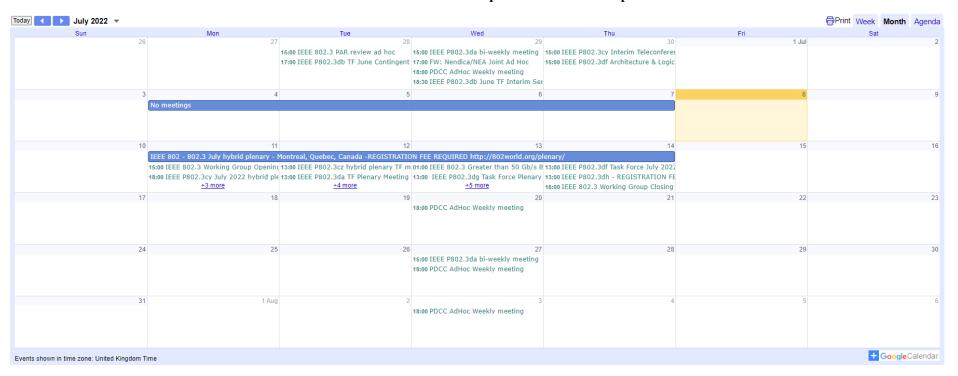# IEEE 802.3 Officers, Subgroup Chairs and Vice-Chairs

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IEEE P802.3de Time Synchronization for Point-to-Point Single Pair Ethernet: George Zimmerman <george@cmephyconsulting.com>
IEEE P802.3df 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet: John D'Ambrosia <jdambrosia@ieee.org>
IEEE P802.3dg 100 Mb/s Long-Reach Single Pair Ethernet: George Zimmerman <george@cmephyconsulting.com>
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Upcoming meetings

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