

# IEEE 802.3 Working Group March 2018 Plenary Week

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# Current IEEE 802.3 activities

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## IEEE 802.3 Task Forces

- IEEE P802.3bs 200 Gb/s and 400 Gb/s Ethernet
- IEEE P802.3bt DTE Power via MDI over 4-Pair
- IEEE P802.3ca 25 Gb/s, 50 Gb/s, and 100 Gb/s Ethernet Passive Optical Networks
- IEEE P802.3cb 2.5 Gb/s and 5 Gb/s Backplane
- IEEE P802.3cc 25 Gb/s Ethernet over Single-Mode Fiber
- IEEE P802.3cd 50 Gb/s, 100 Gb/s, and 200 Gb/s Ethernet
- IEEE P802.3.2 (IEEE 802.3cf) YANG Data Model Definitions
- IEEE P802.3cg 10 Mb/s Single Twisted Pair Ethernet
- IEEE P802.3ch Multi-Gig Automotive Ethernet PHY
- IEEE P802.3 Revision to IEEE Std 802.3-2015 (IEEE 802.3cj) Maintenance #12

## IEEE 802.3 Study Group

- IEEE 802.3 Beyond 10 km Optical PHYs
- IEEE 802.3 10 Mb/s Backplane Ethernet
- IEEE 802.3 100 Gb/s per Lane Electrical
- IEEE 802.3 Next-generation 200 Gb/s and 400 Gb/s MMF PHYs

## IEEE 802.3 Call for Interest

- Bidirectional 10Gb/s and 25Gb/s optical access PHYs

## IEEE 802.3 Industry Connection activity

- IEEE 802.3 New Ethernet Applications Ad Hoc

# IEEE 802.3 Maintenance

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## Meeting plan

- Consider new maintenance requests

- Reviewing status of outstanding maintenance requests

- IEEE P802.3 (IEEE 802.3cj) Maintenance #12 (Revision)

  - Consideration of comments received on 1<sup>st</sup> Sponsor recirculation ballot

- ISO/IEC JTC1 SC6 adoptions under PSDO agreement

  - Submission of IEEE 802.3 drafts for review

  - Submission of IEEE 802.3 standards for adoption

  - Respond to any comments on adoption of IEEE 802.3 standards

- Consider any other maintenance business

## Web page

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

# IEEE P802.3bs 200 Gb/s and 400 Gb/s Ethernet Task Force

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## Description

Define Ethernet Media Access Control (MAC) parameters, physical layer specifications, and management parameters for the transfer of Ethernet format frames at 200 Gb/s over single-mode fiber and 400 Gb/s over optical physical media

## Web site:

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

## Status

IEEE Std 802.3bs-2017 approved 6<sup>th</sup> December 2017

IEEE Std 802.3bs-2017 published 12<sup>th</sup> December 2017

## Meeting plan

Awards!!!

# IEEE P802.3bt DTE Power via MDI over 4-Pair Task Force

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## Description

Augment the capabilities of the IEEE Std 802.3 standard with 4-pair power and associated power management information, optional augmented power limit will be made available for certain structured cabling systems, improvements introduced for 4-pair systems, excluding raising the power limit, are optionally enabled for 2-pair systems

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

## Status

Last met during the January 2018 interim meeting series  
Draft D3.3 sent out for 3rd Sponsor recirculation ballot

## Meeting plan

Consideration of comments received against draft D3.3

# IEEE P802.3ca 25 Gb/s, 50 Gb/s, and 100 Gb/s Passive Optical Networks Task Force

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## Description

Amend IEEE Std 802.3 to add physical layer specifications and management parameters for symmetric and/or asymmetric operation at 25 Gb/s, 50 Gb/s, and 100 Gb/s MAC data rates on point-to-multipoint passive optical networks with distance and split ratios consistent with those defined in IEEE Std 802.3-2015

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

## Status

Last met during the January 2018 interim meeting series

Selecting set of baseline proposals to satisfy project objectives

## Meeting plan

Continue to work on selection of a set of baseline proposals

# IEEE P802.3cb 2.5 Gb/s and 5 Gb/s Operation over Backplane Task Force

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## Description

Amend IEEE Std 802.3 to add 2.5 Gb/s and 5 Gb/s Physical Layer (PHY) specifications and management parameters for operation over channels such as backplanes and twinaxial copper cables consistent with current storage interconnect applications within a single rack.

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

## Status

Last met during the January 2018 interim meeting series  
Draft D3.3 sent out for 3rd Sponsor recirculation ballot

## Meeting plan

Consideration of comments received against draft D3.3  
Prepare for request to proceed to RevCom submittal

# IEEE P802.3cc 25 Gb/s Ethernet over Single-Mode Fiber Task Force

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## Description

Provide an amendment to the IEEE 802.3 Ethernet standard to add point-to-point single-mode fiber Physical Medium Dependent (PMD) options for serial 25 Gb/s operation at reaches greater than 100 m

## Web site:

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

## Status

IEEE Std 802.3cc-2017 approved 6<sup>th</sup> December 2017

IEEE Std 802.3cc-2017 published 15<sup>th</sup> January 2018

## Meeting plan

Awards!!!



# IEEE P802.3cd 50 Gb/s, 100 Gb/s, and 200 Gb/s Ethernet Task Force

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## Description

Define Ethernet Media Access Control (MAC) parameters, Physical Layer specifications, and management parameters for the transfer of Ethernet format frames at 50 Gb/s over copper and optical media. Define additional Physical Layer specifications and management parameters at 100 Gb/s over copper and optical media. Define additional Physical Layer specifications and management parameters at 200 Gb/s over copper and multimode fiber physical media

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

## Status

Last met during the January 2018 interim meeting series  
Draft D3.1 sent out for 1st Sponsor recirculation ballot

## Meeting plan

Consideration of comments received against draft D3.1

# IEEE P802.3.2 (IEEE 802.3cf) YANG Data Model Definitions Task Force

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## Description

Define YANG data models for IEEE Std 802.3 Ethernet

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

## Status

Last met during the January 2018 interim meeting series

Draft D2.0 sent out for Initial Working Group ballot

## Meeting plan

Consideration of comments received against draft D2.0

# IEEE P802.3cg 10 Mb/s Single Twisted Pair Ethernet Task Force

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## Description

Define additions to and appropriate modifications of IEEE Std 802.3 to add 10 Mb/s Physical Layer (PHY) specifications and management parameters for operation, and associated optional provision of power, on single balanced twisted-pair copper cabling

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

## Status

Last met during the January 2018 interim meeting series

Baseline proposal selection to satisfy objectives and draft development

Draft D1.1 sent out for 2nd Task Force review

## Meeting plan

Continue to work on selection of a set of baseline proposals

Consideration of comments received against draft D1.1

# IEEE P802.3ch Multi-Gig Automotive Ethernet PHY Task Force

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## Description

Specify additions to and appropriate modifications of IEEE Std 802.3 to add greater than 1 Gb/s Physical Layer (PHY) specifications and management parameters for media and operating conditions for applications in the automotive environment

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

## Status

Last met during a January 2018 Task Force interim meeting series  
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 Beyond 10 km Optical PHYs Study Group

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## Description

Develop a Project Authorization Request (PAR) and Criteria for Standards Development (CSD) responses for beyond 10 km Optical PHYs for 50 Gb/s, 100 Gb/s, 200 Gb/s, and 400 Gb/s Ethernet

Web site: <<http://www.ieee802.org/3/B10K/index.html>>

## Status

First meeting during the January 2018 interim meeting series

Initial development of draft objectives, CSD and PAR

## Meeting plan

Continue developing draft objectives, CSD and PAR

# IEEE 802.3 10 Mb/s Backplane Ethernet Study Group

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## Description

Develop Project Authorization Request (PAR) and Criteria for Standards Development (CSD) modifications to IEEE P802.3cg to add 10 Mb/s Backplane Ethernet to that project.

Web site: <<http://www.ieee802.org/3/10BPE/index.html>>

## Status

First meeting during the January 2018 interim meeting series

Completed draft modified objectives, draft modified CSD and draft PAR modification request

## Meeting plan

Progress approval of modified objectives, CSD and NesCom submittal of PAR modification request for IEEE P802.3cg Standard for Ethernet Amendment: Physical Layer Specifications and Management Parameters for 10 Mb/s Operation and Associated Power Delivery over a Single Balanced Pair of Conductors

# IEEE 802.3 100 Gb/s per Lane Electrical Study Group

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## Description

Develop a Project Authorization Request (PAR) and Criteria for Standards Development (CSD) responses for 100 Gb/s per Lane Electrical Interfaces and Electrical PHYs.

Web site: <<http://www.ieee802.org/3/100GEL/index.html>>

## Status

First meeting during the January 2018 interim meeting series

Completed draft objectives, CSD and PAR for proposed project

## Meeting plan

Progress approval of objectives, CSD and NesCom submittal of PAR for IEEE P802.3ck Standard for Ethernet Amendment: 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

# IEEE 802.3 Next-generation 200 Gb/s and 400 Gb/s MMF PHYs Study Group

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## Description

Develop a Project Authorization Request (PAR) and Criteria for Standards Development (CSD) responses for next-generation 200 Gb/s and 400 Gb/s PHYs over fewer MMF pairs than in existing Ethernet projects and standards

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

## Status

First meeting during the January 2018 interim meeting series

Completed draft objectives, CSD and PAR for proposed project

## Meeting plan

Progress approval of objectives, CSD and NesCom submittal of PAR for IEEE P802.3cm Standard for Ethernet Amendment: Physical Layer and Management Parameters for 400 Gb/s over Multimode Fiber



# IEEE 802.3 Bidirectional 10Gb/s and 25Gb/s optical access PHYs call for interest

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In the past, the IEEE 802.3 Ethernet Working Group has standardized bidirectional optical PHYs running at 100Mb/s and 1Gb/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, such as 10 Gb/s and 25 Gb/s, over distances of at least 20 km. This Call for Interest is to assess the support for the formation of a study group to explore the development of these bidirectional PHYs.

This request for agenda time for this CFI has been received from Frank Effenberger <frank.effenberger@huawei.com>

# IEEE 802.3 New Ethernet Applications (NEA) Ad Hoc

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## 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](http://ieee802.org/3/ad_hoc/ngrates/index.html)>

## Status

Last met during the January 2018 interim meeting series

## Meeting plan

Two sessions on Monday evening  
Switch Latency in Industrial Networks  
Passive Optical Networking (PON)

# IEEE 802.3 Officers

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IEEE 802.3 Chair: David Law <dlaw@hpe.com>

IEEE 802.3 Vice Chair: Adam Healey <adam.healey@broadcom.com>

IEEE 802.3 Secretary: Pete Anslow <panslow@ciena.com>

IEEE 802.3 Executive Secretary: Steve Carlson <scarlson@ieee.org>

IEEE 802.3 Treasurer: Valerie Maguire <valerie\_maguire@siemon.com>

## **IEEE 802.3 Task Force chairs**

IEEE P802.3bs 200 Gb/s and 400 Gb/s Ethernet: John D'Ambrosia <jdambrosia@ieee.org>

IEEE P802.3bt DTE Power via MDI over 4-Pair: Chad Jones <cmjones@cisco.com>

IEEE P802.3ca 25 Gb/s, 50 Gb/s, and 100 Gb/s EPON: Curtis Knittle <c.knittle@cablelabs.com>

IEEE P802.3cb 2.5 Gb/s and 5 Gb/s Backplane: Dan Smith <daniel.f.smith@seagate.com>

IEEE P802.3cc 25 Gb/s Ethernet over Single-Mode Fiber: David Lewis <David.Lewis@lumentum.com>

IEEE P802.3cd 50 Gb/s, 100 Gb/s, and 200 Gb/s Ethernet: Mark Nowell <mnowell@cisco.com>

IEEE 802.3.2 (IEEE 802.3cf) YANG Data Model: Yan Zhuang <zhuangyan.zhuang@huawei.com>

IEEE P802.3cg 10 Mb/s Single Twisted Pair Ethernet: George Zimmerman <george@cmephyconsulting.com>

IEEE P802.3ch Multi-Gig Automotive Ethernet PHY: Steve Carlson <scarlson@ieee.org>

## **IEEE 802.3 Study Group chairs**

IEEE 802.3 10Mb/s Backplane Ethernet: Jon Lewis <jon.lewis@dell.com>

IEEE 802.3 Beyond 10km Optical PHYs: John D'Ambrosia <jdambrosia@ieee.org>

IEEE 802.3 100 Gb/s per Lane Electrical: Elizabeth Kochuparambil <edonnay@cisco.com>

IEEE 802.3 Next-generation 200 Gb/s and 400 Gb/s MMF PHYs Robert Lingle: <rlingle@ofsoptics.com>

# Preliminary IEEE 802.3 Meeting Plan

Always check [on-line schedule](#) for latest updates

	Sun	Mon	Tue	Wed	Thu
AM		IEEE P802.3cd  IEEE 802.3 Opening Plenary	IEEE P802.3ca IEEE P802.3cd IEEE P802.3cg	IEEE SCC18 Ad Hoc IEEE P802.3bt IEEE P802.3ca IEEE P802.3ch Maintenance 100GEL SG NGMMF SG	IEEE P802.3bt IEEE P802.3cb IEEE P802.3ch IEEE P802.3.2 B10K SG 100GEL SG
PM		IEEE P802.3ca IEEE P802.3cd IEEE P802.3cg 10M Backplane SG	IEEE P802.3ca IEEE P802.3cd IEEE P802.3cg PAR review ad hoc	IEEE P802.3bt IEEE P802.3cb IEEE P802.3ch IEEE P802.3.2 Maintenance B10K SG 100GEL SG NGMMF SG	IEEE 802.3 Closing Plenary
		CFI NEA: Switch Latency in Industrial Networks NEA: Passive Optical Networking (PON)	10M Backplane SG NGMMF SG	<b>B10K SG:</b> IEEE 802.3 Beyond 10 km Optical PHYs Study Group <b>100GEL SG:</b> IEEE 802.3 100 Gb/s per Lane Electrical Study Group <b>NGMMF SG:</b> IEEE 802.3 Next-generation 200 Gb/s and 400 Gb/s MMF PHYs Study Group <b>CFI:</b> Bidirectional 10 Gb/s and 25 Gb/s optical access PHYs	