

IEEE 802.3 Working Group November 2017 Plenary Week

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Current IEEE 802.3 activities

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 (IEEE 802.3cj) Maintenance #12 (revision)

IEEE 802.3 Study Group

- IEEE 802.3 Beyond 10 km Optical PHYs

IEEE 802.3 Call for Interest

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

IEEE 802.3 Industry Connection activity

- IEEE 802.3 New Ethernet Applications Ad Hoc

IEEE 802.3 Maintenance

Meeting plan

- Consider new maintenance requests

- Reviewing status of outstanding maintenance requests

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

 - Prepare request to proceed to Sponsor 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

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

Last met during the October 2017 teleconference interim meeting

Draft D3.5 sent out for 5th Sponsor recirculation ballot

No new negatives and no comments received

IEEE P802.3bs placed on December 2017 RevCom agenda

Meeting plan

The Task Force will not be meeting

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

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 September 2017 interim meeting series
Draft D3.1 sent out for 1st Sponsor recirculation ballot

Meeting plan

Consideration of comments received against draft D3.1

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

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 September 2017 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

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 September 2017 interim meeting series
Completed 1st Sponsor recirculation ballot comment resolution

Meeting plan

Progress to 2nd Sponsor recirculation ballot

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

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://ieee802.org/3/cc/index.html>

Status

Last met during the October 2017 teleconference interim meeting

Draft D3.3 sent out for 3rd Sponsor recirculation ballot

No new negatives and no comments received

IEEE P802.3cc placed on December 2017 RevCom agenda

Meeting plan

The IEEE P802.3cc Task Force will not be meeting

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

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 September 2017 interim meeting series
Draft D2.2 sent out for 2nd Working Group recirculation ballot

Meeting plan

Consideration of comments received against draft D2.2
Prepare for request to proceed to Sponsor ballot

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

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 September 2017 interim meeting series

Baseline proposal selection to satisfy objectives

Draft D1.2 sent out for Task Force review

Meeting plan

Continue to work on selection of a set of baseline proposals

Consideration of comments received against draft D1.2

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

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

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 September 2017 Task Force interim
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

Description

Develop a Project Authorization Request (PAR) and Criteria for Standards Development (CSD) responses for beyond 10 km Optical PHYs for 50 Gb/s, 200 Gb/s, and 400 Gb/s Ethernet
Web site: <<http://www.ieee802.org/3/B10K/index.html>>

Status

First met during the September 2017 interim meeting series
Initial discussion of draft objectives, CSD and PAR

Meeting plan

Continue developing draft objectives, CSD and PAR

IEEE 802.3 10Mb/s Backplane Ethernet call for interest

Over the past few years, the IEEE 802.3 Ethernet Working Group has initiated several projects chartered with developing new Ethernet solutions for single pair applications at various rates including 100 Mb/s, 1 Gb/s, and 10 Mb/s. The focus of these efforts has been solutions addressing reaches ranging from 15 m (automotive), 40 m (1 Gb/s industrial) up to 1000 m (10 Mb/s Industrial). There is an emerging need to provide 10 Mb/s Ethernet for intra-system management and control over backplane media. This Call for Interest is to request the formation of a study group to explore the addition of backplane media to the development of single pair 10 Mb/s Ethernet.

This request for agenda time for this CFI has been received from Jon Lewis <jon.lewis@dell.com>

IEEE 802.3 Beyond 10km Optical 100 Gb/s PHYs call for interest

The ongoing growth in network bandwidths continues to push in all application areas. Like core networks, distribution, metro and mobile networks require higher interface speeds in order to keep up with bandwidth requirements. Many of these networks are also migrating to Ethernet solutions in an effort to minimize cost and maximize architecture and deployment flexibility. Applications such as cable/MSO, Service Provider metro and mobile backhaul all require solutions for reaches greater than 10km over single-mode fiber. Newly adopted Ethernet technologies such as forward error correction, higher speed electrical SERDES or higher speed optical modulation offer the potential to be leveraged for new solutions or lower cost solutions compared to the existing solutions available today. It is requested that 802.3 form a study group to investigate potential 100 Gb/s Ethernet solutions for beyond 10km SMF reaches to address these application spaces.

This request for agenda time for this CFI has been received from Mark Nowell <mnowell@cisco.com>

IEEE 802.3 100 Gb/s per Lane for Electrical Interfaces and PHYs call for interest

The continual growth of bandwidth demand has driven evolution of higher Ethernet speeds, most recently with 100 Gb/s, 200 Gb/s, and 400 Gb/s Ethernet, as demonstrated by related 802.3 projects over the past 5 years. Ongoing advancement in SERDES technology to higher rates of operation will enable the opportunity to develop improved interfaces for AUIs, backplanes, and cables at these rates. This call for interest is to assess support for the formation of an 802.3 Study Group to explore the uses and development of electrical interfaces and electrical PHYs using 100 Gb/s per lane technology.

This request for agenda time for this CFI has been received from John D'Ambrosia <jdambrosia@ieee.org>

IEEE 802.3 Next-generation 200 Gb/s and 400 Gb/s MMF PHYs call for interest

Links comprising multimode fiber cable and VCSEL-based transceivers have played a key role in implementing 40 Gb/s and 100 Gb/s Ethernet in data centers for short reach. The continual growth of bandwidth demand has driven evolution of higher Ethernet speeds, most recently with 200 Gb/s and 400 Gb/s Ethernet, as demonstrated by related IEEE 802.3 projects over the past 4 years. To better support the installed base of MMF cables and to reduce the relative cost of short reach links, we request a call for interest to assess support for a Study Group to develop the PAR and CSD for next-generation 200 Gb/s and 400 Gb/s PHYs over fewer MMF pairs than existing Ethernet projects.

This request for agenda time for this CFI has been received from Robert Lingle <rlingle@ofsoptics.com>

IEEE 802.3 Officers

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>

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IEEE 802.3 Task Force chairs

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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 Cables: 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 chair

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

Preliminary IEEE 802.3 Meeting Plan

	Sun	Mon	Tue	Wed	Thu
AM			IEEE P802.3bt IEEE P802.3cd IEEE P802.3cg IEEE P802.3.2	IEEE P802.3bt IEEE P802.3ca IEEE P802.3cg IEEE P802.3ch B10K SG	IEEE P802.3bt IEEE P802.3ch IEEE P802.3.2 B10K SG
		IEEE 802.3 Opening Plenary			
PM		IEEE P802.3bt IEEE P802.3ca IEEE P802.3cb IEEE P802.3cd IEEE P802.3cg	IEEE P802.3bt IEEE P802.3ca IEEE P802.3cd IEEE P802.3cg	Maintenance IEEE P802.3bt IEEE P802.3ca IEEE P802.3ch B10K SG	IEEE 802.3 Closing Plenary
		Tutorial 1	CFI 1	B10K SG: IEEE 802.3 Beyond 10 km Optical PHYs Study Group CFI 1: 10Mb/s Backplane Ethernet CFI 2: Beyond 10km Optical 100 Gb/s PHYs CFI 3: 100 Gb/s per Lane for Electrical Interfaces and PHYs CFI 4: Next-generation 200 Gb/s and 400 Gb/s MMF PHYs	
		Tutorial 2	CFI 2		
			CFI 3		
			CFI 4		