IEEE 802.3 Working Group
July 2016 Plenary Week

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Web site: www.ieee802.org/3

Current IEEE 802.3 activities

- IEEE 802.3 Task Forces
  - IEEE P802.3bn EPON Protocol over Coax (EPoC)
  - IEEE P802.3bs 200 Gb/s and 400 Gb/s Ethernet
  - IEEE P802.3bt DTE Power via MDI over 4-Pair
  - IEEE P802.3bu 1-Pair Power over Data Lines (PoDL)
  - IEEE P802.3bv Gigabit Ethernet Over Plastic Optical Fiber
  - IEEE P802.3bz 2.5G/5GBASE-T
  - 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 and Copper Cables
  - 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 P802.3-2015/Cor 1 (IEEE 802.3ce) Multilane timestamping
- IEEE 802.3 Study Groups
  - IEEE 802.3 YANG Data Model(s)
- IEEE 802.3 Industry Connection activity
  - Next Generation Enterprise/Campus/Data Center Ethernet Ad Hoc
- IEEE 802.3 Call for Interest
  - 10 Mb/s Extended Reach Single Twisted Pair Ethernet PHY

IEEE 802.3 Maintenance

- Meeting plan
  - Consider new maintenance requests
  - Reviewing status of outstanding maintenance requests
  - Consider any other maintenance business
  - IEEE P802.3-2015/Cor 1 (IEEE 802.3ce) Multilane timestamping
    - Prepare for request to proceed to Working Group ballot
- Web page
  - http://www.ieee802.org/3/maint/index.html

IEEE P802.3bn EPON Protocol over Coax (EPoC) Task Force

Description

Provide an amendment to the IEEE 802.3 Ethernet standard to add physical layer specifications and management parameters for symmetric and/or asymmetric operation of up to 10 Gb/s on point-to-multipoint Radio Frequency (RF) distribution plants comprising either amplified or passive coaxial media. It also extends the operation of Ethernet Passive Optical Networks (EPON) protocols, such as MultiPoint Control Protocol (MPCP) and Operation Administration and Management (OAM)

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

Status

Draft D3.2 sent out for 2nd Sponsor recirculation ballot

Last met during a 21st June 2016 interim meeting

- Consideration of comments received against draft D3.2
- Agreed request for unconditional submittal of Draft 3.2 to RevCom

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 a June 2016 Task Force interim

Draft D1.5 sent out for 6th Task Force review

Draft D1.5 submitted to support request to proceed to Working Group ballot

Meeting plan

Consideration of comments received against draft D1.5

Prepare for request to proceed to Working Group ballot

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. The project will augment the methodology for the provision of power via balanced cabling to connected Data Terminal Equipment with 802.3 interfaces. 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. Compatibility with existing equipment will be maintained.

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

Status

Last met during a May 2016 May 2016 interim meeting series

Draft D1.8 sent out for 11th Task Force review

Draft D1.8 submitted to support request to proceed to Working Group ballot

Meeting plan

Consideration of comments received against draft D1.8

Prepare for request to proceed to Working Group ballot

IEEE P802.3bu 1-Pair Power over Data Lines (PoDL) Task Force

Description

Single twisted pair Ethernet links are in development (e.g. IEEE P802.3bp) and some applications (e.g., automotive sensors, industrial devices) require power delivery over the link. A new standard is required to provide power over single twisted pair links where IEEE Std 802.3 Clause 33 Data Terminal Equipment (DTE) Power via Media Dependent Interface (MDI) cannot be used.

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

Status

Last met during the May 2016 interim meeting series

Draft D3.0 sent out for Initial sponsor ballot

Meeting plan

Consideration of comments received against draft D3.0

IEEE P802.3bv Gigabit Ethernet Over Plastic Optical Fiber Task Force

Description

Specify an amendment to the IEEE 802.3 Ethernet standard to add physical layer (PHY) specifications for operation at 1000 Mb/s using standardized plastic optical fiber as the point-to-point data transmission medium.

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

Status

Draft D2.2 sent out for 2nd Working Group recirculation ballot

Last met during a June 2016 interim meeting

- Consideration of comments received against draft D2.2

Draft D2.3 sent out for 3rd Working Group recirculation ballot

Meeting plan

Consideration of comments received against draft D2.3

Prepare for request to proceed to Sponsor ballot

IEEE P802.3bz
2.5G/5GBASE-T Task Force

Description

Define Ethernet Media Access Control (MAC) parameters, physical layer specifications, and management objects for the transfer of Ethernet format frames at 2.5 Gb/s and 5 Gb/s over balanced twisted pair transmission media used in structured cabling.

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

Status

Draft D3.1 sent out for 1st Sponsor recirculation ballot

Last met during a June 2016 Task Force interim

- Consideration of comments received against draft D3.1

Draft D3.2 sent out for 2nd Sponsor recirculation ballot

Meeting plan

Consideration of comments received against draft D3.2

Prepare for request to proceed to RevCom submittal

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 May 2016 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 and Copper Cables 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

- Completed draft PAR and CSD modifications (see below for details)
- Draft D1.0 sent out for 1st Task Force Review
- Last met during a June 2016 Task Force interim
  - Consideration of comments received against draft D1.0
- Draft D1.2 sent out for 2nd Task Force review
- Draft D1.2 submitted to support request to proceed to Working Group ballot

Meeting plan

- Consideration of comments received against draft D1.2
- Seek approval for PAR and CSD modifications
- Prepare for request to proceed to Working Group ballot

IEEE P802.3cb 2.5 Gb/s and 5 Gb/s Operation over Backplane and Copper Cables Task Force (con't)

Summary of modification

The changes are proposed because the IEEE P802.3cb project is intended to address a backplane system within a box (enclosure) that contains an array of storage devices interfacing to a backplane, not a stand-alone cable solution. Because the storage devices plug directly into the enclosure's sub-system, through either a backplane board, or backplane board plus short cables, there may be a short cable used, but never a stand-alone cable. Based on this, to avoid any confusion with a stand-alone cable system, it has been decided to remove the reference to 'cable' from the PAR title, scope and need.

Draft PAR modification request

<http://ieee802.org/3/cb/P802_3cb_PAR_modification_030616.pdf>

Unmodified CSD responses

<http://ieee802.org/3/cb/8023cb_CSD-Rev_0316.pdf>

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/3/25GSMF/index.html>

Status

IEEE P802.3cc PAR approved by IEEE-SA Standards Board

Approval date 12th May 2016

First meeting during the May 2016 interim meeting series

Selected set of baseline proposals to satisfy project objectives

Initial draft D0.1 circulated for comment

Meeting plan

Consider comments received on draft D0.1

Prepare D1.0 for first task force review

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

IEEE P802.3cd PAR approved by IEEE-SA Standards Board

Approval date 12th May 2016

First meeting during the May 2016 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 Ethernet YANG data model(s) Study Group

Description

- Develop a Project Authorization Request (PAR) and Criteria for Standards Development (CSD) for IEEE 802.3 YANG data model(s)
- Web site: <http://ieee802.org/3/YANG/index.html>

Status

- First meeting during the May 2016 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 P802.3.2 (IEEE 802.3cf) Standard for Ethernet YANG data model definitions

IEEE 802.3 Ethernet YANG data model(s) Study Group (con't)

Scope of proposed project

This standard defines YANG data models for IEEE Std 802.3 Ethernet

Draft PAR

http://ieee802.org/3/YANG/public/may16/IEEE_P802d3d2_230516_PAR.pdf

Draft CSD

http://ieee802.org/3/YANG/public/may16/YANG_SG_draft_csd_v1.4.pdf

Draft Objectives

http://ieee802.org/3/YANG/public/may16/YANG_SG_draft_objectives_v1.5.pdf

IEEE 802.3 Next Generation Enterprise/ Campus/Data Center Ethernet Ad Hoc

Description

The goal of this activity is to assess emerging requirements for enterprise, campus, and data center networks, 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

Third meetings during the May 2016 interim meeting series

Meeting plan

Meeting 1: Next generation Automotive meeting

Meeting 2: Extended reach 400 Gb/s optical PMDs

IEEE 802.3 10 Mb/s Extended Reach Single Twisted Pair Ethernet PHY call for interest

This is a call for interest to initiate a Study Group to develop the PAR and CSD for a 10Mb/s Extended Reach Single Twisted Pair Ethernet PHY. We believe there is a market need, driven by a strong desire to consolidate the fragmented fieldbus landscape into a single Ethernet-based solution and satisfy demand for greater bandwidth associated with new applications, such as Industrial IoT. Use case needs are not fulfilled by existing IEEE 802.3 standards.

This request for agenda time for this CFI has been received from Ludwig Winkel <ludwig.winkel@siemens.com>

IEEE 802.3 Officers

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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 P802.3bu 1-Pair Power over Data Lines (PoDL): Dan Dove <dan_dove@ieee.org>

IEEE P802.3bv Gigabit Ethernet Over Plastic Optical Fiber: Bob Grow <bob.grow@ieee.org>

IEEE P802.3bz 2.5G/5GBASE-T: Dave Chalupsky <david.chalupsky@intel.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 and Copper 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 Study Group chairs

IEEE 802.3 YANG Data Model(s) Study Group: Yan Zhuang <zhuangyan.zhuang@huawei.com>

Preliminary IEEE 802.3 Meeting Plan

	Sun	Mon	Tue	Wed	Thu
AM		ECDC: Next generation Automotive IEEE 802.3 Opening Plenary	IEEE P802.3bs IEEE P802.3bt IEEE P802.3bu IEEE P802.3ca IEEE P802.3cb IEEE P802.3cc	IEEE P802.3bt IEEE P802.3bv IEEE P802.3bz IEEE P802.3ca IEEE P802.3cb IEEE P802.3cd	IEEE P802.3bn IEEE P802.3bv IEEE P802.3cd
PM		IEEE P802.3bs IEEE P802.3bu IEEE P802.3ca YANG SG	IEEE P802.3bt IEEE P802.3bu IEEE P802.3ca IEEE P802.3cb IEEE P802.3cc IEEE P802.3cd	Maintenance IEEE P802.3bt IEEE P802.3bv IEEE P802.3ca IEEE P802.3cb IEEE P802.3cd YANG SG	IEEE 802.3 Closing Plenary
			10 Mb/s extended reach single-pair PHYs CFI ECDC: Extended reach 400 Gb/s optical PMDs		

YANG SG: IEEE 802.3 YANG Study Group
ECDC: IEEE 802.3 Industry Connections Next Generation Enterprise / Campus / Data Center Ethernet