

IEEE 802.3 Working Group November 2013 Plenary Week

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Web site: www.ieee802.org/3

Current IEEE 802.3 activities

- IEEE 802.3 Task Forces
 - IEEE P802.3bj 100 Gb/s Backplane and Copper
 - IEEE P802.3bm 40Gb/s and 100 Gb/s Optical Ethernet
 - IEEE P802.3bn EPON Protocol over a Coax (EPoC)
 - IEEE P802.3bp Reduced Twisted Pair 1Gb/s Ethernet (RTPGE)
 - IEEE P802.3bq 40GBASE-T
- IEEE 802.3 Study Groups
 - IEEE 802.3 Distinguished Minimum Latency Traffic (DMLT)
 - IEEE 802.3 400 Gb/s Ethernet:
 - IEEE 802.3 4-pair Power over Ethernet (PoE)
 - IEEE 802.3 1-Pair Power over Data Lines (PoDL)
- IEEE 802.3 Industry Connection Activity initiation proposal
 - Next Generation Ethernet Passive Optical Networking (NGEPON)

IEEE 802.3 Maintenance

- Meeting plan
 - Consider new maintenance requests
 - Reviewing status of outstanding maintenance requests
 - Review status of submission of IEEE Std 802.3-2012 for adoption by ISO/IEC JTC1 SC6 under PSDO agreement
 - Consider any other maintenance business
- Web page
 - <http://www.ieee802.org/3/maint/index.html>

IEEE P802.3bj 100 Gb/s Backplane and Copper Cable Task Force

- Description
 - Provide an amendment to the IEEE 802.3 Ethernet standard to specify 100 Gb/s 4 lane operation on backplanes and twinaxial copper cables.
 - Web site: <<http://www.ieee802.org/3/bj/index.html>>
- Status
 - Met during the September 2013 interim meeting series
 - 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 P802.3bm 40 Gb/s and 100 Gb/s Operation Over Fiber Optic Cables Task Force

- Description

- Provide an amendment to the IEEE 802.3 Ethernet standard to add 100 Gb/s Physical Layer (PHY) specifications using a four-lane electrical interface for operation on multimode and single-mode fiber optic cables and 40 Gb/s Physical Layer (PHY) specifications for operation on extended reach (> 10 km) single-mode fiber optic cables
- Web site: <<http://www.ieee802.org/3/bm/index.html>>

- Status

- Met during the September 2013 interim meeting series
- Draft D1.2 sent out for 3rd Task Force review
- Draft D1.2 also submitted for Working Group preview

- Meeting plan

- Consideration of comments received against draft D1.2
- Prepare for request to proceed to Working Group ballot

IEEE 802.3bn 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
 - Met during the September 2013 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 P802.3bp Reduced Twisted Pair Gigabit Ethernet PHY Task Force

- Description
 - Provide an amendment to specify additions to and appropriate modifications of IEEE Std 802.3 to add a point-to-point 1 Gb/s Physical Layer (PHY) specifications and management parameters for operation on fewer than three pairs of twisted copper cables
 - Web site: <<http://www.ieee802.org/3/bp/index.html>>
- Status
 - Met during the September 2013 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 P802.3bq 40GBASE-T Task Force

- Description
 - Specify a Physical Layer (PHY) for operation at 40 Gb/s on balanced twisted-pair copper cabling, using existing Media Access Control, and with extensions to the appropriate physical layer management parameters.
 - Web site: <<http://www.ieee802.org/3/bq/index.html>>
- Status
 - Met during the September 2013 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 Distinguished Minimum Latency Traffic (DMLT) Study Group

- Description
 - Study Group to develop a PAR & 5 Criteria for Distinguished minimum latency traffic in a converged traffic environment
 - Web page: <http://www.ieee802.org/3/DMLT/index.html>
- Status
 - Proposed project failed to gain approval at July 2013 plenary
 - Met during September 2013 interim meeting series
 - Revised objectives, PAR and 5 Criteria for proposed project
- Meeting plan
 - Progress approval of revised Objectives, 5 Criteria and NesCom submittal of PAR for IEEE P802.3br Standard for Ethernet Amendment: Specification and Management Parameters for Interspersing Express Traffic

IEEE 802.3 Distinguished Minimum Latency Traffic (DMLT) Study Group (con't)

- Scope of proposed project
 - Specify additions to and appropriate modifications of IEEE Std 802.3 to add support for interspersing express traffic over a single physical link
- Draft PAR
 - http://www.ieee802.org/3/DMLT/P802_3br_PAR_030913.pdf
- Draft 5C
 - <http://www.ieee802.org/3/DMLT/8023-DMLT-SG-1309-Winkel-5C-v2.2.pdf>
- Draft Objectives
 - <http://www.ieee802.org/3/DMLT/8023-DMLT-SG-1309-Winkel-Objectives-v2.3.pdf>

IEEE 802.3 400 Gb/s Ethernet Study Group

- Description
 - Study Group to develop a PAR & 5 Criteria for 400 Gb/s Ethernet
 - Web page: <http://www.ieee802.org/3/400GSG/index.html>
- Status
 - Meet during September 2013 IEEE 802.3 Interim series week
 - Development of draft objectives
- Meeting plan
 - Continue developing draft objectives, 5 Criteria and PAR

IEEE 802.3 4-pair Power over Ethernet Study Group

- Description
 - Study Group to develop a PAR & 5 Criteria for 4-pair Power over Ethernet
 - Web page: <http://www.ieee802.org/3/4PPOE/index.html>
- Status
 - Met during September 2013 interim meeting series
 - Completed objectives, PAR and 5 Criteria for proposed project
- Meeting plan
 - Progress approval of Objectives, 5 Criteria and NesCom submittal of PAR for IEEE P802.3bt Standard for Ethernet Amendment: Physical Layer and Management Parameters for DTE Power via MDI over 4-Pair

IEEE 802.3 4-pair Power over Ethernet Study Group (con't)

- Scope of proposed project
 - 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. Compatibility with existing equipment will be maintained.
- Draft PAR
 - <http://www.ieee802.org/3/4PPOE/P802.3bt.pdf>
- Draft 5C
 - <http://www.ieee802.org/3/4PPOE/5Criteria.pdf>
- Draft Objectives
 - http://www.ieee802.org/3/4PPOE/objectives_0713.pdf

IEEE 802.3 1-pair Power over Data Lines (PoDL) Study Group

- Description
 - Study Group to develop a PAR & 5 Criteria for 1-pair Power over Data Lines
 - Web page: <http://www.ieee802.org/3/1PPODL/index.html>
- Status
 - First meeting during September 2013 IEEE 802.3 Interim series
 - Completed objectives, PAR and 5 Criteria for proposed project
- Meeting plan
 - Progress approval of Objectives, 5 Criteria and NesCom submittal of PAR for IEEE P802.3bu Standard for Ethernet Amendment: Physical Layer and Management Parameters for 1-Pair Power over Data Lines

IEEE 802.3 1-pair Power over Data Lines (PoDL) Study Group (con't)

- Scope of proposed project
 - Define methodology for the provision of power via a single twisted pair to connected Data Terminal Equipment (DTE) with IEEE 802.3 interfaces
- Draft PAR
 - http://www.ieee802.org/3/1PPODL/Draft_P802_3bu_PAR_Detail.pdf
- Draft 5C
 - http://www.ieee802.org/3/1PPODL/Draft_5C_PoDL.pdf
- Draft Objectives
 - http://www.ieee802.org/3/1PPODL/Draft_Objectives_PoDL_2.pdf

Next Generation Ethernet Passive Optical Networking Industry Connection proposal

- Motivation and Goal
 - IEEE Std 802.3-2012 includes specifications for the Data Link and Physical layers for Ethernet Passive Optical Networks (EPON) operating at 1 Gb/s (1G-EPON) and 10 Gb/s (10G-EPON). There is a need to explore the technology options for a next generation of EPON, operating at data rates beyond 10 Gb/s.
- Proposed Deliverables
 - The activity will generate a report which will detail: (a) operators' requirements, (b) technological and economic tradeoffs of various approaches to next generation EPON, (c) the state of the art for optical subscriber access network technology, and (d) potential solutions that merit further consideration.
- Web page
 - http://www.ieee802.org/3/cfi/request_1113_1.html

IEEE 802.3 Officers

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

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

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

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

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IEEE P802.3bm 40Gb/s and 100 Gb/s Optical Ethernet: Dan Dove <dan_dove@ieee.org>

IEEE P802.3bn EPON Protocol over a Coax (EPoC): Mark Laubach <laubach@broadcom.com>

IEEE P802.3bp Reduced Twisted Pair 1Gb/s Ethernet (RTPGE) PHY: Steve Carlson <scarlson@hspdesign.com>

IEEE P802.3bq 40GBASE-T: Dave Chalupsky <david.chalupsky@intel.com>

IEEE 802.3 Study Group chairs

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IEEE 802.3 400 Gb/s Ethernet: John D'Ambrosia <john_dambrosia@dell.com>

IEEE 802.3 4-pair Power over Ethernet: Chad Jones <cmjones@cisco.com>

IEEE 802.3 1-Pair Power over Data Lines (PoDL) Dave Dwelley <ddwelley@linear.com>

Preliminary IEEE 802.3 Meeting Plan

	Mon	Tue	Wed	Thu
AM		IEEE P802.3bj IEEE P802.3bm IEEE P802.3bn IEEE P802.3bp IEEE P802.3bq DMLT_SG 400G_SG 4PPoE_SG PoDL_SG	IEEE P802.3bj IEEE P802.3bm IEEE P802.3bn IEEE P802.3bp IEEE P802.3bq DMLT_SG 400G_SG 4PPoE_SG PoDL_SG	IEEE P802.3bj IEEE P802.3bm IEEE P802.3bn IEEE P802.3bp DMLT_SG 400G_SG 4PPoE_SG PoDL_SG
PM	IEEE 802.3 Opening Plenary	IEEE P802.3bj IEEE P802.3bm IEEE P802.3bn IEEE P802.3bp 400G_SG 4PPoE_SG PoDL_SG	Maintenance IEEE P802.3bj IEEE P802.3bm IEEE P802.3bn IEEE P802.3bp DMLT_SG 400G_SG 4PPoE_SG PoDL_SG	IEEE 802.3 Closing Plenary
	40 th Anniversary of Ethernet celebration	Next Generation EPON Industry connection proposal		

DMLT_SG
 400G_SG
 4PPoE_SG
 PoDL_SG

IEEE 802.3 Distinguished Minimum Latency Traffic Study Group
 IEEE 802.3 400Gb/s Ethernet Study Group
 IEEE 802.3 4-Pair Power over Ethernet Study Group
 IEEE 802.3 1-Pair Power over Data Lines (PoDL) Study Group

IEEE 802.3 Standards

- IEEE Std 802.3™-2012 (30th Aug 12 / 28th Dec 12)*
- IEEE Std 802.3.1™-2013 (14th Jun 13 / 2nd Aug 13)
- IEEE Std 802.3bk™ -2013 (23rd Aug 13 / 30th Aug 13)

* Available through Get IEEE 802
<http://standards.ieee.org/getieee802/802.3.html>

Note 1: Dates are Approval date / Publication date

Current project drafts

- IEEE P802.3bj/D2.3 100 Gb/s Backplane and Copper Cable
 - Third Working Group recirculation ballot draft
- IEEE P802.3bm/D1.2 40 Gb/s and 100 Gb/s Operation Over Fiber Optic Cables
 - Working Group ballot preview draft