

# IEEE 802.3 Working Group July 2013 Plenary Week

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Web site: [www.ieee802.org/3](http://www.ieee802.org/3)

# Current IEEE 802.3 activities

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- IEEE 802.3 Task Forces
  - IEEE P802.3.1 (IEEE 802.3.1a) Ethernet MIBs (revision)
  - IEEE P802.3bj 100 Gb/s Backplane and Copper: Adam Healey
  - IEEE P802.3bk Extended Ethernet Passive Optical Network
  - 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
- IEEE 802.3 Call for Interest
  - Power over Data Link (PoDL)

# IEEE 802.3 Maintenance

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- Meeting plan
  - Consider new maintenance requests
  - Reviewing status of outstanding maintenance requests
  - Comments from 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

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- 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 May 2013 interim meeting series
  - Completed 1st Working Group recirculation ballot on draft D2.1
- Meeting plan
  - Consideration of comments received against draft D2.1

# IEEE P802.3bk Extended Ethernet Passive Optical Networks (EPON) Task Force

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- Description
  - Provide an amendment to the IEEE 802.3 Ethernet standard to specify extensions to the optical loss budgets supported by Ethernet Passive Optical Networks (EPON) to support higher density and longer reach applications, while optimizing costs of ownership
  - Web site: <<http://www.ieee802.org/3/bk/index.html>>
- Status
  - Met during the May 2013 interim meeting series
  - Completed 1st Sponsor recirculation ballot on Draft D3.1
- Meeting plan
  - Consideration of comments received against draft D3.1
  - Prepare for request for approval of RevCom submittal

# IEEE P802.3bm 40 Gb/s and 100 Gb/s Operation Over Fiber Optic Cables Task Force

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- 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
  - PAR modification approved on 10th May 2013
  - Met during the May 2013 interim meeting series
  - Selecting set of baseline proposals to satisfy project objectives
  - Draft D1.0 sent out for first Task Force review
- Meeting plan
  - Continue to work on selection of a set of baseline proposals
  - Consideration of comments received against D1.0

# IEEE 802.3bn EPON Protocol over Coax (EPoC) Task Force

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- 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 May 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

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- 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 May 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

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- 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
  - IEEE P802.3bq PAR approved by IEEE-SA Standards Board
  - Approval date 10th May 2013
  - First meeting during May 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

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- 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
  - Met during May 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 P802.3br Standard for Ethernet Amendment: Specification and Management Parameters for Interspersing Express Traffic

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

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- Draft PAR
  - Scope of project
    - Specify additions to and appropriate modifications of IEEE Std 802.3 to add a support for interspersed express traffic.
  - Draft PAR
    - <http://www.ieee802.org/3/DMLT/8023-DMLT-SG-1305-Winkel-PAR-2013-05-17r1.pdf>
  - Draft 5C
    - <http://www.ieee802.org/3/DMLT/8023-DMLT-SG-1305-Winkel-5C-2013-05-17r1.pdf>
  - Draft Objectives
    - <http://www.ieee802.org/3/DMLT/8023-DMLT-SG-1305-Winkel-Objectives-2013-05-17r1.pdf>

# IEEE 802.3 400 Gb/s Ethernet Study Group

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- 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
  - First meeting during May 2013 IEEE 802.3 Interim series week
  - Initial development of draft objectives, 5 Criteria and PAR
- Meeting plan
  - Continue developing draft objectives, 5 Criteria and PAR

# IEEE 802.3 4-pair Power over Ethernet Study Group

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- 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
  - First meeting during May 2013 IEEE 802.3 Interim series week
  - Initial development of draft objectives, 5 Criteria and PAR
- Meeting plan
  - Continue developing draft objectives, 5 Criteria and PAR

# Power over Data Link (PoDL) call for interest

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- The IEEE P802.3bp (Reduced Twisted Pair Gigabit Ethernet PHY) standard is being developed. There is a need in some applications for power delivery over the same link segment to power devices such as cameras and sensors. These powered links are expected to be widely deployed in automobiles as well as other transportation and non-transportation applications. The P802.3bp link segment and powering requirements will be substantially different than those specified in the existing Power over Ethernet Clause (Clause 33) and will require the creation of a new standard. This Call for Interest is to request the formation of a “Power over Data Lines” study group to start this effort.
- This request for agenda time for this CFI has been received from Dave Dwelley <ddwelley@linear.com>

# IEEE 802.3 Officers

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

IEEE 802.3 Vice Chair: Wael William Diab <wdiab@broadcom.com>

IEEE 802.3 Secretary: Adam Healey <adam.healey@lsi.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 P802.3.1 (IEEE 802.3.1a) Ethernet MIBs (revision): Howard Frazier <hfrazier@broadcom.com>

IEEE P802.3bj 100 Gb/s Backplane and Copper: Adam Healey <adam.healey@lsi.com>

IEEE P802.3bk Extended Ethernet Passive Optical Network: Marek Hajduczenia <marek.hajduczenia@zte.pt>

IEEE P802.3bm 40Gb/s and 100 Gb/s Optical Ethernet: Dan Dove <ddove@apm.com>

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**

IEEE 802.3 Distinguished Minimum Latency Traffic (DMLT) <ludwig.winkel@siemens.com>

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>

# Preliminary IEEE 802.3 Meeting Plan

	Mon	Tue	Wed	Thu
AM		IEEE P802.3bj IEEE P802.3bk IEEE P802.3bm IEEE P802.3bn IEEE P802.3bp IEEE P802;.3bq DMLT_SG 400G_SG 4PPoE_SG	IEEE P802.3bj IEEE P802.3bm IEEE P802.3bn IEEE P802.3bp IEEE P802;.3bq DMLT_SG 400G_SG 4PPoE_SG	IEEE P802.3bj IEEE P802.3bm IEEE P802.3bn IEEE P802;.3bq DMLT_SG 400G_SG 4PPoE_SG
PM	IEEE 802.3 Opening Plenary	Maintenance IEEE P802.3bj IEEE P802.3bm IEEE P802.3bn IEEE P802.3bp IEEE P802;.3bq DMLT_SG 400G_SG 4PPoE_SG	IEEE P802.3bj IEEE P802.3bm IEEE P802.3bn IEEE P802.3bp IEEE P802;.3bq DMLT_SG 400G_SG 4PPoE_SG	IEEE 802.3 Closing Plenary
		Power over Data Link CFI		

DMLT\_SG  
 400G\_SG  
 4PPoE\_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 Standards

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- IEEE Std 802.3™-2012 (30<sup>th</sup> Aug 12 / 28<sup>th</sup> Dec 12)\*
- IEEE Std 802.3.1™-2013 (14<sup>th</sup> Jun 13 / TBD)

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

Note 1: Dates are Approval date / Publication date

# Current project drafts

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- IEEE P802.3bk/D3.1 Extended EPON
  - First Sponsor recirculation ballot draft
- IEEE P802.3bj/D2.1 100 Gb/s Backplane and Copper Cable
  - First Working Group recirculation ballot draft
- IEEE P802.3bm/D1.0 40 Gb/s and 100 Gb/s Operation Over Fiber Optic Cables
  - First Task Force review draft