# IEEE 802.3 Working Group
# March 2012 Plenary Week

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# Current IEEE 802.3 activities

- IEEE P802.3 (IEEE 802.3bh) Maintenance #10 (Revision)
- IEEE P802.3bj 100 Gb/s Backplane and Copper
- IEEE 802.3 Ethernet Bandwidth Assessment Ad Hoc
- IEEE P802.3.1 (IEEE 802.3.1a) Ethernet MIB (Revision)
- Next Generation 100Gb/s Optical Ethernet Study Group
- Extended Ethernet Passive Optical Network Study Group
- EPON Protocol over a Coax (EPoC) PHY Study Group
- Reduced Pair 1 Gb/s Ethernet call for interest
- Extended reach 40GBASE-R PMD call for interest
- Ethernet WDM Aggregation Network call for interest
- Frame Pre-emption call for interest

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

- Description
  - Provide an amendment to the IEEE 802.3 standard to specify 100Gb/s Ethernet operation on Electrical Backplane and Twinaxial Copper Cable Assemblies
- Status
  - IEEE P802.3bj PAR was approved at the IEEE-SA Standards Board meeting on 10th September 2011
  - Selecting set of baseline proposals to satisfy project objectives
- Meeting plan
  - Continue to work on selection of a set of baseline proposals

**Note:** The IEEE 802.3 Next Generation 100 Gb/s Optical Ethernet Study Group will be holding an interim meeting adjacent to, and co-located with, the IEEE 802 plenary on the Monday morning prior to the IEEE 802.3 Opening plenary meeting to address issues common between the Study Group and this Task Force (see below).

# IEEE 802.3 Ethernet Bandwidth Assessment Ad Hoc

- Description
  - Gathering information that will enable an evaluation of the bandwidth needs for Ethernet applications, including, but not limited to, core networking and computing
  - Role is to gather information
    - Not to make recommendations or initiate new project
- Status
  - Information gathering
  - Teleconference held 8th September
    - Presentation from Tom Cloonan, Arris
  - Met during the IEEE 802.3 September interim sessions
    - Presentations from Scott Kipp, Brocade and Mark Nowell, Cisco
- Meeting plan
  - Status update
  - Plan for moving forward

# IEEE P802.3.1 Ethernet MIB Revision Task Force

- Description
  - Revision to IEEE Std 802.3.1 GDMO and SMIv2 MIB modules to reflect changes from recent IEEE Std 802.3 amendments
    - IEEE Std 802.3at-2009, IEEE Std 802.3av-2009, IEEE Std 802.3bc-2009, IEEE Std 802.3bd-2011, IEEE 802.3az-2010, IEEE Std 802.3ba-2010, IEEE Std 802.3bf-2011 and IEEE std 802.3bg
- Status
  - Completed initial Working Group ballot
  - Comment resolution took place at January interim
- Meeting plan
  - Prepare for Working Group recirculation ballot

# IEEE 802.3 Next Generation 100Gb/s Optical Ethernet Study Group

- Description
  - Study group to explore the market need and solutions to reduce the cost, power and panel size of 100 Gb/s optical interfaces

- Status
  - Developing objectives, PAR and 5 Criteria for proposed project
  - Study Group chartered at July IEEE 802 plenary
  - Study Group met for first time during the IEEE 802.3 September interim sessions week

- Meeting plan
  - Continue to work on development of a set of objectives, PAR and 5 Criteria for proposed project

**Note:** The IEEE 802.3 Next Generation 100 Gb/s Optical Ethernet Study Group will be holding an interim meeting adjacent to, and co-located with, the IEEE 802 plenary on the Monday morning prior to the IEEE 802.3 Opening plenary meeting. This meeting will be used to address issues that are common between the Study Group and the IEEE 802.3bj 100 Gb/s Backplane and Copper Task Force.

# IEEE 802.3 Extended Ethernet Passive Optical Networks (EPON) Study Group

- Description
  - Study group to explore the market demand, available technologies and definition of optical interface parameters for extended Ethernet Passive Optical Networks (EPON)

- Status
  - Study Group chartered at July IEEE 802 plenary
  - Study Group met for first time during the IEEE 802.3 September interim sessions week

- Meeting plan
  - Continue to work on development of a set of objectives, PAR and 5 Criteria for proposed project

# IEEE 802.3 EPON Protocol over a Coax (EPoC) PHY Study Group

- Description
  - Study Group to develop a PAR & 5 Criteria for operating the EPON Protocol over a Coax (EPoC) PHY
- Status
  - Study Group chartered at November 2011 IEEE 802 plenary
  - Study Group met for first time during the IEEE 802.3 January interim sessions week
- Meeting plan
  - Continue to work on development of a set of objectives, PAR and 5 Criteria for proposed project

# IEEE 802.3 Maintenance

- Meeting plan
  - IEEE P802.3 (IEEE 802.3bh) Maint #10 (Revision)
    - Resolve comments on initial sponsor ballot draft IEEE P802.3 (IEEE 802.3bh) draft D3.0
    - Hear reports from the appointed ad-hocs
  - Interpretation request
    - Prepare responses to one interpretation

      1-03/12 clarification regarding Annex 86A nPPI - XLPPI - CPPI electrical parameter
  - Consider any other maintenance business

# Reduced Pair 1 Gb/s Ethernet call for interest

IEEE Std 802.3 PHYs are being deployed in ever-increasing numbers in a wide variety of application spaces. Recently, the global automotive industry has begun to deploy Ethernet into vehicles as a backbone for all data services. This includes vehicle control (brakes, suspension, transmission, ECU, etc.) and well as infotainment. The automotive industry is interested in 1Gb/s speeds, but with fewer than the four pairs currently used by 1000BASE-T. The reduction in wire pairs will reduce the size and weight of the Ethernet wiring in the vehicle, as well as allowing for a smaller form-factor connector. It is estimated that over 500 million Ethernet nodes will be present in cars by 2018. The represents an untapped, high-volume market for Ethernet technology that would likely open up new applications in other areas, such as industrial control or small form-factor consumer devices.

This request for agenda time for a Call for Interest has been received from Steve Carlson <scarlson@hspdesign.com>

# Extended reach 40GBASE-R PMD call for interest

40Gb/s Ethernet is being applied to an increasing variety of applications, some of which require a longer reach than the 10km provided by 40GBASE-LR4. This Call for Interest will measure the interest in the formation of a study group (or expansion of an existing study group) to explore the market need and solutions for extended reach 40Gb/s Ethernet interfaces.

This request for agenda time for a Call for Interest has been received from Pete Anslow <panslow@ciena.com>

# Ethernet WDM Aggregation Network call for interest

IEEE Std 802.3 EPON is the world's most successful access technology. Other Ethernet PHYs, such a 1000BASE-X and 10GBASE-X are also finding applications in the access network. However, not all service providers have the fiber resources to adequately serve their customers with these technologies. In some cases the large cost to deploy new outside plant fibers is preventing or delaying providers from deploying Ethernet access technologies. There is interest in technology that allows more than 10 customers to have a dedicated gigabit service delivered over a single fiber trunk, to carry multiple EPONs over a single fiber and to mix EPON and P2P services over a single fiber. This Call For Interest will assess the interest within 802.3 to form a study group to explore the market demand, compatibility concerns and feasibility of using Wavelength Division Multiplexing to provide an aggregated Ethernet service to address these, and similar, needs in the market.

This request for agenda time for a Call for Interest has been received from Duane Remein <Duane.Remein@huawei.com>

# MAC Services in support of Frame Pre-emption call for interest

Precision time synchronization for Ethernet has been standardized by the combination of "IEEE 802.3bf Ethernet Support for the IEEE P802.1AS Time Synchronization Protocol" and "IEEE 802.1 AVB". These standards have already helped to converge several dozen proprietary A/V protocols to mainstream Ethernet LANs and have been adopted by major A/V streaming and time-sensitive networking systems. These standards have also expanded the overall Ethernet market to include automotive multi-media and industrial automation systems.

There is a need for lower end-to-end latency for scheduled traffic in time-sensitive LANs (i.e. industrial automation and automotive backbone) in order to address remaining requirements and further expand their markets. Link-by-link, packet pre-emption provides much lower latency for selected Class of Service (CoS) traffic and would help to meet these controlled and lower-latency requirements in time-sensitive LANs.

IEEE 802.1 submitted IEEE P802.1Qbu PAR and 5 Criteria to the IEEE 802 EC for consideration in March 2012 in order to address the IEEE 802.1 aspect of this need. This PAR refers to coordination with an IEEE 802.3 project in order to provide optimized and coordinated standards. This Call For Interest will assess the interest within IEEE 802.3 to form a study group to explore the companion IEEE 802.3 PAR and 5 Criteria.

This request for agenda time for a Call for Interest has been received from Mike Grimwood <grimwood@broadcom.com>

# IEEE 802.3 Officers

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IEEE 802.3 Extended Ethernet Passive Optical Networks Study Group:
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IEEE 802.3 EPON Protocol over a Coax (EPoC) PHY Study Group:
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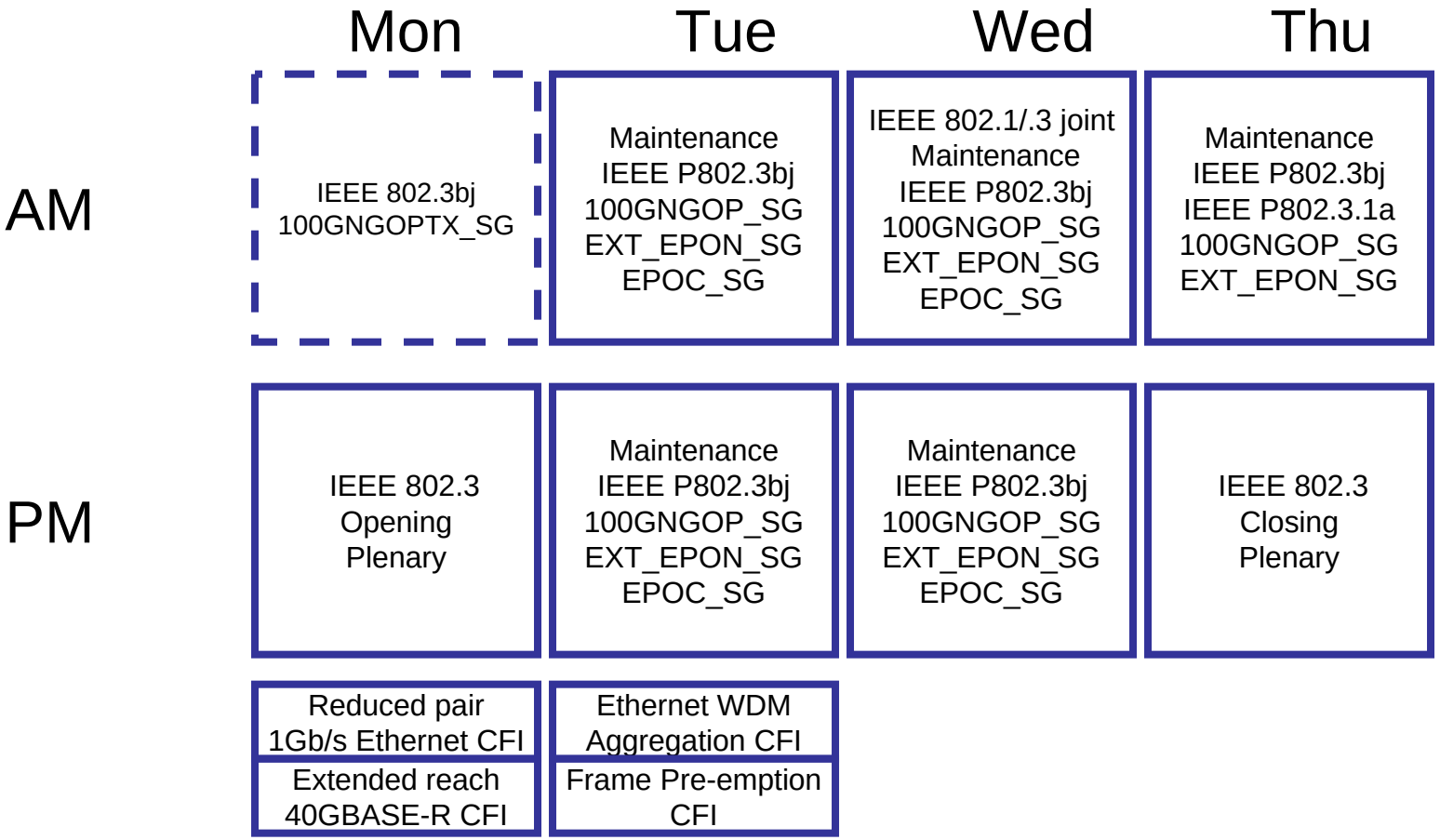
# Preliminary Meeting Plan

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|---|---|
| 100GNGOP_SG | IEEE 802.3 Next Generation 100 Gb/s Optical Ethernet Study Group |
| EXT_EPON_SG | IEEE 802.3 Extended EPON Study Group |
| EPOC_SG | IEEE 802.3 EPON Protocol over a Coax (EPoC) PHY Study Group |

# IEEE 802.3 Standards

- IEEE Std 802.3™-2008 (26 Dec 08 / 26 Dec 08)*
  - IEEE Std 802.3av™-2009 (11 Sep 09 / 30 Oct 09)*
  - IEEE Std 802.3bc™-2009 (11 Sep 09 / 28 Sep 09)*
  - IEEE Std 802.3at™-2009 (11 Sep 09 / 30 Oct 09)*
  - IEEE Std 802.3-2008/Cor1-2009™ (9 Dec 09 / 1 Feb 10)*
  - IEEE Std 802.3ba™-2010 (17 Jun 10 / 22 Jun 10)*
  - IEEE Std 802.3az™-2010 (30 Sep 10 / 27 Oct 10)*
  - IEEE Std 802.3bg™-2011 (31 Mar 11 / 31 Mar 11)*
  - IEEE Std 802.3bf™-2011 (16 May 11 / 15 Jul 11)*
  - IEEE Std 802.3bd™-2011 (16 Jun 11 / 10 Aug 11)*
- IEEE Std 802.3.1™-2011 (16 May 11 / 5 Jul 11)*

* 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 P802.3/D3.0 (IEEE 802.3bh) maintenance #10 (revision)
  - Initial sponsor ballot draft
- IEEE P802.3.1/D1.0 (IEEE 802.3.1a) Ethernet MIBs (revision)
  - Initial Working Group ballot draft