IEEE 802.3 Working Group
Interim meeting
21st January 2016

David Law
Chair, IEEE 802.3 Working Group
dlaw@hpe.com

Agenda, voter list:
http://www.ieee802.org/3/minutes/jan16/index.html
IEEE 802.3 Officers

IEEE 802.3 Chair: David Law <dlaw@hpe.com>
IEEE 802.3 Vice Chair: Adam Healey <adam.healey@avagotech.com>
IEEE 802.3 Secretary: Pete Anslow <panslow@ciena.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 P802.3bn EPON Protocol over Coax (EPoC): Mark Laubach <laubach@broadcom.com>
IEEE P802.3bp 1000BASE-T1: Steve Carlson <scarlson@hsppdesign.com>
IEEE P802.3bq 25G/40GBASE-T: Dave Chalupsky <david.chalupsky@intel.com>
IEEE P802.3br Interspersing Express Traffic: Ludwig Winkel <ludwig.winkel@siemens.com>
IEEE P802.3bs 400 Gb/s Ethernet: John D'Ambrosia <john_dambrosia@dell.com>
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 P802.3by 25 Gb/s Ethernet: Mark Nowell <mnowell@cisco.com>
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: Yong Kim <ybkim@broadcom.com>

IEEE 802.3 Study Group chairs
IEEE 802.3 50 Gb/s Ethernet Over a Single Lane: Mark Nowell <mnowell@cisco.com>
IEEE 802.3 Next Generation 100 Gb/s Ethernet & 200 Gb/s Ethernet: Mark Nowell <mnowell@cisco.com>
IEEE 802.3 25 Gb/s Ethernet PMD(s) for Single Mode Fiber: David Lewis <David.Lewis@lumentum.com>
WG Decorum

• Photography or recording by permission only (December 2014 IEEE-SA Standards Board Ops Manual 5.3.3.2)
• Press (i.e., anyone reporting publicly on this meeting) are to announce their presence (December 2014 IEEE-SA Standards Board Ops Manual 5.3.3.3)
• Cell phone ringers off
• Wear your badges at all times in meeting areas
  – Help the hotel security staff improve the general security of the meeting rooms
  – **PCs HAVE BEEN STOLEN** at previous meetings
  – **DO NOT** assume that meeting areas are secure
• Please observe proper decorum in meetings
Agenda

• Approve agenda
  – http://www.ieee802.org/3/minutes/jan16/
  – Any modifications, additions or deletions?
Instructions for the WG Chair

The IEEE-SA strongly recommends that at each WG meeting the chair or a designee:

- Show slides #1 through #4 of this presentation
- Advise the WG attendees that:
  - The IEEE's patent policy is described in Clause 6 of the IEEE-SA Standards Board Bylaws;
  - Early identification of patent claims which may be essential for the use of standards under development is strongly encouraged;
  - There may be Essential Patent Claims of which the IEEE is not aware. Additionally, neither the IEEE, the WG, nor the WG chair can ensure the accuracy or completeness of any assurance or whether any such assurance is, in fact, of a Patent Claim that is essential for the use of the standard under development.

- Instruct the WG Secretary to record in the minutes of the relevant WG meeting:
  - That the foregoing information was provided and that slides 1 through 4 (and this slide 0, if applicable) were shown;
  - That the chair or designee provided an opportunity for participants to identify patent claim(s)/patent application claim(s) and/or the holder of patent claim(s)/patent application claim(s) of which the participant is personally aware and that may be essential for the use of that standard
  - Any responses that were given, specifically the patent claim(s)/patent application claim(s) and/or the holder of the patent claim(s)/patent application claim(s) that were identified (if any) and by whom.

- The WG Chair shall ensure that a request is made to any identified holders of potential essential patent claim(s) to complete and submit a Letter of Assurance.
- It is recommended that the WG chair review the guidance in IEEE-SA Standards Board Operations Manual 6.3.5 and in FAQs 14 and 15 on inclusion of potential Essential Patent Claims by incorporation or by reference.

Note: WG includes Working Groups, Task Groups, and other standards-developing committees with a PAR approved by the IEEE-SA Standards Board.

(Optional to be shown)
Participants, Patents, and Duty to Inform

All participants in this meeting have certain obligations under the IEEE-SA Patent Policy.

- Participants [Note: Quoted text excerpted from IEEE-SA Standards Board Bylaws subclause 6.2]:
  - “Shall inform the IEEE (or cause the IEEE to be informed)” of the identity of each “holder of any potential Essential Patent Claims of which they are personally aware” if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents
  - “Should inform the IEEE (or cause the IEEE to be informed)” of the identity of “any other holders of potential Essential Patent Claims” (that is, third parties that are not affiliated with the participant, with the participant’s employer, or with anyone else that the participant is from or otherwise represents)
- The above does not apply if the patent claim is already the subject of an Accepted Letter of Assurance that applies to the proposed standard(s) under consideration by this group
- Early identification of holders of potential Essential Patent Claims is strongly encouraged
- No duty to perform a patent search
Patent Related Links

All participants should be familiar with their obligations under the IEEE-SA Policies & Procedures for standards development.

Patent Policy is stated in these sources:

IEEE-SA Standards Boards Bylaws
http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6

IEEE-SA Standards Board Operations Manual

Material about the patent policy is available at
http://standards.ieee.org/about/sasb/patcom/materials.html

If you have questions, contact the IEEE-SA Standards Board Patent Committee Administrator at patcom@ieee.org or visit
http://standards.ieee.org/about/sasb/patcom/index.html

This slide set is available at
https://development.standards.ieee.org/myproject/Public/mytools/mob/slideset.ppt
Call for Potentially Essential Patents

If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance:

- Either speak up now or
- Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible or
- Cause an LOA to be submitted
Other Guidelines for IEEE WG Meetings

- All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.
  - Don’t discuss the interpretation, validity, or essentiality of patents/patent claims.
  - Don’t discuss specific license rates, terms, or conditions.
    - Relative costs, including licensing costs of essential patent claims, of different technical approaches may be discussed in standards development meetings.
      - Technical considerations remain primary focus
  - Don’t discuss or engage in the fixing of product prices, allocation of customers, or division of sales markets.
  - Don’t discuss the status or substance of ongoing or threatened litigation.
  - Don’t be silent if inappropriate topics are discussed … do formally object.

See IEEE-SA Standards Board Operations Manual, clause 5.3.10 and “Promoting Competition and Innovation: What You Need to Know about the IEEE Standards Association's Antitrust and Competition Policy” for more details.
Important Bylaws and Rules


- IEEE-SA Standards Board Bylaws


- IEEE 802 LAN/MAN Standards Committee (LMSC) Policies and Procedures

- IEEE 802 LAN/MAN Standards Committee (LMSC) Operations Manual

- IEEE 802 LAN/MAN Standards Committee (LMSC) Working Group (WG) Policies and Procedures

- IEEE 802.3 Working Group Operating Rules
Membership and attendance recording

Membership requirements

- Membership requirements (gaining and retaining)
  - 75% attendance at 2 of last 4 plenary sessions
    - A qualifying interim may be substituted for one plenary
  - Request to become member during potential voter agenda item at IEEE 802.3 opening or closing plenary
  - Participate in two out of the last three IEEE 802.3 Working Group ballots to retaining membership
  - Maintain valid contact information
  - Consistent declaration of affiliation
Membership and attendance recording

- IEEE 802.3 voters

- Attendance recording

- IEEE 802.3 balloting records
IEEE 802.3 Maintenance Task Force

Outgoing liaison letter
Approve IEEE_802d3_to_ISOIEC_JTC1_SC6_0116_draft.pdf with editorial license granted to the Chair (or his appointed agent) as liaison communication from the IEEE 802.3 Working Group to ISO/IEC JTC1 SC6.

Move: Adam Healey
Second: ????
Technical (≥ 75% required)
Y:  N:  A:
IEEE P802.3bq
25G/40GBASE-T Task Force

Outgoing liaison letters
Outgoing liaison letters

• Move that the IEEE 802.3 Working Group approve:
  IEEE_802d3_to_ISOIEC_SC25_WG3_40GRL_0116_draft.pdf
  IEEE_802d3_to_ISOIEC_SC25_WG3_9905_0116_draft.pdf
  with editorial license granted to the Chair (or his appointed agent) as liaison communications from the IEEE 802.3 Working Group to ISO/IEC JTC1/SC25 WG3.

  • Moved: David Chalupsky
  • Seconded: George Zimmerman
  • Technical (≥ 75% required)
  • Y: N: A:
  • Motion passes/fails
  • (Task Force motion passed 20/0/0, January 21, 2016)
IEEE P802.3br Interspersing Express Traffic Task Force

Request for unconditional approval to proceed to sponsor ballot
# IEEE P802.3br IET to Sponsor ballot

The 2\(^{nd}\) Working Group recirculation ballot on IEEE P802.3br draft D2.4 closed on 03\(^{rd}\) Dec 2015

## Vote Tally Draft D2.4

<table>
<thead>
<tr>
<th></th>
<th>D2.0</th>
<th>D2.1</th>
<th>D2.2</th>
<th>D2.3</th>
<th>D2.4</th>
<th>D2.0</th>
<th>D2.1</th>
<th>D2.2</th>
<th>D2.3</th>
<th>D2.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voters</td>
<td>275</td>
<td>275</td>
<td>279</td>
<td>279</td>
<td>279</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approve</td>
<td>72</td>
<td>81</td>
<td>110</td>
<td>115</td>
<td>135</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disapprove with comment</td>
<td>16</td>
<td>15</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disapprove without comment</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abstain</td>
<td>51</td>
<td>49</td>
<td>31</td>
<td>33</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Returns</td>
<td>140</td>
<td>145</td>
<td>148</td>
<td>154</td>
<td>181</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comments</td>
<td>385</td>
<td>114</td>
<td>51</td>
<td>25</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comments incl. from floor</td>
<td>387</td>
<td>115</td>
<td>51</td>
<td>32</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Response rate:** 50.91% 52.73% 53.05% 55.20% 64.87% 50.91% 52.73% 53.05% 55.20% 64.87%

**Approval rate:** 81.82% 84.38% 94.02% 95.04% 95.74% 81.82% 84.38% 94.02% 95.04% 95.74%

**Abstain rate:** 36.43% 33.79% 20.95% 21.43% 22.10% 36.43% 33.79% 20.95% 21.43% 22.10%
Motion 1

Move that the IEEE 802.3 Working Group re-affirm the CSD responses in [http://www.ieee802.org/3/br/8023-DMLT-SG-1311-Winkel-5C-v2.3.pdf](http://www.ieee802.org/3/br/8023-DMLT-SG-1311-Winkel-5C-v2.3.pdf) and request approval to progress the IEEE P802.3br draft to IEEE 802 LMSC sponsor ballot.

Moved: Ludwig Winkel on behalf of the TF IET Technical (≥ 75% required)

Y:  N:  A:  Results:
IEEE P802.3bs 400Gb/s Ethernet Task Force

Outgoing liaison letter
Move that the IEEE 802.3 Working Group approve the text in IEEE_802d3_to_SG15_0116_draft.pdf with editorial license granted to the IEEE 802.3 WG Chair (or his appointed agent) as a liaison to ITU-T

Move: John D’Ambrosia
Second: Pete Anslow
Technical (≥ 75% required)
Y: N: A:
IEEE P802.3bt DTE Power via MDI over 4-pair Task Force

Outgoing liaison letter
Move that IEEE 802.3 approve the text in  
IEEE_802d3_to_SC25_PoE_0116_draft.pdf with editorial license granted to the Chair (or his appointed agent) as a liaison communication from the IEEE 802.3 Working Group to ISO/IEC JTC1 SC25/ WG3
Move: Chad Jones
Second: 
Technical (≥ 75% required)
Y:  N:  A:
P802.3bv Task Force WG business

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

Robert M. Grow
RMG Consulting
Atlanta, Georgia, USA
21 January 2016
Motion – P802.3bv WG ballot

Move that the 802.3 Working Group advance the IEEE P802.3bv draft to Working Group ballot.

Moved: R. Grow
Second: moved on behalf of the TF Technical
Y: , N: , A:

(TF vote Y: 15, N: 0, A: 0)
Motion – Liaison to WG3

Move that the 802.3 Working Group approve IEEE_802d3_to_ISOIEC_SC25_0116_draft.pdf with editorial license granted to the Chair (or his appointed agent) as liaison communication from the IEEE 802.3 Working Group to ISO/IEC/JTC1/SC25/WG3.

Moved: R. Grow
Second:

Technical/Procedural
Y: , N: , A:

(TF vote Y: 15, N: 0, A: 0)
IEEE P802.3bz 2.5G/5GBASE-T Task Force

Working Group ballot
Outgoing liaison letter
IEEE P802.3bz draft status

  - 25 comments from 6 reviewers

- **TF Motion #4:** Move to: Generate (802.3bz) Draft 1.3 from Draft 1.2 and closed comments

- Direct the Task Force Chair to make the following motion to the 802.3 Working Group:
  - Move that the IEEE 802.3 Working Group progress the IEEE P802.3bz draft to Working Group ballot.
  - Y: 22 N: 0 A: 0

- **TF Motion #5:** Authorize the editor to remove Editor’s notes labeled as to be removed (before/prior to) working group ballot and generate draft 1.3.1.
  - MOTION Passes by voice vote without objection
(from P802.3bz) WG Motion

Move that the IEEE 802.3 Working Group progress the IEEE P802.3bz draft to Working Group ballot.

- Moved: David Chalupsky on behalf of the IEEE P802.3bz Task Force
- Technical (≥ 75% required)
- Y: N: A:
- Motion passes/fails.
- (Task force motion passed 20/0/0 January 21, 2016)
(from P802.3bz) WG Motion

• Move that the IEEE 802.3 Working Group approve IEEE_802d3_to_ISOIEC_SC25_WG3_9904_0116_draft.pdf with editorial license granted to the Chair (or his appointed agent) as liaison communication from the IEEE 802.3 Working Group to ISO/IEC JTC1/SC25 WG3.
  
  • Moved: David Chalupsky
  • Seconded: George Zimmerman
  • Technical (≥ 75% required)
  • Y: N: A:
  • Motion passes/fails
  • (Task force motion passed 20/0/0 January 21, 2016)
IEEE 802.3 50 Gb/s Ethernet Over a Single Lane Study Group

IEEE 802.3 Next Generation 100 Gb/s Ethernet & 200 Gb/s Ethernet Study Group

Charter reassignment between Study Groups
Charter Re-Assignment between Study groups

Mark Nowell – Cisco
50 Gb/s Ethernet & NGOATH Ethernet Study Group Chair
Jan 21st, 2016
CFI Motion @ Nov Closing Plenary

Move that the IEEE 802.3 Working Group request the formation of two Study Groups to develop Project Authorization Requests (PAR) and Criteria for Standards Development (CSD) responses for:

– 50 Gigabit/s Ethernet over a single lane
– Next Generation 100 Gb/s Ethernet & 200 Gigabit/s Ethernet

M: Mark Nowell
S: John D’Ambrosia

Procedural (>50%)
Y: 74  N: 0  A: 2
50G & NGOATH Study Group decisions made

- Adopted objectives for:
  - 50Gb/s Ethernet including a set of PHYs
  - 200 Gb/s Ethernet including a set of PHYs
  - 100 Gb/s Ethernet including a set of PHYs

- Motion passed to modify P802.3bs objectives, CSDs and PAR to include 200 Gb/s Ethernet objectives (SMF) pending approval from 802.3bs Task Force (Friday morning)

- Straw Poll taken to gauge support that the objectives that will not be considered by P802.3bs Task Force to be included as part of a single Task force. “Single TF”:82 “More than one”:0 “Abstain”:2
Motion

Move that the IEEE 802.3 Working Group request that the EC:

- expand the charter of the current 50 Gb/s Ethernet over a single-lane Study group to include next generation 100 Gb/s and 200 Gb/s Ethernet rates
- reduce the charter of the Next generation 100 Gb/s and 200 Gb/s Ethernet Study Group to 200 Gb/s single mode fiber.

M: M Nowell
S: K Lusted