Agenda and General Information

IEEE P802.3cs Task Force: Increased-reach Ethernet optical subscriber access (Super-PON)

Claudio DeSanti (proposed)
Google
Long Beach, CA – January 15, 2019
Agenda

- Appointment of Recording Secretary: Duane Remein
- Confirmation of Chair
- Welcome and Introductions
- Approve Agenda
- Approve November 14, 2018 Minutes
- Goals for this meeting
- Big Ticket Items
- Reflector and Web
- Ground Rules
- IEEE
  - Structure, Bylaws and Rules
  - Call for Patents
  - IEEE Standards Process
- Liaisons and Communications
- Review of Action Items from November 14, 2018 Meeting
- Presentations
- Motions and Closing Business
- Future Meetings
Task Force Decorum

• An officer is permitted to make an audio or slideshow recording of this meeting exclusively for the purpose of generating minutes which shall not be copied or distributed. **IEEE 802.3 meetings do not use this option.** Recording of the proceedings by any other participant or observer, in part or in whole, via any means, is prohibited. (June 2018 IEEE-SA Standards Board Ops Manual 5.3.3.2)
• Press (i.e., anyone reporting publicly on this meeting) are to announce their presence (June 2018 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
Motion #1

• Move to approve the agenda

• M:  S:
• > 50%
• Y:  N:  A:
Motion #2

• Move to approve the minutes of the past meeting

• M:  S:
• > 50%
• Y:  N:  A:
Goals for the meeting

- Review presentations
- Understand technology difficulties
- Explore architectural options
- Lay the ground work for the next meeting
Big ticket items

• 50 km Link Budget
• 50 km Chromatic Dispersion

• Lay the ground work for the next meeting
Reflector and Web

• To subscribe to the P802.3cs reflector, send an email to:
  
  \texttt{ListServ@ieee.org}

  with the following in the body of the message (do not include “<>”):

  \texttt{subscribe STDS-802-3-SUPER-PON <yourfirstname> <yourlastname> end}

• Send P802.3cs reflector messages to:
  
  \texttt{STDS-802-3-SUPER-PON@listserv.ieee.org}

• Task Force web page URL:
  
  \texttt{http://www.ieee802.org/3/cs/index.html}
Task Force Private Area

- We don’t have it yet…
Ground Rules

• Based upon IEEE 802.3 Rules
  – Foundation based upon Robert’s Rules of Order
  – Anyone in the room may speak
  – Anyone in the room may vote
• RESPECT… give it, get it
• NO product pitches
• NO corporate pitches
• NO prices!!!
  – This includes costs, ASPs, etc. no matter what the currency
• NO restrictive notices
Attendance

• Tutorial Material on attendance tool

• Access details
  – URL: http://imat.ieee.org/
  – (For interim) Password will be provided
Important Bylaws and Rules

  http://standards.ieee.org/develop/policies/sa_opman/

- IEEE-SA Standards Board Bylaws
  http://standards.ieee.org/develop/policies/bylaws/

  http://standards.ieee.org/develop/policies/opman/

- IEEE 802 LAN/MAN Standards Committee (LMSC) Policies and Procedures
  https://ieee.app.box.com/v/PandP-LMSC

- IEEE 802 LAN/MAN Standards Committee (LMSC) Operations Manual
  http://www.ieee802.org/devdocs.shtml

- IEEE 802 LAN/MAN Standards Committee (LMSC) Working Group (WG) Policies and Procedures
  http://www.ieee802.org/devdocs.shtml

- IEEE 802.3 Working Group Operating Rules
Participants have a duty to inform the IEEE

• Participants 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.

• Participants should inform the IEEE (or cause the IEEE to be informed) of the identity of any other holders of potential Essential Patent Claims.

Early identification of holders of potential Essential Patent Claims is encouraged.
Ways to inform IEEE

• Cause an LOA to be submitted to the IEEE-SA (patcom@ieee.org); 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

• Speak up now and respond to this 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, please respond at this time by providing relevant information to the WG Chair.
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 of different technical approaches that include relative costs of patent licensing terms may be discussed in standards development meetings.
    • Technical considerations remain the 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.

Patent-related information

The patent policy and the procedures used to execute that policy are documented in the:

- **IEEE-SA Standards Board Bylaws**
  (http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6)
- **IEEE-SA Standards Board Operations Manual**
  (http://standards.ieee.org/develop/policies/opman/sect6.html#6.3)

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
Participation in IEEE 802 Meetings

Participation in any IEEE 802 meeting (Sponsor, Sponsor subgroup, Working Group, Working Group subgroup, etc.) is on an individual basis

• Participants in the IEEE standards development individual process shall act based on their qualifications and experience. (https://standards.ieee.org/develop/policies/bylaws/sb_bylaws.pdf section 5.2.1)

• IEEE 802 Working Group membership is by individual; “Working Group members shall participate in the consensus process in a manner consistent with their professional expert opinion as individuals, and not as organizational representatives”. (subclause 4.2.1 “Establishment”, of the IEEE 802 LMSC Working Group Policies and Procedures)

• Participants have an obligation to act and vote as an individual and not under the direction of any other individual or group. A Participant’s obligation to act and vote as an individual applies in all cases, regardless of any external commitments, agreements, contracts, or orders.

• Participants shall not direct the actions or votes of any other member of an IEEE 802 Working Group or retaliate against any other member for their actions or votes within IEEE 802 Working Group meetings, see https://standards.ieee.org/develop/policies/bylaws/sb_bylaws.pdf section 5.2.1.3 and the IEEE 802 LMSC Working Group Policies and Procedures, subclause 3.4.1 “Chair”, list item x.

By participating in IEEE 802 meetings, you accept these requirements. If you do not agree to these policies then you shall not participate.

Overview of IEEE 802.3 Standards Process (1/5)- Study Group Phase

Note: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.
Overview of IEEE 802.3 Standards Process (2/5) – Task Force Comment Phase

1. Approved PAR
2. Task Force Meetings
   - Objectives
     - Yes: Proposals Selected
     - No: No
3. D1.0
4. Task Force Review
   - D1.(n+1)
     - Yes: TF Review Done
     - No: To 802.3 WG Ballot
      - Yes: D2.0
      - No: No
Overview of IEEE 802.3 Standards Process (3/5) – Working Group Ballot Phase

**Notes:** At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

See 802.3 Operating Rules 7.1.4 and listed references for complete description.
Overview of IEEE 802.3 Standards Process (4/5)-
Sponsor Ballot Phase

Notes: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.
See 802.3 Operating Rules 7.1.5 and listed references for complete description
Overview of IEEE 802.3 Standards Process (5/5) – Final Approvals / Standard Release

Notes: At "Check Point", either the activity is ended, or there may be various options that would allow resubmission for approval.
Liaisons and Communications

• none
Action Items

• none
IEEE P802.3cs Super-PON
Approved Project Documents

• PAR
  – http://www.ieee802.org/3/cs/P802_3cs_PAR.pdf

• 5 Criteria

• Objectives
IEEE P802.3cs Super-PON Objectives

- Provide Physical Layer specifications that:
  - Preserve the Ethernet frame format utilizing the Ethernet MAC
  - Support a BER of better than or equal to $10^{-12}$ at the MAC/PLS service interface (or the frame loss ratio equivalent)
  - Support a passive point-to-multipoint ODN with a reach of at least 50 km with at least 1:64 split ratio per wavelength pair
  - Support at least 16 wavelength pairs for point-to-multipoint PON operation
  - Support the MAC data rate of 10Gb/s downstream
  - Support the MAC data rates of 2.5Gb/s and 10Gb/s upstream
  - Leverage existing EPON PCS and PMA to support the above MAC data rates
  - Support tunable transmitters
IEEE P802.3cs Super-PON
Thoughts on Timeline

Legend
- IEEE 802 Plenary
- IEEE 802.3 Interim
- IEEE-SA Standards Board

Task Force Formation
Baseline selection
TF Review
WG Ballot
LMSC Ballot
Standard

2018
PAR Approved
2019
2020
D1.0
D2.0
2021
D3.0

Last Feature
Last Technical Change

Presentations (1)

• P802.3cs Architectural Options
  – Liang Du (Google)

• Burst Mode Wavelength Stabilization
  – Xuming Wu, Dekun Liu, Huafeng Lin, Xiang Liu, Frank Effenberger (Huawei)

• Reach, fan-out, power-budget and dispersion tolerance of a Quasi-Coherent Super-PON
  – Jesper Bevensee Jensen (Bifrost)

• P802.3cs Chromatic Dispersion Considerations
  – Liang Du (Google)

Note – Times listed are subject to change.
Presentations (2)

• Chromatic Dispersion Compensation in Super-PON Networks with FBG-Based, Multi-Channel Chromatic Dispersion Compensators
  – Patrick Lebeau (TeraXion)
• P802.3cs Super-PON Link Budget Analysis
  – Xiangjun Zhao (Google)
• Burst-mode capable EDFAs
  – Qing Wei (Accelink)
• PCS Considerations
  – Claudio DeSanti (Google)
Next Meeting

• March Plenary meeting
• Do we want some interim calls?
Future Meetings

• See: http://www.ieee802.org/3/interims/index.html

• March 2019 Plenary
  – Vancouver, BC
  – March 11 to 14
  – Plan to attend: Y: N: M:

• May 2019 Interim
  – Salt Lake City, UT
  – Week of May 20
  – Plan to attend: Y: N: M:

• July 2019 Plenary
  – Vienna, Austria
  – July 15 to 18
  – Plan to attend: Y: N: M:

• Anyone interested in hosting a interim meeting contact me or the IEEE 802.3 Executive Secretary Steve Carlson.
Motion #3

• Move to adjourn

• M: S:
• > 50%
• Y: N: A:
Thank You!