

IEEE 802.3 Maintenance Task Force

10th November 2015

Dallas, TX

Adam Healey
Chair, IEEE 802.3 Maintenance TF
Vice-Chair, IEEE 802.3 Working Group

Agenda

- Introductions
- Review and approve agenda
- Approve minutes
- Call for patents
- Attendance procedures
- IEEE P802.3 status
- Review status of open revision requests
- Review revision requests
- Presentations
- Future meetings

Agenda and Minutes Motions

- Motion #1: Approve the agenda
 - M: G. Thompson S: V. Maguire
 - Passes by voice vote without opposition
- Motion #2: Approve the [September 2015 minutes](#)
 - M: V. Maguire S: M. Turner
 - Passes by voice vote without opposition

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.



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*](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*](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*](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*](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*](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.

Attendance

- IEEE Meeting Attendance Tool
 - <http://imat.ieee.org/>
- For more information, please see...
 - http://ieee802.org/3/minutes/attendance_procedures.pdf
- Please sign the attendance sheet for the Task Force meeting minutes

IEEE P802.3 status

- Targeting publication by the 3rd week of December

Revision request ballot status

#	Sep-15	Nov-15	Target project	Update
1238	A	A	Revision	IEEE P802.3 approved!
1239	A	A	Revision	
1243	A	A	Revision	
1247	A	A	Revision	
1249	A	A	Revision	
1250	A	A	Revision	
1251	A	A	Revision	
1253	A	A	Revision	
1254	A	A	Revision	
1255	A	A	Revision	
1256	A	A	Revision	
1257	A	A	Revision	

Revision request ballot status cont'd

#	Sep-15	Nov-15	Target project	Update
1258	A	A	Revision	IEEE P802.3 approved!
1259	A	A	Revision	
1260	A	A	Revision	
1262	A	A	Revision	
1265	A	A	Revision	
1266	V	V	P802.3bq	Initial Working Group ballot comment #103
1267	A	A	Revision	IEEE P802.3 approved!
1268	A	A	Revision	
1269	A	A	Revision	
1270	A	A	Revision	
1271	B	B	P802.3bt	
1273	B	B	P802.3bt	

Revision request ballot status cont'd

#	Sep-15	Nov-15	Target project	Update
<u>1274</u>	<u>B</u>	B	P802.3bt	
<u>1276</u>	<u>R</u>	R		
<u>1277</u>	<u>R</u>	R		
<u>1278</u>	<u>B</u>	B	P802.3bt	
<u>1279</u>	<u>B</u>	B	Revision	
<u>1280</u>	<u>B</u>	B	Revision	
<u>1281</u>	<u>W</u>			
<u>1282</u>	<u>B</u>	B	Revision	

New revision requests

#	Date	Standard	Clause	Subject
1287	09-Oct-15	802.3-2015	75.1.4	EPON extended power budget identification
1288	05-Nov-15	802.3-2015	86.10, 95.10	Equate fibre optic channel with link segment
1289	06-Nov-15	802.3-2015	30.3.2.1.2	Management enumeration of PHY types

Revision request status summary

- 38 open maintenance requests
- Current status of open requests
 - Approved 21
 - Balloting 1
 - Ready for ballot 7
 - Awaiting clarification 0
 - Errata 0
 - To be categorised 9

Review revision requests

- Deadline for consideration at this meeting was 5th October 2015

#	Date	Standard	Clause	Subject
1276	20-Feb-15	802.3-2012	Frontmatter	Define "PoE"
1277	25-Mar-15	802.3-2012	33	Load during inrush
1283	26-Aug-15	802.3-2012	73.6.4	Backplane/twinax PHY advertisement
1284	03-Sep-15	802.3-2015	83	Incorrect register names
1285	09-Sep-15	802.3-2015	1.4	Incorrect/missing cable definitions
1286	11-Sep-15	802.3-2015	90.7	Data delay reference points

Revision request 1276

- Add definition of “PoE” to IEEE Std 802.3
- The term “PoE” could be expanded in the frontmatter (introduction), added as a definition (1.4), or included in Clause 33
- May 2015
 - Further consideration is needed to determine the best location.
- July 2015
 - Thompson accepted an action item to draft a change to 33.1 that expands “PoE”. There will be related additions to definitions and abbreviations ([completed 13th July 2015](#))
- September 2015
 - Chair to request submitter to revise the request based upon the proposed changes

Revision request 1276 cont'd

- November 2015
 - Resubmission of the maintenance request is pending

Revision request 1277

- Add text to clarify that PDs should not turn on their DC-DC load during inrush
- May 2015
 - Further consideration is necessary to determine whether or not this request adds a new requirement
- July 2015
 - Deferred to September 2015 meeting in order to gather more information
- September 2015
 - It is believed there will be an impact on the compliance of existing PDs (hence an impact to existing networks)
- November 2015
 - There is on-going discussion with P802.3bt Task Force chair

Revision request 1283

- 73.6.4, 3rd paragraph

“A PHY for operation over an electrical backplane (e.g., 1000BASE-KX, 10GBASE-KX4, 10GBASE-KR, 40GBASE-KR4, 100GBASE-KP4, 100GBASE-KR4) shall not be advertised simultaneously with a PHY for operation over a copper cable assembly (e.g., 40GBASE-CR4, 100GBASE-CR10, 100GBASE-CR4) as the MDI and physical medium are different.”
- Since IEEE 802.3 does not define Auto-Negotiation for operation over twinaxial cable assemblies at rates below 40 Gb/s (and does not serial operation at 10 Gb/s over twinaxial cable), 1000BASE-KX, 10GBASE-KX4, and 10GBASE-KR could be used as proxies to enable Auto-Negotiation of these unsupported modes of operation

Revision request 1283 cont'd

- There is no obvious reason to prohibit simultaneous advertisement of backplane and copper cable PHYs
 - MDIs should differentiate them (as the text states)
 - Both media are mixed into a common priority resolution table
 - It should be an “either-or” choice (not both)
 - Note that P802.3by uses the same bits to advertise 25GBASE-KR and –CR abilities
- In scope: Yes / ~~No~~
- Errata: ~~Yes~~ / No
- Complete: Yes / ~~No~~
- See discussion on next slide...

Revision request 1283 cont'd

- Proposed revision text

“A PHY for operation over an electrical backplane (~~e.g., 1000BASE-KX, 10GBASE-KX4, 10GBASE-KR,~~ 40GBASE-KR4, 100GBASE-KP4, 100GBASE-KR4) shall not be advertised simultaneously with a PHY for operation over a copper cable assembly of the same data rate”. (~~e.g., 40GBASE-CR4, 100GBASE-CR10, 100GBASE-CR4) as the MDI and physical medium are different.~~”

NOTE: The final phrase has been removed by P802.3by.

- Would it be better to say “...cable assembly using the same number of physical lanes at the same signaling rate” and remove 100GBASE-KP4 and 100GBASE-CR10 from the parentheticals?
- Maintain status as “Received”. Discuss with submitter.

Revision request 1284

- Tables 83-3 and 83-4 refer to PMA ingress/egress AUI stop ability registers
 - There are no such registers
 - The references should be to PMA/PMD Control 2 and PMA/PMD status 1
- In scope: Yes / ~~No~~
- Errata: ~~Yes~~ / No
- Complete: Yes / ~~No~~
- Change status to “Ready for ballot” and target the next revision

Revision request 1285

- Reference to 1000BASE-T in definition of “Category 3 balanced cabling” is incorrect
- Reference to 1000BASE-T is missing in definition of Category 5, 5e, 6, 6A, 7, and 7A
- Add definition of Category 5e (there are exactly 2 uses, 33.1 and corresponding PICS)
- Revise definitions to not include specifications
- In scope: Yes / ~~No~~
- Errata: ~~Yes~~ / No
- Complete: Yes / ~~No~~
- See discussion on next slide...

Discussion of revision request 1285

- The proposed definitions remove references to additional PHY-specific requirements
- The purpose of the original cross-reference was to point out requirements beyond the ISO/IEC and ANSI/TIA/EIA requirements
 - E.g., see 40.7
 - With this qualifier, the cross-references do not make sense in a number of cases
 - E.g., there is no reference to Category 6A cabling in Clause 40 so why is it listed in the cross-references?
- So, why continue to reference specific PHY clauses?
- Is “category” nomenclature appropriate for references to ISO/IEC 11801?

Revision request 1285, cont'd

- Submitter to resubmit request with updates to the proposed revision text

Revision request 1286

- Reference points for data delay measurements are not clear
 - Identify whether TX or RX MDI is intended
 - Define the reference point for multi-lane interfaces
- Refer to [IEEE 802.3 Timestamping liaison letter ad hoc](#)
- In scope: Yes / ~~No~~
- Errata: ~~Yes~~ / No
- Complete: Yes / ~~No~~
- Change status to “Ready for ballot” and target the next revision

Presentation

- “Definition of ‘channel’ and ‘link segment’ and ‘fiber optic cabling (channel)’ equivalence text for optical clauses”,
Jonathan King

Future meetings

- Week of 18th January 2016
 - Atlanta, GA USA

Adjourn

Maintenance web and reflector

- IEEE 802.3 Maintenance web site
 - <http://www.ieee802.org/3/maint/>
- IEEE 802.3 Maintenance Request form
 - http://www.ieee802.org/3/private/maint/revision_request.html
 - Username: XXXXX
 - Password: XXXXXXXX
- IEEE 802.3 Maintenance reflector
 - stds-802-3-maint@ieee.org