IEEE 802.3 Maintenance Task Force
20 July 2020

Adam Healey, Broadcom Inc.
Chair, IEEE 802.3 Maintenance TF
Vice Chair, IEEE 802.3 Ethernet WG

Voting at electronic meetings

- IEEE 802.3 Operations Manual 3.4.2

  There are two type of votes in the TF; votes on motions and votes in straw polls.

  In face-to-face meetings where a TF is operating with membership rules for voting (see 3.3) only the TF members may make and vote on motions. In face-to-face meetings where membership rules are not in force all TF participants may make and vote on motions, subject only to the provision that they believe that they are qualified to vote on the matter before the TF. ~~Electronic meetings shall only consider motions to progress a draft and only when balloting is substantially complete.~~* Electronic meetings that will consider motions shall be approved by the WG Chair prior to the meeting announcement. In such meetings only IEEE 802.3 Working Group members may make and vote on motions. If a motion is not approved by unanimous consent it shall be taken as a roll call vote.

  In all cases, regardless of any membership rules that may or may not be in force, all participants who feel qualified may participate in a straw poll.

  * Rule suspension [3] per IEEE 802.3 WG 10-day electronic ballot (closed 10 May 2020).

Agenda

- Review and approve agenda
- Approve minutes
- Guidelines for IEEE-SA Meetings
- IEEE-SA Copyright policy
- Participation in IEEE 802 Meetings
- Attendance procedures
- Consider open maintenance requests
- Revision plan
- Drafts and standards to ISO/IEC JTC 1/SC 6
- Future meetings

Agenda and minutes motions

- Motion #1: Approve the agenda
  - M: M. Hajduczenia   S: R. Grow
  - Procedural (> 50%)
  - Passed by unanimous consent

- January 2020 minutes were posted 21 January 2020

- Motion #2: Approve the January 2020 minutes
  - M: D. Law   S: J. Lewis
  - Procedural (> 50%)
  - Passed by unanimous consent

Guidelines for IEEE-SA 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.**

    For more details, see *IEEE-SA Standards Board Operations Manual*, clause 5.3.10 and *Antitrust and Competition Policy: What You Need to Know* at http://standards.ieee.org/develop/policies/antitrust.pdf

    If you have questions, contact the IEEE-SA Standards Board Patent Committee Administrator at patcom@ieee.org

◆IEEE

INSTRUCTIONS FOR CHAIRS OF STANDARDS DEVELOPMENT ACTIVITIES

At the beginning of each standards development meeting the chair or a designee is to:

- Show the following slides (or provide them beforehand)
- Advise the standards development group participants that:
- IEEE SA's copyright policy is described in Clause 7 of the IEEE SA Standards Board Bylaws and Clause 6.1 of the IEEE SA Standards Board Operations Manual;
- Any material submitted during standards development, whether verbal, recorded, or in written form, is a Contribution and shall comply with the IEEE SA Copyright Policy;
- Instruct the Secretary to record in the minutes of the relevant meeting:
- That the foregoing information was provided and that the copyright slides were shown (or provided beforehand).

IEEE SA STANDARDS ASSOCIATION

◆IEEE   2

IEEE SA COPYRIGHT POLICY

By participating in this activity, you agree to comply with the IEEE Code of Ethics, all applicable laws, and all IEEE policies and procedures including, but not limited to, the IEEE SA Copyright Policy.

- Previously Published material (copyright assertion indicated) shall not be presented/submitted to the Working Group nor incorporated into a Working Group draft unless permission is granted.

- Prior to presentation or submission, you shall notify the Working Group Chair of previously Published material and should assist the Chair in obtaining copyright permission acceptable to IEEE SA.

- For material that is not previously Published, IEEE is automatically granted a license to use any material that is presented or submitted.

◆IEEE   3

IEEE SA COPYRIGHT POLICY

■ The IEEE SA Copyright Policy is described in the IEEE SA Standards Board Bylaws and IEEE SA Standards Board Operations Manual

- IEEE SA Copyright Policy, see
  Clause 7 of the IEEE SA Standards Board Bylaws
  https://standards.ieee.org/about/policies/bylaws/sect6-7.html#7
  Clause 6.1 of the IEEE SA Standards Board Operations Manual
  https://standards.ieee.org/about/policies/opman/sect6.html

■ IEEE SA Copyright Permission
- https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/permissionltrs.zip

■ IEEE SA Copyright FAQs
- http://standards.ieee.org/faqs/copyrights.html/

■ IEEE SA Best Practices for IEEE Standards Development
- http://standards.ieee.org/develop/policies/best_practices_for_ieee_standards_development_051215.pdf

■ Distribution of Draft Standards (see 6.1.3 of the SASB Operations Manual)
- https://standards.ieee.org/about/policies/opman/sect6.html

IEEE SA STANDARDS ASSOCIATION

◆IEEE 4

Participant behavior in IEEE-SA activities is guided by the IEEE Codes of Ethics & Conduct

- All participants in IEEE-SA activities are expected to adhere to the core principles underlying the:
  - IEEE Code of Ethics
  - IEEE Code of Conduct

- The core principles of the IEEE Codes of Ethics & Conduct are to:
  - *Uphold the highest standards of integrity, responsible behavior, and ethical and professional conduct*
  - *Treat people fairly and with respect, to not engage in harassment, discrimination, or retaliation, and to protect people's privacy.*
  - *Avoid injuring others, their property, reputation, or employment by false or malicious action*

- The most recent versions of these Codes are available at http://www.ieee.org/about/corporate/governance

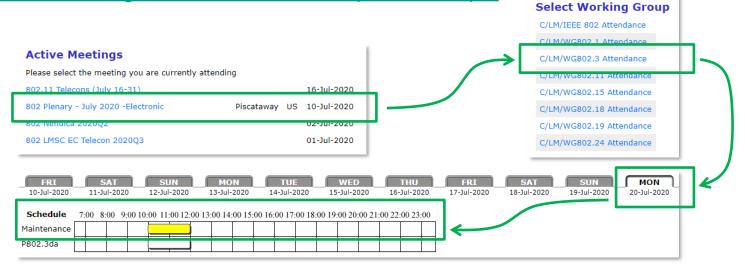# Participants in the IEEE-SA "*individual process*" shall act independently of others, including employers

- The IEEE-SA Standards Board Bylaws require that "*participants in the IEEE standards development individual process shall act based on their qualifications and experience*"

- This means participants:
  - **Shall act & vote** based on their personal & independent opinions derived from their expertise, knowledge, and qualifications
  - **Shall not act or vote** based on any obligation to or any direction from any other person or organization, including an employer or client, regardless of any external commitments, agreements, contracts, or orders
  - **Shall not direct** the actions or votes of other participants or retaliate against other participants for fulfilling their responsibility to act & vote based on their personal & independently developed opinions

- By participating in standards activities using the "*individual process*", you are deemed to accept these requirements; if you are unable to satisfy these requirements then you shall immediately cease any participation

IEEE-SA standards activities shall allow the fair & equitable consideration of all viewpoints

- The IEEE-SA Standards Board Bylaws (clause 5.2.1.3) specifies that "*the standards development process shall not be dominated by any single interest category, individual, or organization*"
  - This means no participant may exercise *"authority, leadership, or influence by reason of superior leverage, strength, or representation to the exclusion of fair and equitable consideration of other viewpoints"* or *"to hinder the progress of the standards development activity"*

- This rule applies equally to those participating in a standards development project and to that project's leadership group

- Any person who reasonably suspects that dominance is occurring in a standards development project is encouraged to bring the issue to the attention of the Standards Committee or the project's IEEE-SA Program Manager

Attendance procedures

- IEEE Meeting Attendance Tool
  - http://imat.ieee.org/
- For more information, please see…
  - http://ieee802.org/3/minutes/attendance_procedures.pdf

Maintenance request status

- 2 new requests received since the March 2020 update
- 46 open maintenance requests
- Current status of open requests
  - Approved   0
  - Balloting   0
  - Ready for ballot   36
  - Awaiting clarification   0
  - Errata   0
  - To be categorized   10
- Also see http://www.ieee802.org/3/maint/requests/open_num.html

Maintenance requests to be categorized

• For consideration this meeting

No.	Date	Standard	Clause	Subject
1344	05-May-19	802.3-2018	99.4.6	Incorrect primitive name
1357	13-Jan-20	802.3-2018	99.1	Include 10 Mb/s in Clause 99 introduction
1358	14-Jan-20	802.3cb-2018	125.3	Incorrect conversion of units
1359	17-Feb-20	802.3-2018	Various, see details	Inconsistent usage of "PHY"
1360	26-Feb-20	802.3cg-2019	147.9.2	Incorrect units
1361	09-Nov-19	802.3-2018	1.1	Add "Word usage" Subclause
1362	09-Nov-19	802.3-2018	44.3	Remove "informative" label from Table 44-2
1363	12-May-20	802.3cd-2018	Table 136C-3	Incorrect contact mapping
1364	08-Jun-20	802.3-2018	Figure 98-9	Incorrect variable assignment

Maintenance request 1344

- Received an update with new proposed revision text
- Change 99.4.6 as follows

  ... the Express filter passes the RS ~~PLS_DATA.request~~PLS_DATA.indications to the eMAC ...

- Set the status to "Ready for ballot"

Complete: Yes
In scope: Yes
Errata: No

IEEE 802.3 Maintenance Task Force

Maintenance request 1357

- Request was withdrawn by the submitter

Complete:
In scope:
Errata:

Maintenance request 1358

- IEEE Std 802.3cb-2018 adds the following row to Table 125−3 "Sublayer delay constraints"

Sublayer	Maximum (bit time)	Maximum (pause_quanta)	Maximum (ns)	Notes
5GBASE-KR PMD	1024	1	102.4	See 130.4

- 1 pause_quanta = 512 bit times, update the table accordingly
- Also, change 130.4 to state the maximum delay is 512 bit times
- Set the status to "Ready for ballot"

Complete: Yes
In scope: Yes
Errata: No

Maintenance request 1359

- Inconsistent usage/expansion of "PHY"

  1.4.391 Physical Layer entity (PHY): Within IEEE 802.3, the portion of the Physical Layer between the Medium Dependent Interface (MDI) and the Media Independent Interface (MII), Gigabit Media Independent Interface (GMII) or 10 Gigabit Media Independent Interface (XGMII), consisting of the Physical Coding Sublayer (PCS), the Physical Medium Attachment (PMA), and, if present, the WAN Interface Sublayer (WIS) and Physical Medium Dependent (PMD) sublayers. The PHY contains the functions that transmit, receive, and manage the encoded signals that are impressed on and recovered from the physical medium.

- "PHY" is sometimes used to mean "Physical Layer"

- "PHY" is sometimes expanded to "Physical Layer device"

- Replace instances of "Physical Layer entity" with "Physical Layer device"

- Ensure correct usage of "PHY" and "Physical Layer"

- Leave status at "Received" and continue to evaluate

Complete: Yes?
In scope: Yes
Errata: No

Maintenance request 1359 statistics

- IEEE Std 802.3-2018 (and all approved amendments)
  - 7740 instances of "PHY"
  - 6 instances of "Physical Layer entity"
  - 154 instances of "Physical Layer device"
  - 2429 instances of "Physical Layer" (2269 that do not include "entity" or "device")
  - 32 instances of "PHY device"
    - **30.3.2 PHY ~~device~~ managed object class**
    - **30.3.2.1 PHY ~~device~~ attributes**
    - **30.3.2.2 PHY ~~device~~ actions**
  - 13 instances of "Physical Layer (PHY)"
    - **1.4.373 packet:** Consists of a MAC frame as defined previously, preceded by the Preamble and the Start Frame Delimiter, encoded, as appropriate, for the Physical Layer ~~(PHY)~~ type.

Maintenance request 1359 statistics, continued

- IEEE Std 802.3-2018 (and all approved amendments)
  - 5 instances of "PHY layer"
    - **34.1.1 Reconciliation Sublayer (RS) and Gigabit Media Independent Interface (GMII)** "The Gigabit Media Independent Interface (Clause 35) provides an interconnection between the Media Access Control (MAC) sublayer and Physical Layer ~~entities~~devices (PHY) and between PHY ~~Layer~~ and Station Management (STA) entities."
  - 1 instance of "PHY entity"
    - **45.1.2 Application** "This clause defines a management interface between Station Management (STA) and the sublayers that form a Physical Layer device (PHY) ~~entity~~."

Maintenance request 1360

- In Table 147-4 for 10BASE-T1S, the units "kW" should be "kΩ".
- This error was introduced during preparation for publication.
- In scope: Yes
- Errata: Yes
- Complete: Yes
- IEEE-SA editorial staff were informed of this issue on 13 March 2020 and agreed to issue an errata

Complete: Yes
In scope: Yes
Errata: Yes

Maintenance request 1361

- Add a new [required] subclause 1.1.6 "Word usage"
- Defines "shall", "should", "may", and "can" consistent with IEEE-SA Standards Board Operations Manual 6.4.7
- Generated in response to Mandatory Editorial Coordination (MEC) on IEEE Std 802.3ch-2020
- Set the status to "Ready for ballot"

Complete: Yes
In scope: Yes
Errata: No

Maintenance request 1362

- Table 44–2—Round-trip delay constraints ~~(informative)~~
- There is no normative reference to the table so the "informative" designation is unnecessary
- It is also not compliant to IEEE-SA rules
- Generated in response to Mandatory Editorial Coordination (MEC) on IEEE P802.3ch
- Ask submitter to resubmit with update to proposed revision text that adds a footnote to Table 44–2 similar to footnote c) in Table 80–5

Complete: Yes
In scope: Yes
Errata: No

Maintenance request 1363

- Contact mapping for the OSFP connector in Table 136C-3 is not consistent with the reference in 136C.2.5 to the "OSFP MSA specification" (footnote 28)
- Polarity swaps, ground contact missing
- Consistent contact mapping provided
- Set the status to "Ready for ballot"

Complete: Yes
In scope: Yes
Errata: No

Maintenance request 1364

- In Figure 98−9–Receive state diagram, change assignment of receive_DME_active in DELIMITER_WAIT state from "true" to false"

- Change introduced when the state diagram was re-drawn between P802.3bp/D2.0 and P802.3bp/D2.1

- Set the status to "Ready for ballot"

Complete: Yes
In scope: Yes
Errata: No

Revision plan

[Draft PAR, motion]

IEEE 802.3 Maintenance Task Force

It is time to start the next revision

- [IEEE-SA Standards Board Operations Manual](#) 8.1.2

  Up to three amendments can be approved before the standard shall be revised, unless the base standard has been approved within the past three years. In such a case, multiple amendments may be added until the base standard is three years old. After the three-year period, RevCom shall defer consideration of additional amendments or corrigenda until a revision or a two-year extension request is approved by the IEEE-SA Standards Board.

- IEEE Std 802.3-2018 was approved 14 June 2018
- IEEE Std 802.3ca-2020 was the ninth amendment!

Considerations for the revision plan

Consideration	Comments
Target a short revision timeline	• Minimize disruption to project schedules • Verify correct implementation of the roll-up and ballot maintenance changes • Use targeted maintenance projects for more "heavy lifting" (e.g., cq, cr, cv) • Requires forbearance of the balloting group
Able to incorporate approved amendments into the revision draft prior to initial SA ballot	• Add amendment as balloted and approved • It is a hardship on the editorial team (use sparingly)
SA ballot of amendments can be done in parallel with the revision	• Amendment(s) requires one additional recirculation after completion of revision SA ballot • Align to final revision draft • Can be placed on the same RevCom agenda as the revision draft

Final timeline for IEEE Std 802.3-2015

11/8/2014	WGB opens		6/16/2015	SAB-r1 opens
12/11/2014	WGB closes		7/1/2015	SAB-r1 closes
12/23/2014	Ad hoc teleconference #1		7/13/2015	Maintenance TF meeting
1/8/2015	Ad hoc teleconference #2		7/17/2015	Cond. approval RevCom submittal
1/14/2015	Maintenance TF meeting		7/20/2015	SAB-r2 opens
2/7/2015	WGB-r1 opens		7/24/2015	RevCom submittal deadline
2/21/2015	WGB-r1 closes		8/4/2015	SAB-r2 closes
3/9/2015	Maintenance TF meeting		8/12/2015	Maintenance TF meting
3/13/2015	SAB approval		9/2/2016	RevCom meeting
3/25/2015	SAB opens			
4/24/2015	SAB closes			
5/21/2015	Maintenance TF meeting			

IEEE P802.3 approved by IEEE-SA Standards Board 3rd September 2015!

~9 months of "active" balloting

Final timeline for IEEE Std 802.3-<u>2018</u>

7/13/2017	WGB approval
7/23/2017	WGB day 1
8/21/2017	WGB closes
9/13/2017	Maintenance TF meeting
9/29/2017	WGB-r1 day 1
10/13/2017	WGB-r1 closes
11/8/2017	Maintenance TF meeting
11/10/2017	SAB approval
12/6/2017	Amendments approved
12/11/2017	SAB day 1
1/9/2018	SAB closes
1/24/2018	Maintenance TF meeting
2/14/2018	SAB-r1 day 1

2/28/2018	SAB-r1 closes
3/7/2018	Maintenance TF meeting
3/9/2018	Cond. approval RevCom submittal
3/13/2018	SAB-r2 day 1
3/27/2018	SAB-r2 closes
4/6/2018	Cond. interim telecon meeting #1
4/10/2018	SAB-r3 day 1
4/24/2018	SAB-r3 closes
4/26/2018	Cond. interim telecon meeting #2
5/4/2018	RevCom submittal deadline
6/12/2018	Start of SASB meeting series

IEEE Std 802.3-2018 approved by IEEE-SA Standards Board 14th June 2018!

~9 months of "active" balloting

Possible revision schedules

Project	2020						2021												2022					
	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6
P802.3ck							WGB						SAB						Std!					
P802.3cp	<<<	WGB			SAB							Std!												
P802.3cr	<<<	SAB				Std!																		
P802.3cs			WGB				SAB					Std!												
P802.3ct	<<<	WGB			SCB										Std!									
P802.3cu	SAB					Std!																		
P802.3cv	<<<	WGB	SAB			Std!																		
P802.3cw											WGB						SAB							Std!
P802.3cx													WGB				SAB							Std!
P802.3cy																								
P802.3cz													WGB								SAB			
P802.3da													WGB								SAB			
P802.3db																								
Revision1			PAR?		WGB				SAB						Std!									
Revision2			PAR?						WGB			SAB							Std!					
Revision3			PAR?												WGB			SAB						Std!
SASB		d	rb	d		sd		nr	d		d s		nrd		nrb		d		d s	d nr		s		

Key

d	Nes/RevCom submission deadline
n	NesCom teleconference
r	RevCom teleconference
b	SB teleconference
s	SASB meeting series

Revision PAR

[Major questions, PAR form]

IEEE 802.3 Maintenance Task Force

PAR motion

- Motion #5:
  Approve the IEEE P802.3 Revision to IEEE Std 802.3-2018 (IEEE 802.3dc) revision PAR in http://www.ieee802.org/3/maint/public/P802d3_PAR_draft_0720.pdf.
  - M: R. Grow   S: S. Carlson
  - Technical ($\geq$ 75%)
  - Passed by unanimous consent

Drafts to ISO/IEC JTC 1/SC 6

[Draft liaison letter, motions]

Drafts to ISO/IEC JTC 1/SC 6 motion

- Motion #3:
Approve IEEE_802d3_to_ISOIEC_JTC1_SC6_0720_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 JTC 1/SC 6.
  - M: G. Thompson   S: P. Anslow
  - Technical ($\geq$ 75%)
  - Passed by unanimous consent

Standards to ISO/IEC JTC 1/SC 6

[Motion]

Standards to ISO/IEC JTC 1/SC 6 motion

- Motion #4:
  Submit IEEE Std 802.3cn-2019, IEEE Std 802.3cg-2019, IEEE Std 802.3cq-2020, IEEE Std 802.3cm-2020, IEEE Std 802.3ch-2020, IEEE Std 802.3ca-2020, and IEEE Std 802.3.2-2019 to ISO/IEC JTC 1/SC 6 for ratification under the PSDO agreement.
  - M: N. Wienckowski   S: S. Carlson
  - Technical ($\geq$ 75%)
  - Passed by unanimous consent

Future meetings

- Future teleconference meetings will be announced to the reflector

IEEE 802.3 Maintenance Task Force

Adjourn

IEEE 802.3 Maintenance Task Force