

IEEE 802.3 Maintenance Task Force

4 February 2025

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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 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.

General 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. (*January 2020 IEEE-SA Standards Board Ops Manual 5.3.3.2*)
- Press (i.e., anyone reporting publicly on this meeting) are to announce their presence (*January 2020 IEEE-SA Standards Board Ops Manual 5.3.3.3*)
- Please observe proper decorum in meetings

Teleconference decorum

- **Please MUTE if you are not speaking**
- The conference tool in use for this meeting has a chat function. Public, and in some cases private chats, are available to the teleconference host after the meeting, and should be treated as a public statement that could appear in the minutes. The public chat function shall only be used for official business related to the meeting, as determined by the Chair. Parallel discussions between participants using the public chat function can be a distraction from the meeting and the Chair or designee will ask participants to cease such discussions should they occur.

Agenda

- Review and approve agenda
- Approve meeting minutes
- Guidelines for IEEE-SA Meetings
- IEEE-SA Copyright policy
- Participation in IEEE 802 Meetings
- Attendance procedures
- Consideration of maintenance requests
- Future meetings

Agenda motion

- Motion #1: Approve the agenda
 - M: G. Zimmerman S: G. Thompson
 - Passed by unanimous consent at 11:09 am EST
- November 2024 minutes were posted on 11 November 2024
- Motion #2: Approve the [November 2024](#) minutes
 - M: C. Jones S: D. Law
 - Passed by unanimous consent at 11:11 am EST

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. Formally object to the discussion immediately.

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

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 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 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>

- IEEE SA Best Practices for IEEE Standards Development
 - http://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/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>

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

- Meeting attendance will be determined using the Zoom meeting attendance record
- This meeting does qualify for attendance credit towards obtaining or maintaining voting membership

Consideration of maintenance requests

Maintenance request status

- 3 new requests received since the November 2024 meeting
- 81 open maintenance requests
- Current status of open requests
 - Approved 0
 - Balloting 0
 - Ready for ballot 59
 - Awaiting clarification 3
 - Errata 0
 - To be categorized 19
- Also see http://www.ieee802.org/3/maint/requests/open_num.html

Maintenance requests to be categorized

- Deadline for consideration at this meeting was 31 December 2024
- New requests to be considered today

No.	Date	Standard	Reference	Subject
1471	12-Nov-24	802.3-2022	Various, see details	Update reference
1472	24-Nov-24	802.3-2022	22.2.1	Incorrect arrow direction
1473	03-Dec-24	802.3cz-2023	Table 166-16	Imprecise values in table

Consideration of maintenance requests, 1 of 8

No.	Date	Standard	Reference	Synopsis	Complete?	In scope?	Status
1421	11-Oct-23	802.3-2022	97.4.2.4	No update.	N		I
1429	2-Apr-24	802.3-2022	46.3.4.3	No update.	N		I
1431	29-Apr-24	802.3-2022	Various, see details	Maintenance request has been WITHDRAWN. [Note that the same issue is addressed more completely by 1471.]			W
1433	14-May-24	802.3cx-2023	90.7.1	No update.	N		I

Consideration of maintenance requests, 2 of 8

No.	Date	Standard	Reference	Synopsis	Complete?	In scope?	Status
1447	4-Oct-24	802.3-2022	149.3.9	<p>"However, if EEE is implemented, then the OAM frame exchange function is implemented to exchange, at a minimum, the link partner PHY health OAM status."</p> <p>This would make more sense since PHY health is checked during low-power idle and the formatting of the OAM status field is informative.</p>	Y	Y	B
1448	4-Oct-24	802.3-2022	149.3.9	<p>"OAM shall beis operational as long as both PHYs implement this mechanism and the link is up. It shallcontinues to be operational during Low Power Idle, albeit the information is transferred at a slower rate during the refresh cycle." Add PICS.</p> <p>The text is descriptive and not normative. The proposed requirement does not appear to be enforceable since 1) "implementation" is not an externally observable trait and 2) the term "operational" does not have a clear definition. For item 1) reference to advertisement of the capability using e.g., the "MultiGBASE-T1 OAM ability" may be more appropriate. For item 2) "operation" apparently means that OAM frames may be exchanged using the mechanism defined in this subclause although there does not appear to be any requirement to do so (except perhaps for EEE support) or how often OAM frames should be exchanged.</p>	N		R

Consideration of maintenance requests, 3 of 8

No.	Date	Standard	Reference	Synopsis	Complete?	In scope?	Status
1449	4-Oct-24	802.3-2022	149.3.9.2.1	"One OAM symbol is placed in the 10-bit OAM field in each RS-FEC PHY frame during normal power operation in the data mode. One OAM symbol is placed in the 10-bit OAM field in each refresh cycle during Low Power Idle. The sixteen OAM symbols are consecutively inserted into sixteen consecutive RS-FEC PHY frames and/or refresh cycles." Subsequent text appears to confirm that "RS-FEC frame" is correct.	Y	Y	B
1450	4-Oct-24	802.3-2022	149.3.9.2.1	"The dummy OAM symbol is all 0's and its value shall be is ignored at the receiver." Clearly indicate that it is a normative behavior for the value of the dummy OAM symbol to be ignored and add a PICS.	Y		R
1451	4-Oct-24	802.3-2022	149.3.9.2.1	"Bit 0 of each OAM symbol shall be is the first bit transmitted in the 10-bit OAM field. Symbol 0 shall be is the first symbol transmitted in each OAM frame." Replace OAM2 with a new PICS that reflects these transmitter order requirements. However, the replacement would result in no PICS requirement covering that symbol<0> should be inserted in the first RS-FEC frame of an RS-FEC super-frame when L=2 or L=4. It seem that the new requirement should be a separate PICS item.	N		R

Consideration of maintenance requests, 4 of 8

No.	Date	Standard	Reference	Synopsis	Complete?	In scope?	Status
1456	4-Oct-24	802.3-2022	149.3.9.2.15	"If a PHY receives SNR<1:0> set to 01 by its link partner, then it shall not cannot enter into LPI in the egress direction." Also add PICS. However, the PCS 64B/65B Transmit state diagram, part b (see Figure 149–17) is defined such that the transmitter will not go into LPI mode if the link partner is sending SNR<1:0> = 01 . Therefore, it seems appropriate that this text simply be a statement of fact.	Y		R
1457	4-Oct-24	802.3-2022	97.3.8.2.14	"If a PHY receives SNR<1:0> set to 01 by its link partner, then it shall not cannot enter into LPI in the egress direction." However, the PCS Transmit state diagram (see Figure 97–14) is defined such that the transmitter will not go into LPI mode if the link partner is sending SNR<1:0> = 01. Therefore, it seems appropriate that this text simply be a statement of fact. The additional PICS for this behavior (97.11.8 OAM7) should be removed.	Y		R
1459	4-Oct-24	802.3-2022	149.3.9.4.3	In rx_exp_toggle definition, "This is normally the opposite value of the current toggle value, but is shall reset on error conditions...". The shall is redundant with the normative requirement that implementations conform to the state diagrams in Figures 149–24 and 149–25 (see 149.3.9). The change would align it to similar text in Clause 97 (see 97.3.8.4.3).	Y	Y	B

Consideration of maintenance requests, 5 of 8

No.	Date	Standard	Reference	Synopsis	Complete?	In scope?	Status
1460	4-Oct-24	802.3-2022	Figure 149–24	Add action "rx_boundary <= FALSE" to state CHECK_READ. The purpose is to add clarity about when the variable is set to FALSE. However, the definition of rx_boundary in 149.3.9.4.3 seems clear that it is set to FALSE when the "receive stream is not at a boundary end". The definition indicates the variable is set to TRUE at the boundary end and is FALSE otherwise.	Y		R
1461	4-Oct-24	802.3-2022	Figure 149–25	Add action "tx_boundary <= FALSE" to state CHECK_ACK and TRANSMIT symbol states. The purpose is to add clarity about when the variable is set to FALSE. However, the definition of tx_boundary in 149.3.9.4.3 seems clear that it is set to FALSE when the "transmit stream is not at a boundary end". The definition indicates the variable is set to TRUE at the boundary end and is FALSE otherwise.	Y		R

Consideration of maintenance requests, 6 of 8

No.	Date	Standard	Reference	Synopsis	Complete?	In scope?	Status
1462	4-Oct-24	802.3-2022	149.3.9.4.3	"This variable is set to TRUE whenever the transmit data stream reaches the start of a RS-FEC PHY frame and a dummy OAM symbol is not transmitted per..." Refer to similar text in the definition of rx_boundary which includes "This variable is set to TRUE whenever the receive data stream reaches the end of a Reed-Solomon frame and a dummy OAM symbol is not expected..."	Y	Y	B
1463	4-Oct-24	802.3-2022	149.3.9.4.5	Rewrite definition of function "rs" to clearly identify function inputs and outputs. There is no change to the operation of the function.	Y	Y	
1464	4-Oct-24	802.3-2022	149.3.9.4.5	Rewrite definition and usage of function "rs_correct" to clearly identify function inputs and outputs. There is no change to the operation of the function.	Y	Y	

Consideration of maintenance requests, 7 of 8

No.	Date	Standard	Reference	Synopsis	Complete?	In scope?	Status
1468	4-Oct-24	802.3-2022	149.3.9.2.7	Remove "This bit is valid only if Valid is set to 1." The statement at the end of 149.3.9.2.7 seems unnecessary since Table 149–8 assigns a description to all possible combinations of toggle and valid bits.	Y	Y	B
1469	4-Oct-24	802.3-2022	149.3.9.2.11	Add "These bits are valid only if Valid is set to 1." to the definition of "OAM message data". This seems consistent with the operation of state diagrams in Figures 149–24 and 149–25.	Y	Y	B
1470	4-Oct-24	802.3-2022	149.3.9.2.10	Add "These bits are valid only if Valid is set to 1." to the definition of "OAM message number". This seems consistent with the operation of state diagrams in Figures 149–24 and 149–25.	Y	Y	B

Consideration of maintenance requests, 8 of 8

No.	Date	Standard	Reference	Synopsis	Complete?	In scope?	Status
1471	12-Nov-24	802.3-2022	Various, see details	Update references to IEEE Std 802.1AB-2009 to IEEE Std 802.1AB-2016. Similar to maintenance request 1431 but it includes a complete list of the required changes.	Y	Y	B
1472	24-Nov-24	802.3-2022	22.2.1	In Figure 22–2, arrow corresponding to PLS_DATA.request primitive should point from “PLS Service Primitives” to “Reconciliation sublayer”. It currently points in the opposite direction.	Y	Y	B
1473	03-Dec-24	802.3cz-2023	Table 166–16	Proposes to change values of TDFOM0 which, in turn, would modify the “Transmitter distortion figure of merit” TDFOM results which are specified for transmitters (and for calibration of stressed receiver inputs). The differences are largest (0.13~0.14 dB reduction in TDFOM) for 2.5GBASE-AU, 5GBASE-AU, and 10GBASE-AU. This may warrant a corrigendum project.	Y		R

Future meetings

- Next meeting is expected to be an electronic meeting occurring before the March 2025 IEEE 802 plenary week
- Meeting details will be announced on the Task Force reflector

Adjourn