

3 Maintenance Task Group

Between this session and the preceding session, the IEEE 802.1 Maintenance Task Group (TG) held electronic meetings whose minutes are incorporated to these session minutes by reference as follows:

- Minutes of the Maintenance TG meeting held 2025-12-09 10:02 - 10:44 ET
<https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;fec20611.26&S=>

See section 1 for attendance and affiliation information.

Call to order Jan 19, 2026 at 13:30 CST by Jessy Rouyer, IEEE 802.1 Working Group Vice Chair, acting locally for remote Mark Hantel, IEEE 802.1 Maintenance TG Chair (Chair), who presided and wrote the minutes, assisted by Karen Randall, IEEE 802.1 Liaison Secretary.

Agenda items and dispositions:

1. Meeting introduction and other administrative items. The IEEE SA slides on IEEE SA Patent Policy and IEEE SA Copyright and Participation Policies were provided beforehand as part of “MEETING INTRODUCTION”

<http://www.ieee802.org/1/files/public/templates/admin-TG-intro-0325-v01.pdf>.

The Chair showed this presentation advising that the following, provided beforehand, applies:

- Participant behavior shall comply with the outlined requirements;
- IEEE SA’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 IEEE is not aware. Additionally, neither 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.
- 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.

The Chair made the Call for Potentially Essential Patents thereby providing 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: there were no responses to this Call prior to the end of the meeting.

The Chair asked participants to record their attendance in IMAT and, if they are unable to do so, to promptly provide their affiliation to the minute taker.

2. Approval of agenda. The Chair presented the agenda in <https://1.ieee802.org/january-2026-interim-session-maintenance-tg-agenda/>.

Disposition: The agenda was reviewed, discussed, and agreed (informally, none dissenting) as presented.

3. Maintenance Project Status. Mick Seaman, P802.1Q-2022-Rev editor, gave a verbal update. The Chair gave a verbal update on P802.1ACea.

Disposition: For Information.

4. Liaison Activity. Karen Randall, IEEE 802.1 Liaison Secretary, reviewed liaison activity shown at <https://1.ieee802.org/liaisons/liaisonstable/>.
Disposition: For information.
5. Outstanding Maintenance item review. The Chair led discussion on maintenance items 368 and 374.
Disposition: The status of maintenance items 368 and 374 was updated.
6. P802.1X-2020/Cor1 D1.1 Comment Resolution. Scott Mansfield, P802.1X-2020/Cor1 editor, led the resolution of comments received on <https://www.ieee802.org/1/files/private/x-2020-cor-1-drafts/d1/802-1X-2020-Cor1-D1.1.pdf>.
Disposition: Comment 12 was resolved. Final resolution: <https://www.ieee802.org/1/files/private/x-2020-cor-1-drafts/d1/802.1X-2020-Cor1-d1-1-dis-v00.pdf>.
7. P802.1AC-2016-REV D1.0 Comment Resolution. Jessy Rouyer, P802.1AC-2016-Rev editor, led the resolution of comments received on <https://www.ieee802.org/1/files/private/ac-2016-rev-drafts/d1/802-1AC-2016-Rev-d1-0.pdf>.
Disposition: Comments 17, 19, 29, 27, 16, 28, 23, 18, and 21 were resolved.

16:00 CST recess

Call to order Jan 19, 2026 at 16:30 CST by Jessy Rouyer, IEEE 802.1 Working Group Vice Chair, acting locally for remote Mark Hantel, IEEE 802.1 Maintenance TG Chair (Chair), who presided and wrote the minutes, assisted by Karen Randall, IEEE 802.1 Liaison Secretary.

8. P802.1AC-2016-REV D1.0 Comment Resolution. Jessy Rouyer, P802.1AC-2016-Rev editor, led the resolution of comments received on <https://www.ieee802.org/1/files/private/ac-2016-rev-drafts/d1/802-1AC-2016-Rev-d1-0.pdf>.
Disposition: Comments 20, 15, 14, 24, 25, 4, 11, 10, 12 and 8 were resolved.

18:00 CST recess

Call to order Jan 20, 2026 at 8:00 CST by Jessy Rouyer, IEEE 802.1 Working Group Vice Chair, acting locally for remote Mark Hantel, IEEE 802.1 Maintenance TG Chair (Chair), who presided and wrote the minutes, assisted by Karen Randall, IEEE 802.1 Liaison Secretary.

9. P802.1AC-2016-REV D1.0 Comment Resolution. Jessy Rouyer, P802.1AC-2016-Rev editor, led discussion on comments received on <https://www.ieee802.org/1/files/private/ac-2016-rev-drafts/d1/802-1AC-2016-Rev-d1-0.pdf>.
Disposition: Comments 22, 6, 13, 7, 4, 2, 9, 22, 1, 26, 14, 5, and 20 were resolved. Final disposition: <https://www.ieee802.org/1/files/private/ac-2016-rev-drafts/d1/802-1AC-2016-Rev-d1-0-dis-v01.pdf>.
10. P802.1AB-2016-REV D2.0 Comment Resolution. Paul Bottorff, P802.1AB-2016-Rev editor, continued the resolution of comments received on <https://www.ieee802.org/1/files/private/ab-2016-rev-drafts/d2/802-1AB-2016-Rev-d2-0.pdf>.
Disposition: Comments 37, 28, 64, 65, 21, 22, 62, 63, 38, 10, 23, 24 and 39 were resolved.

10:05 CST recess

Call to order Jan 20, 2026 at 10:35 CST by Jessy Rouyer, IEEE 802.1 Working Group Vice Chair, acting locally for remote Mark Hantel, IEEE 802.1 Maintenance TG Chair (Chair), who presided and wrote the minutes.

11. P802.1AB-2016-REV D2.0 Comment Resolution. Paul Bottorff, P802.1AB-2016-Rev editor, continued the resolution of comments received on <https://www.ieee802.org/1/files/private/ab-2016-rev-drafts/d2/802-1AB-2016-Rev-d2-0.pdf>. **Disposition:** Comments 39, 11, 25, 40, 41, 29, 43, 42, 66, 44, 45, 20, 30, 79, 83, 13, 84, 82, and 31 were resolved.

12:30 CST recess

Call to order Jan 22, 2026 at 10:30 CST by Jessy Rouyer, IEEE 802.1 Working Group Vice Chair, acting locally for remote Mark Hantel, IEEE 802.1 Maintenance TG Chair (Chair), who presided and wrote the minutes, assisted by Karen Randall, IEEE 802.1 Liaison Secretary.

12. P802.1AB-2016-REV D2.0 Comment Resolution. Paul , P802.1AB-2016-Rev editor, continued the resolution of comments received on <https://www.ieee802.org/1/files/private/ab-2016-rev-drafts/d2/802-1AB-2016-Rev-d2-0.pdf>. **Disposition:** Comments 84, 15, 16, 17, 18, 47, 26, 46, 48, 50, 74, 85, 75, 51, 61, 27, 1, 76, 68, 2, 59, 77, 81, 52, 53, 54, 55, 56, 57, 58, 69, 78, 70, 4, 5, 6, 72, 73, 60, 14, 32, 7, 80, 33, and 34 were resolved. Final disposition: <https://www.ieee802.org/1/files/private/ab-2016-rev-drafts/d2/802-1AB-2016-Rev-d2-0-dis-v01.pdf>.

12:30 CST recess

Call to order Jan 22, 2026 at 13:30 CST by Jessy Rouyer, IEEE 802.1 Working Group Vice Chair, acting locally for remote Mark Hantel, IEEE 802.1 Maintenance TG Chair (Chair), who presided and wrote the minutes, assisted by Karen Randall, IEEE 802.1 Liaison Secretary.

13. P802.1CB-2017-Revision D0.3 Comment Resolution. Christophe Mangin, P802.1CB-2017-Rev editor, led the resolution of comments received on <https://www.ieee802.org/1/files/private/cb-2017-rev-drafts/d0/802-1CB-2017-Rev-d0-3.pdf>. **Disposition:** Comments 2, 6, 8, 9, 1, 3, 4, 5, 7, 10 and 11 were resolved. Final disposition: <https://www.ieee802.org/1/files/private/cb-2017-rev-drafts/d0/802-1CB-2017-Rev-d0-3-dis-v01.pdf>.
14. ITU-T G.8020 Liaison Review. Jessy Rouyer, IEEE 802.1 Vice Chair, presented and led discussion on draft “Proposal to publish IEEE Std 802.1Q as an ITU-T Recommendation through referencing” <https://www.ieee802.org/1/files/private/liaison-drafting/draft-contribution-ITU-T-SG15-G8020x-0126-v01.docx> and draft “Liaison on making IEEE Std 802.1Q available as an ITU-T Recommendation by referencing” <https://www.ieee802.org/1/files/private/liaison-drafting/draft-liaison-ITU-T-SG15-G8020x-0126-v01.docx>. **Disposition:** More discussion needed.

15:36 CST recess

Call to order Jan 22, 2026 at 16:00 CST by Jessy Rouyer, IEEE 802.1 Working Group Vice Chair, acting locally for remote Mark Hantel, IEEE 802.1 Maintenance TG Chair (Chair), who presided and wrote the minutes, assisted by Karen Randall, IEEE 802.1 Liaison Secretary.

15. 802.24 Package of smart grid standards update. The Chair led discussion on “IEEE 802 recommendations on IEEE 802 related Smart Grid standards” <https://mentor.ieee.org/802.24/dcn/26/24-26-0002-00-sgtq-package-of-802-smart-grid-standards.docx>. **Disposition:** More discussion needed.

16. November 2024 LMSC In-Person Collaboration Straw Poll. Glenn Parsons, IEEE 802.1 Chair, presented “LMSC In-Person Collaboration Discussion: November Straw Poll Results” <https://mentor.ieee.org/802-lmsc/dcn/26/lmsc-26-0016-01-LMSC-in-person-collaboration-statement.pptx>.

Disposition: For information.

17. Any other business. No other business was discussed by the Maintenance TG in this session.

17:25 CST adjournment.

4 Security Task Group

Between this session and the preceding session, the IEEE 802.1 Security Task Group (Security TG) held electronic meetings whose minutes are incorporated to these session minutes by reference as follows:

- Minutes of the Security TG meeting held 2025-12-12 11:00 - 12:15 ET <https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;99a446ae.25&S=>
- Minutes of the Security TG meeting held 2025-12-16 11:00 - 12:15 ET <https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;a3fe091e.25&S=>

See section 1 for attendance and affiliation information.

Call to order Jan 21, 2026 at 10:03 CST by Mick Seaman, IEEE 802.1 Security TG Chair, who presided and wrote the minutes assisted by Karen Randall, Security TG Vice-Chair.

Agenda items and dispositions:

1. Meeting introduction. The IEEE SA slides on IEEE Patent Policy and IEEE SA Copyright and Participation Policies were provided beforehand as part of MEETING INTRODUCTION” <https://www.ieee802.org/1/files/public/templates/admin-TG-intro-0325-v01.pdf>.

The Security TG Chair showed this presentation advising that the following, provided beforehand, applies:

- 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 IEEE is not aware. Additionally, neither 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.
- IEEE SAs 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.

The Security TG Chair made the Calls for Potentially Essential Patents thereby providing 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: there were no responses to these Calls prior to the end of the session.

The Security TG Chair asked participants to record their attendance in IMAT and, if they are unable to do so, to promptly provide their affiliation to the minute taker.

2. Approval of agenda. The Security TG Chair presented the agenda as previously made available in <https://1.ieee802.org/january-2026-interim-session-security-tg-agenda/>
Disposition: the agenda was reviewed, discussed, and updated as recorded by these minutes.
3. P802.1AReg Secure Device Identity - Amendment: Support for the Module-Lattice-Based Digital Signature Algorithm. P802.1AReg/D1.0 Working Group Ballot resolution. Paul Bottorff, P802.1AReg editor, presented the initial WG ballot results (16 Approve, 3 Disapprove, 19 Abstentions, 52 Comments) in <https://www.ieee802.org/1/files/private/eg-drafts/d1/802-1AReg-D1-0-pdis-v01.pdf>. The ballot had passed, meeting the required 50% response rate (70%, 38 of the 54 eligible voters responded) and the 75% approval rate (83%, 16 of the 19 voting Approve or Disapprove has Approved). The P802.1AReg editor then led the resolution of comments received on <https://www.ieee802.org/1/files/private/eg-drafts/d1/802-1AReg-d1-0.pdf>, showing the comments in the comment resolution tool and updating the proposed dispositions as the meeting progressed.

Discussion:

[The following points are additional to those captured in the proposed or final disposition of comments.]

- Comment resolution started.
- 12:34 – 13:33 CST recess
- Comment resolution continued.
- Items can only be added to the Bibliography if they are referenced in the normative or informative text. Existing Bibliography entries need to be checked.

Disposition: Discussion to be continued in this session. Interim proposed disposition:

<https://www.ieee802.org/1/files/private/eg-drafts/d1/802-1AReg-D1-0-pdis-v01.pdf>. The following existing items in the Bibliography are not referenced in the text and need to be removed as part of editorial corrections to existing functionality or references added where required to existing text, in either P802.1AReg or P802.1AR-2018-Rev: IEEE Std 1363-2000, IETF RFC 5246. The reference in the main text to SP 800-57 should have '[B12]' (possibly renumbered) added. The existing reference [B14] for 'BRSKI' needs to be updated to IETF RFC 8995 (May 2021).

4. P802.1AEef MAC Security - Amendment: Ascon Cipher Suite P802.1AEef/D0.1 Task Group Ballot Resolution. Mick Seaman, P802.1AEef editor, presented the initial TG ballot results (5 Approve, 1 Disapprove, 7 Abstentions, with comments from 5 voters). Those results and the collected comments with some initial dispositions were available at: <https://www.ieee802.org/1/files/private/ef-drafts/d0/802-1AEef-d0-1-pdis-v01.pdf>. The P802.1AEef editor then led the resolution of comments received on <https://www.ieee802.org/1/files/private/ef-drafts/d0/802-1AEef-d0-1.pdf>, updating the proposed dispositions as the meeting progressed.

Discussion:

[The following points are additional to those captured in the proposed or final disposition of comments.]

- A write up of Ascon performance considerations and interoperability challenges across the range of current cost targets and speeds (a wider range than can be addressed by the 'Default Cipher Suite', which was the only fully conformant Cipher Suite in the initial 2006 edition of IEEE Std 802.1AE, would be useful, but this is not material for inclusion in the standard.
- The proposed Ascon Cipher Suite test vectors (comment #39) posted at <https://www.ieee802.org/1/files/public/docs2025/ef-seaman-ascon-test-vectors-1225-00.pdf> have been independently generated, using the test cases from the balloted draft, with results posted (both plain text and xml formats available):

- <https://www.ieee802.org/1/files/public/docs2026/ef-mcintosh-ascon-test-vectors-0126-00.txt>
- <https://www.ieee802.org/1/files/public/docs2026/ef-mcintosh-ascon-test-vectors-0126-00.xml>

Both sets of test vectors are in agreement. The generation of both raised the need to be clear about the endianness of the Key (SAK) as noted in comment.

Disposition: Comment resolution to be continued.

15:17 – 16:02 CST recess

Mick Seaman, IEEE 802.1 Security TG Chair, reminded the meeting that the previously presented and available IEEE SA Patent, Copyright, and Participant Behavior policies applied and repeated the Call for Patents.

5. Any Other Business: Ethernet Link Security for Data Center Interconnect.

Mick Seaman, Security TG Chair, introduced this A.O.B. item. This followed a request from the 802.3 leadership for the 802.1 Security TG review of a proposal for new work for securing P802.3dj. The subject had been raised under A.O.B. in the Nov 2025 plenary session and additional information circulated in this Jan 2026 interim session to 802.1 and potential 802.3 participants in the discussion:

<https://www.ieee802.org/1/private/email2/msg38801.html>

Haojie Wang presented “Discussion of Ethernet Link Security for Inter-Datacenter Interconnection” <https://www.ieee802.org/1/files/public/docs2026/new-wang-inter-datacenter-sec-0126-v02.pdf>.

Discussion:

- Concern that the proposal may be duplication of work already carried out in other SDOs.
- Slide 3 item 1 notes the expansion of 64-byte frames when protected by MACsec. However, if 64-byte frames are common they can be packed into a single frame using Mac Privacy Protection (IEEE Std 802.1AEdk-2023) as well as MACsec resulting in a bandwidth saving relative to unprotected frames (bandwidth available 130% of the unprotected case).
- Slide 3 item 3 is incorrect in its description of MACsec relative to PFC. P802.1Qdt is addressing measurement of the headroom required for lossless PFC enable operation, while it is necessary to be clear about the placement of MACsec in the measurement path this is not a significant complication. PFC protection is desirable to guard against some potential attacks.
- Slide 6 shows authentication frames running over the protected link. This introduces the possibility of misalignment between the two peers in their transition to using data keys or rolling over from one data key to another, requiring a recovery mechanism if the control plane is no longer (perceived to be operational). The need for such recovery would add further vulnerability to attack.
- Slide 9 is misleading in its depiction of EAP/MKA operation as continued operation is required for reauthentication and subsequent key rollover for non-stop operation mission critical link as well as for monitoring. Dealing with control loss by dropping the link and restarting is not acceptable.
- Slide 8. All the mechanisms proposed are at a mature/complete stage in the ITU and not new.
- Slide 11. It is not the role of the 802.1 Security TG to tell 802.3 what to do in the MAC and PHY. The Security TG has had requests to use a single instance of MACsec over concatenated links. In a simple scenario, a simple low-level bridge (a TPMR in IEEE Std 802.1Q) can accommodate differences between media types along the link. The MACsec coverage can be extended to avoid exposure in

shared/accessible equipment. High link speeds can be supported using either the parallelism naturally provided by AES GCM or by merging separately protected streams. MACsec and MKA are being used to protect Ethernet over MPLS.

- 802.1 is sensitive to being told that standards need to change. Encrypting data is the easy part, the control part (authentication, authorization, key agreement, reauthentication, monitoring) is more challenging.
- The type of approach advocated has been in use since 2017 in the market, standardized, and has been through the FIPS process. Optimizes for the bulk Layer 1 payload, embraced by vendors, works with a Tag (ICV) length of 128 bits. Scales well with GCM slicing. Clear text channel is provided for control/key agreement, although the key agreement protocol is not specified by the ITU.
- GCM AES protection at the bulk payload level introduces delay equivalent to 1.2 km of fiber, acceptable in the market for data center interconnect.
- The proposal is specifically for use from one data center to another. Within Data Center MACsec is not needed, assuming the data center is internally secure. This may not be the case for multi-tenant data centers, and even within a single operator/user data center there may be internal threats best protected against.
- This is already mature technology. Nothing to prevent the ITU Recommendation being used in the context of P802.3dj. Prefer not to have to add to the P802.3dj standard.
- Nothing to prevent use of the existing standardized technology in the context of the ER1 PMD. Can build using 802.3dj plus ITU Recommendations. But there are other 802.3 PMDs that do not use the same frame structure. Current technology is not really a sublayer that can be inserted into the 802.3 stack. Concern about introducing something that is too specific and of limited applicability. Not advocating fitting the same approach across the range of PMDs.

Disposition: Meeting objectives of bringing experts together to help with clarification has been met. Any further 802.1 Security Task Group activity on this subject would be at the request of 802.3.

17:12 CST recess

Call to order Jan 22, 2026 at 8:00 CST by Mick Seaman, IEEE 802.1 Security TG Chair, who presided and wrote the minutes assisted by Karen Randall, Security TG Vice-Chair, and who reminded the meeting that the previously presented and available IEEE SA Patent, Copyright, and Participant Behavior policies applied, repeated the Call for Patents, and reviewed the agenda for the morning's meeting.

6. MACsec over/for MPLS. Hooman Bidgoli presented "MACsec Enhanced"
<https://www.ieee802.org/1/files/public/docs2025/new-bidgoli-macsec-enhanced-1125-v01.pdf>.

Discussion:

- Uses MACsec engine to encrypt IP and MPLS flow.
- Perhaps not want to modify existing standard, would prefer to create a new doc, need name other than !MACsec enhanced! to avoid deprecating existing MACsec in existing MACsec implementations
- Must not lose sight of the fact that MACsec and MKA are used today, in a standard conformant way to protect Ethernet over MPLS. However not all customers have adopted a virtual LAN approach for their MPLS structure. Also may need to protect part of the path.
- Thinking about coupling to MKA: identify endpoints and scope of protection

- Technology is potentially, protecting any type of transport, can go deeper in stack to encrypt specific services.
- Looking for the common basis going forward: a set of fields in clear (unprotected, can be modified en route) followed by Tag or field with crypto parameters (inc. counter nonce with replay protection capability) and then everything following either integrity or confidentiality protected. Is there a common structure for the generic proposal.
- Limited number of keys and a limited amount of associated data was important for MACsec initially and some application spaces are very cost sensitive. Do not want to make an apparent shift of focus and lose that.
- Existing technology can support thousands of VLANs encrypted with MACsec, each with own SAK.
- Are there use cases that require two different encryptions—one for header and one for inner payload.
- Flexibility possible, with some authenticated some encrypted.
- Approach the idea of variable parts of the protected payload confidentiality protected with care. This has a bad historical record, with the use of the initial “confidentiality offset” being forcefully promoted, then the offset values not correctly calculated by the proponents, and as a consequence “confidentiality offset” being deliberately omitted from later standardized Cipher Suites. The idea is recurrent and repeatedly reinvented, but it is hard to get everyone on an extended path to agree is exactly what is to be protected (not open for modification) and what is to be confidential. In general a better approach is to follow the approach for EDEs (IEEE Std 802.1AEcg-2017) with forwarding (bridging) components arranged to add an unprotected VLAN Tag prior to the SecTag while the original VLAN Tag remains in the protected scope (possibly confidential). That allowed the outer VLAN Tag to be modified enroute (priority mapping, red marking) while the original VLAN Tag is delivered guaranteed unmodified. The outer VLAN Tag can multiplex services for improved privacy.
- Authentication of an initial part of the packet for part of the path (between forwarding system authorized to modify that initial part) will still require a way of binding that part to the remainder of the frame.
- Inevitable to have multiple levels of protection in the path.
- A difficult vulnerability is where an attacker uses fingerprinting technology to identify frames for a single customer amongst many supported by a provider with a view to disrupting just that customer. Using MAC Privacy Protection is desirable, but doing that at low cost may require bundling services over some segment of the “end to end” protected path, thus requiring a level of protection for communication over that segment.
- “End to end” vs “Hop by hop” a frequent mantra, but the “end to end” discussed is very rarely application instance to application instance (use TLS for this) but simply refers to the ends of the responsibility of some organization. There may be little real difference between “end to end” in that sense and “hop by hop” where the “hop” is supported by multiple physical links.

Disposition: Discussion to be continued. An updated presentation to be made available.

7. P802.1AReg Secure Device Identity - Amendment: Support for the Module-Lattice-Based Digital Signature Algorithm. P802.1AReg/D1.0 Working Group Ballot resolution (continued). Paul Bottorff, P802.1AReg editor, led a continuation of the resolution of comments received on <https://www.ieee802.org/1/files/private/eq-drafts/d1/802-1AReg-d1-0.pdf>, with a focus on comments #32 and #31 and related issues (copyright, included OIDs from the NIST registry, use of the those OIDs in IETF RFC 9981).

Disposition: For further discussion.

8. Any Other Business. No other business was discussed by the Security TG in this session.
9. Future meeting. Agreed (informally, none dissenting) to hold electronic meetings at 13.00 ET on Wednesdays Feb 4 and 11, 2026, to complete the resolution of comments received on <https://www.ieee802.org/1/files/private/ef-drafts/d0/802-1AEef-d0-1.pdf> and <https://www.ieee802.org/1/files/private/eg-drafts/d1/802-1AReg-d1-0.pdf>, with the possibility of further electronic meetings subject to the usual notice requirements.
A Working Group recirculation ballot of P802.1AReg is anticipated, following resolution of comments, with the intention of timing that ballot to close prior to the Mar 2026 IEEE 802 plenary session.
The present intent is not to conduct a further Task Group ballot of P802.1AEef, subject to resolution of comments on the initial ballot, but to seek 802.1 permission to proceed to Working Group ballot in the closing Mar 2026 IEEE 802 plenary meeting.
The Security TG will meet during the Mar 2026 IEEE 802 plenary session to be held in Vancouver, BC, Canada.

9:45 CST adjournment

5 Time-Sensitive Networking Task Group

Between this session and the preceding session, the IEEE 802.1 Time-Sensitive Networking (TSN) Task Group (TG) did not hold electronic meetings.

Between this session and the preceding session, the IEEE P802.1DP/SAE AS 6675 joint project did not hold electronic meetings.

See section 1 for attendance and affiliation information.

Minutes of the IEC/IEEE 60802 Joint Project meetings are in section 5.1.

Call to order Jan 19, 2026 at 8:00 CST by János Farkas, IEEE 802.1 TSN TG Chair (Chair), who presided. Johannes Specht, IEEE 802.1 TSN TG Secretary (Secretary), wrote the minutes.

Agenda items and dispositions:

1. Meeting introduction. The IEEE SA slides on IEEE SA Patent Policy and, IEEE SA Copyright Policy, and Participation Behavior (“Policies”) were provided beforehand as part of “MEETING INTRODUCTION” <https://www.ieee802.org/1/files/public/templates/admin-TG-intro-0325-v01.pdf>.

The Chair showed this presentation advising that the following, provided beforehand, applies:

- Participant behavior shall comply with the outlined requirements;
- IEEE SA’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 IEEE is not aware. Additionally, neither 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.
- 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.

The Chair made the Calls for Potentially Essential Patents at the beginning of each TG meeting during this session thereby providing 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: there were no responses to these Calls prior to the end of the session.

The Chair asked participants to record their attendance in IMAT and, if they are unable to do so, to promptly provide their affiliation to the Secretary.

2. Session Host introduction.

Disposition: For information.

3. Lihao Chen presented “IEEE 802.1 May 2026 Interim Offer to Host by Huawei” <https://www.ieee802.org/1/files/public/docs2026/admin-chen-May2026-interim-proposal-0126-v03.pdf>.

Disposition: For information.

4. Approval of agenda. The Chair presented the agenda <https://1.ieee802.org/2026-01-interim-tsn-agenda/>.

Disposition: The agenda was reviewed, discussed and agreed (informally, none dissenting) as presented.

5. The Chair presented “IEEE 802.1DG Standard for Automotive In-Vehicle Ethernet Networks”

<https://www.linkedin.com/feed/update/urn:li:share:7402663888816771072/?actorCompanyId=68683976> and “Publication: IEEE 802.1DG™-2025 Time-Sensitive Networking Profile for Automotive In-Vehicle Ethernet Communications” <https://1.ieee802.org/publication-ieee-802-1dg-2025/>.

Disposition: For information.

6. The Chair presented “IEEE 802.1DP SAE AS6675 Time-Sensitive Networking Standard for Aerospace” https://www.linkedin.com/posts/ieee802_8021dp-2025-ieee-sae-standard-for-local-activity-7403095880993603584-oQaY/ and “Publication – IEEE 802.1DP™-2025 / SAE AS6675 Time-Sensitive Networking Profile for Aerospace Onboard Ethernet Communications” <https://1.ieee802.org/publication-ieee-802-1dp-2025/>.

Disposition: For information.

7. Dieter Proell presented “Status Update IEC/IEEE 60802: Footnotes for YANG and PCS in discussion at IEC Technical Office (TO) and IEC Standards Management Board (SMB).” <https://www.ieee802.org/1/files/public/docs2026/60802-Proell-Status-IEC-60802-0125-v04.pdf>.

Disposition: For information.

8. Silvana Rodrigues, P802.1ASds editor, presented “802.1ASds-D2.0 Editor’s Report” <https://www.ieee802.org/1/files/public/docs2026/ds-Rodrigues-d2-0-SA-ballot-report-0126-v00.pdf> then led the resolution of comments received on <https://www.ieee802.org/1/files/private/asds-drafts/d2/802-1ASds-d2-0.pdf>.

Disposition: Final disposition: <https://www.ieee802.org/1/files/private/asds-drafts/d2/802-1ASds-d2-0-dis-v00.pdf>.

9. Lihao Chen presented “Congestion Management deepdive & Qdw considerations” <https://www.ieee802.org/1/files/public/docs2026/dw-chen-cc-deepdive-sfc-considerations-0126-v01.pdf>.

Disposition: Presentation discussed. Further discussion needed.

10:00 – 10:30 CST recess

10. Paul Bottorff presented “CSIG Telemetry At Layer 2”
<https://www.ieee802.org/1/files/public/docs2026/new-bottorff-csig-0126-v11.pdf>.
Disposition: Presentation discussed. Further discussion needed. Continuation per agenda item 18.
11. Mick Seaman presented “Starvation-free Priority Precedence”
<https://www.ieee802.org/1/files/public/docs2026/new-seaman-priority-precedence-ppt-0126-v1.pptx>.
Disposition: Presentation discussed. Further discussion needed.
12. The Chair led the drafting of <https://www.ieee802.org/1/files/public/docs2026/as-2025-rev-draft-PAR-0126-v00.pdf>.
Disposition: Draft PAR modification up for LMSC expedited review at the March 2026 plenary session.

12:30 CST recess

Call to order Jan 20, 2026 at 13:30 CST by János Farkas, IEEE 802.1 TSN TG Chair (Chair), who presided. Johannes Specht, IEEE 802.1 TSN TG Secretary (Secretary), wrote the minutes.

13. The Chair announced that this meeting remains subject to the Policies mentioned in agenda item 1 and asked participants to record their attendance in IMAT and, if they are unable to do so, to promptly provide their affiliation to the Secretary.
14. The Chair presented incoming liaison response “Liaison Response on IEEE P1588h draft sharing” <https://www.ieee802.org/1/files/public/docs2026/liaison-IEEE1588-P1588h-draft-sharing.pdf> (attachment: https://www.ieee802.org/1/files/private/liaisons/P1588h-v1.1-Announce-Disable_20251208.pdf).
Disposition: For information.
15. The Chair made a verbal update on IEC/IEEE 60802 FDIS status.
Disposition: For information.
16. The Chair led a discussion on P802.1Qdw and Lihao Chen presented “Congestion Management deepdive & Qdw considerations”
<https://www.ieee802.org/1/files/public/docs2026/dw-chen-cc-deepdive-sfc-considerations-0126-v02.pdf>.
Disposition: Presentation discussed. Further discussion needed.
17. Lily Lyu presented “Load Balancing in AI DCN” <https://mentor.ieee.org/802.1/dcn/26/1-26-0002-01-ICne-load-balancing-in-ai-dcn.pdf> during and as part of the discussion per item 16.
Disposition: Presentation discussed. Further discussion needed.
18. Paul Bottorff continued presenting “CSIG Telemetry At Layer 2”
<https://www.ieee802.org/1/files/public/docs2026/new-bottorff-csig-0126-v11.pdf>.
Disposition: Presentation discussed. Further discussion needed.

15:30 CST adjournment

5.1 IEC/IEEE 60802 Joint Project

Between this session and the preceding session, the IEC/IEEE 60802 Joint Project held electronic meetings whose minutes are incorporated to these session minutes by reference as follows:

- Minutes of the IEC/IEEE 60802 Joint Project meeting held 2025-12-01 10:00 - 12:00 ET
<https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;6c3fb370.ex>
- Minutes of the IEC/IEEE 60802 Joint Project meeting held 2026-01-12 10:00 - 12:00 ET
<https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;b4756736.ex>

The IEC/IEEE 60802 Joint Project did not meet at this session.

6 Nendica

Between this session and the preceding session, Nendica held electronic meetings whose minutes are incorporated to these session minutes by reference as follows:

- Minutes of the Nendica meeting held 2025-12-11 09:00-11:00 ET
<https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;7cc17693.25>
- Minutes of the Nendica meeting held 2026-01-08 09:00-11:00 ET
<https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;f745715d.26>

See section 1 for attendance and affiliation information.

Call to order Jan 21, 2026 at 8:05 CST by Roger Marks, IEEE 802 Nendica Chair (Chair) who presided and wrote the minutes.

Agenda items and dispositions:

1. Meeting introduction and other administrative items. The IEEE SA slides on IEEE SA Patent Policy, IEEE SA Copyright Policy, and Participant Behavior (“Policies”) were provided beforehand as part of “MEETING INTRODUCTION”

<https://www.ieee802.org/1/files/public/templates/admin-prePAR-intro-0325-v01.pdf>.

The Chair showed this presentation advising that the following, provided beforehand, applies:

- Participant behavior shall comply with the outlined requirements;
- 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.

The Chair asked participants to record their attendance in IMAT and, if they are unable to do so, to promptly provide their affiliation to the minute taker.

2. Approval of agenda. The Mentor server document list was noted.

Disposition: The agenda was reviewed and agreed (informally, none dissenting) as <https://1.ieee802.org/802-nendica-agenda-2026-01-21/>.

3. Minutes. The Chair reviewed the draft Minutes of the Nendica meeting held Jan 8, 2026 <https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;f745715d.26>.

Disposition: It was agreed (informally, none dissenting) to approve the minutes.

The Nendica “MAC Frame Size Topics” meeting

https://www.ieee802.org/3/ad_hoc/ngrates/public/26_01/, held jointly with the IEEE 802.3 New Ethernet Applications (NEA) Ad Hoc on Jan 19, 2026, was discussed. The unapproved minutes of that meeting were reviewed

https://www.ieee802.org/3/ad_hoc/ngrates/public/26_01/minutes_nea_2601_unapproved.pdf.

Disposition: Several typographical errors in the minutes were noted.

[Secretary’s note: Consolidated attendance list includes 86 unique participants on Jan 19, 2026 and 88 unique participants over both Jan 19, 2026 and Jan 21, 2026.]

4. Nendica Organization. No activity.

5. AICN Study Item.
Lily Lyu presented “Load balancing in AI DCN” Rev. 1
https://mentor.ieee.org/802.1/documents?is_group=ICne&is_year=2026&is_dcn=0002.
Disposition: Presentation discussed. Further contributions and discussions welcome.
Jieyu Li presented “Summary and Follow-up Discussion on Packet Spraying and Reordering” Rev. 1
https://mentor.ieee.org/802.1/documents?is_group=ICne&is_year=2026&is_dcn=0003.
Disposition: Presentation discussed. Further contributions and discussions welcome.
6. Vetting and New Topics. No activity.
7. Next meeting. Nendica intends to meet next by electronic teleconference on February 5, 2026 09:00-11:00 ET.
8. Other Business. Two liaison statements from ITU-T SG 15 were reviewed:
 - LS 53 from ITU-T SG15 on Approval of Technical Report on International Optical Networks towards 2030 and Beyond <https://mentor.ieee.org/802-ec/dcn/25/ec-25-0264-00-INTL.zip>
 - LS 54 from ITU-T SG15 on Technical Report of Use Cases and Requirements Beyond 10Gbps <https://mentor.ieee.org/802-ec/dcn/25/ec-25-0265-00-INTL.docx>**Disposition:** Participants are encouraged to bring proposals toward responses, particularly noting LS 53. Also, participants are encouraged to consider input toward a workshop, joint between IEEE 802 and ITU-T SG 15, in Montreal on Jul 11, 2026.

9:27 CST adjournment

7 YANGsters

Between this session and the preceding session, YANGsters held electronic meetings whose minutes are incorporated to these session minutes by reference as follows:

- Minutes of the YANGsters meeting held 2025-10-07 10:00 –10:24 ET
<https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;7815736e.26&S=>
- Minutes of the YANGsters meeting held 2025-12-02 10:00 –10:28 ET
<https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;fd9501.26&S=>
- Minutes of the YANGsters meeting held 2025-12-16 10:00 –11:00 ET
<https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;7ce5eab2.26&S=>
- Minutes of the YANGsters meeting held 2026-01-13 10:02 –10:47 ET
<https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;64e8b9a.26&S=>

See section 1 for attendance and affiliation information.

Call to order Jan 20, 2026 at 16:01 CST by Scott Mansfield, YANGsters Chair, who presided. Stephan Kehrer, YANGsters Secretary, wrote the minutes.

Agenda items and dispositions:

1. Meeting introduction. The IEEE SA slides on IEEE SA Patent Policy, IEEE SA Copyright Policy, and Participant Behavior (“Policies”) were provided beforehand as part of “MEETING INTRODUCTION” <https://www.ieee802.org/1/files/public/templates/admin-prePAR-intro-0325-v01.pdf>.

The YANGsters Chair showed this presentation advising that the following, provided beforehand, applies:

- Participant behavior shall comply with the outlined requirements;
- 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.

The YANGsters Chair asked participants to record their attendance in IMAT and, if they are unable to do so, to promptly provide their affiliation to the minute taker.

2. Approval of agenda. The YANGsters Chair presented the agenda in <https://1.ieee802.org/january-2025-802-1-and-802-3-interim-session-yangsters-and-yang-sc-agenda-austin/>.

Disposition: The agenda was reviewed, discussed, and agreed (informally, none dissenting) as presented.

3. Introduction to YANGsters. The YANGsters Chair introduced the topic by presenting the following:

- <https://1.ieee802.org/yangsters/>, and
- <https://1.ieee802.org/yangsters/yangsters-guidelines/yangsters-faq/>.

Disposition: For information.

4. YANG 802.1 Project Status. The YANGsters Chair presented the topic by showing <https://1.ieee802.org/yang-sanity/>.

- The table at “YANG Sanity” <https://1.ieee802.org/yang-sanity/> provides an overview of all currently open IEEE 802.1 projects that contain or are expected to contain YANG.
- It was discussed whether the work on MIBs ongoing in IEEE 802.1 should also be tracked the same way.
- Currently MIBs are only provided by IEEE 802 as attachment to the published standards and through the IEEE 802.1 website at <https://1.ieee802.org/mib-modules/>.
- Providing MIB modules the same way as YANG modules was discussed. Further discussion on the topic is needed.
- MIB repositories are available on the internet, for example at <https://mibs.observium.org/>.

Disposition: For information.

5. Instance Examples. The YANGsters Chair provided an overview of the topic by showing “macsec and lag” [yangsters-smansfield-macsec-lag-instances-0126-v01.pdf](#) and “YANG models for Systems with Link Aggregation” <https://www.ieee802.org/1/files/public/docs2025/yangsters-haddock-systems-with-LAG-1025-v2.pdf>, and led the discussion.

- The YANG tree that provides an overview of how LAG and MACSec integrate on the 802.1 bridge model, if used on the same port, was shown.
- The question of how this integrates into the IEEE 802.11 architecture was raised.
- It was suggested to start a discussion with the 802.11 WG on the topic.

Disposition: More discussion needed.

6. Open Maintenance Item. The YANGsters Chair provided an overview of maintenance item 037 and led the discussion.

- Detailed information on maintenance item 037 can be found at <https://www.802-1.org/items/481>.
- The maintenance item points out that the representation of scaled-ns, unscaled-ns, and float64, as provided in `ieee802-dot1as-gtp.yang`, can be ambiguous and hard to handle.
- A suggestion on how to change the representation of those types has been provided in “YANG Type Pattern Proposals for P802.1ASdn/D2.2” <https://www.ieee802.org/1/files/public/docs2024/dn-specht-type-pattern-proposals-0724-v01.pdf>.

- The topic has been discussed in previous YANGsters meetings without reaching consensus on how to move forward.
- People interested in the topic are encouraged to contribute to the discussion.

Disposition: More discussion needed.

7. Next meeting. YANGsters intend to meet next electronically on Feb 10, 2026.
8. Any Other Business. No other business was discussed by YANGsters in this session.

17:05 CST adjournment

8 Next Session

Mar 9-12, 2026 mixed mode plenary session in Vancouver, BC, Canada.