







## 2 802.1 Officers and Leadership

- Chair: Glenn Parsons
- Vice-Chair and Recording Secretary: Jessy Rouyer
- Executive Secretary: Stephan Kehrer
- Liaison Secretary: Karen Randall
- Maintenance TG Chair: Paul Congdon
- Security TG Chair: Mick Seaman
  - Security TG Vice-Chair: Karen Randall
- TSN TG Chair: János Farkas
  - TSN TG Vice-Chair: Craig Gunther
  - TSN TG Secretary: Johannes Specht
  - IEC/IEEE 60802 Joint Project Chair: Ludwig Winkel
  - IEC/IEEE 60802 Joint Project Secretary: Josef Dorr
  - IEEE P802.1DP/SAE AS6675 joint project co-Chairs: Abdul Jabbar & János Farkas
  - IEEE P802.1DP/SAE AS6675 joint project Secretary: Marina Gutiérrez
- Nendica Chair: Roger Marks
- YANGsters Chair: Scott Mansfield
  - YANGsters Vice-Chair and Secretary: Stephan Kehrer
- Maintenance of Email exploder: Mark Hantel and Hal Keen
- Maintenance of website: Mark Hantel, Roger Marks, John Messenger

## 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 2023-04-11 11:00 – 13:03 ET <https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;5045a784.23>
- Minutes of the Maintenance TG meeting held 2023-04-25 11:00 – 12:58 ET <https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;8aa9957e.23>
- Minutes of the Maintenance TG meeting held 2023-05-02 11:00 – 13:07 ET <https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;b7e4915.23>
- Minutes of the Maintenance TG meeting held 2023-05-09 12:00 – 14:03 ET <https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;882c897c.23>

See section 1 for attendance and affiliation information.

**Call to order** May 16, 2023 at 8:00 EEST by Paul Congdon, IEEE 802.1 Maintenance TG Chair who presided and wrote the minutes.

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-0323-v01.pdf>.

The Maintenance 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 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 Maintenance TG 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 Maintenance 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 Maintenance TG chair presented the agenda in <https://1.ieee802.org/may-2023-interim-session-maintenance-tg-agenda/>.  
**Disposition:** The agenda was reviewed, discussed, and agreed (informally, none dissenting) as presented.
3. Maintenance TG Project Status. The Maintenance TG chair presented "Maintenance TG Project Status" in <https://www.ieee802.org/1/files/public/docs2023/maint-congdon-hy-0523-1-v01.pdf>.  
**Disposition:** For information. The MEC review has occurred for P802.1ASdr, but the SA ballot pool needs to be created.
4. P802.1CS-2020/Cor1 updated disposition. Norman Finn, P802.1CS-2020/Cor1 editor, discussed proposed modifications to <https://www.ieee802.org/1/files/private/cs-2020-cor-1-drafts/d1/802-1CS-2020-Cor1-d1-2-dis.pdf>.  
**Disposition:** It was agreed (informally, none dissenting) to update the disposition and add a rogue comment to make the modifications necessary to address the NesCom comment on the use of "Mbyte" in the PAR and draft standard. Updated final disposition: <https://www.ieee802.org/1/files/private/cs-2020-cor-1-drafts/d1/802-1CS-2020-Cor1-d1-2-dis-v02.pdf>.
5. Maintenance requests: The Maintenance TG Chair led the discussion of existing maintenance requests:
  - 0340: Misleading details on ATS MaxResidenceTime - Max Turner
  - 0342: StreamID, StreamID Group, StreamID TLV - Max Turner - Contribution
  - 0343: Handling of stream\_handle in Active Stream - Max Turner
  - 0344: Handling of R-TAG in IP Stream Identification - Max Turner - Contribution - Norman Finn
  - 0352: "when" statements in augments should use derived-from-or-self
  - 0353: update to yang 1.1 so "when" statements in augments can use derived-from-or-self
  - 0356: StreamID correlation of req-resp insufficient
  - 0357: StreamID consistency between Data-Transport and Configuration

**Disposition:** Details for discussion on all items are logged in the IEEE 802.1 maintenance database at <https://www.802-1.org/home> where items progressed at the meeting can be reviewed by selecting 'Meetings'.

The maintenance database was cleaned up and the status of several requests was updated to reflect current status. The post-meeting slides were updated to reflect the status of "Brief Vehicle Status Update" in

<https://www.ieee802.org/1/files/public/docs2023/maint-congdon-hy-0523-1-v02.pdf>.

11:02 EEST recess

**Call to order** May 16, 2023 at 16:00 EEST by Paul Congdon, IEEE 802.1 Maintenance TG Chair who presided and wrote the minutes.

6. The Maintenance TG 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 minute taker.
7. P802-REVC/D1.0 Comment Resolution. James Gilb, P802-REVC editor, led the resolution of comments received on <https://www.ieee802.org/1/files/private/802-REVC-drafts/d1/P802-REVC-d1-0.pdf> using <https://mentor.ieee.org/802.1/dcn/23/1-23-0013-00-Mntg-p802-revc-may-comment-resolution.odp>.

**Disposition:** Comments discussed are listed in 'P802 REVC May comment resolution' <https://mentor.ieee.org/802.1/dcn/23/1-23-0013-01-Mntg-p802-revc-may-comment-resolution.odp>. Partial disposition: <https://mentor.ieee.org/802.1/dcn/23/1-23-0008-10-Mntg-802-revc-comments-wg-lb1-pdis.ods>.

17:54 EEST recess

**Call to order** May 17, 2023 at 17:00 EEST by Paul Congdon, IEEE 802.1 Maintenance TG Chair who presided and wrote the minutes.

8. The Maintenance TG 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 minute taker.
9. P802-REVC/D1.0 Comment Resolution. James Gilb, P802-REVC editor, led the resolution of comments received on <https://www.ieee802.org/1/files/private/802-REVC-drafts/d1/P802-REVC-d1-0.pdf> using 'P802 REVC May comment resolution' <https://mentor.ieee.org/802.1/dcn/23/1-23-0013-02-Mntg-p802-revc-may-comment-resolution.odp>.

**Disposition:** Comments discussed are listed in 'P802 REVC May comment resolution' <https://mentor.ieee.org/802.1/dcn/23/1-23-0013-03-Mntg-p802-revc-may-comment-resolution.odp>. Partial disposition: <https://mentor.ieee.org/802.1/dcn/23/1-23-0008-11-Mntg-802-revc-comments-wg-lb1-pdis.ods>.

18:05 EEST recess

**Call to order** May 18, 2023 at 18:00 EEST by Paul Congdon, IEEE 802.1 Maintenance TG Chair who presided and wrote the minutes.

10. The Maintenance TG 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 minute taker.

11. P802REVC/D1.0 Comment Resolution. James Gilb, P802-REVC editor, led the resolution of comments received on <https://www.ieee802.org/1/files/private/802-REVC-drafts/d1/P802-REVC-d1-0.pdf> using ‘P802 REVC May comment resolution’ <https://mentor.ieee.org/802.1/dcn/23/1-23-0013-03-Mntg-p802-revc-may-comment-resolution.odp>. A contribution “Terminology for EPD and LPD encoding in IEEE Std 802” <https://mentor.ieee.org/802.1/dcn/23/1-23-0014-00> was included in the discussion.  
**Disposition:** Partial disposition <https://mentor.ieee.org/802.1/dcn/23/1-23-0008-12-Mntg-802-revc-comments-wg-lb1-pdis.ods>.
12. Any Other Business. No other business was discussed in this session.
13. Future meetings. The meeting of the Maintenance TG for P802-REVC comment resolution has been scheduled for May 31, 2023 <https://1.ieee802.org/p802-revc-comment-resolution-agenda-may-31-2023-11-am-et/>.

19:05 EEST 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 2023-05-01 11:00 - 12:07 ET <https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;edfae29c.23&S=>

See section 1 for attendance and affiliation information.

**Call to order** May 17, 2023 at 10:30 EEST (Helsinki time) by Mick Seaman, IEEE 802.1 Security TG Chair, who presided and wrote the minutes.

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” <http://www.ieee802.org/1/files/public/templates/admin-TG-intro-0721-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/may-2023-interim-session-security-tg-agenda/>.

Discussion:

- Discussion of MACsec in automotive applications would be held over until others are available to participate.
- Discussion of 802.1AR Signature Suites would be held over pending update of the January 2023 item discussion conclusions on this subject.

**Disposition:** The agenda was updated as recorded by these minutes.

3. P802.1Qdt Priority-based Flow Control Enhancements

- 3.1 Draft development. Lily Lv, P802.1Qdt Editor, presented “Headroom Measurement Design” <https://www.ieee802.org/1/files/public/docs2023/dt-lv-design-topics-0323-v2.pdf> for discussion.

Discussion:

- Cable length and speed table with timestamp inaccuracy tolerance very useful.
- Concern about ‘egress pipeline’. Sending of protocol messages is direct to the MAC interface, without intervening queuing, and that needs to be reflected in shim positioning and description.

## 12.15 EEST Recess

**Call to order** May 17, 2023 at 13.30 EEST by the Security TG Chair

Lily Lv, P802.1Qdt Editor, presented “Headroom Measurement Protocol Design” <https://www.ieee802.org/1/files/public/docs2023/dt-lv-design-topics-0323-v2.pdf> following the morning’s discussion, clarifying timestamp points and interfaces.

**Disposition:** Discussion to be continued.

8. A.O.B (Any other business)

- 8.1 MACsec PSK (Pre-Shared Key) distribution for dedicated network devices. Mick Seaman, Security TG Chair, led a brief discussion on MACsec deployment for network devices dedicated to long-term use in single networks.

Discussion:

- Deployment, use, CAK (MACsec Connectivity Association Key) acquisition requirements may differ significantly from the mobile/semi-mobile/personal device model.
- The network/network service and device may be under a single administration (as opposed to the personally owned/managed device that might be attached to a service provider network or company network).
- Device may have limited, very specific, low-cost functionality and have as nearest neighbor(s) similarly limited devices without EAP functionality.
- Example networks might include industrial networks (as per IEC/IEEE 60802), automotive, or similar contained system with many networked sub-components.
- Need to consider initial deployment, repair, component tracking (at the global level), reuse control.
- One model, IEC/IEEE 60802 oriented, would leverage prior use of Secure DevID with NetConf/TLS, with an insecure VLAN supporting that initial management



configuration with bandwidth policing at each node to limited unauthenticated bandwidth usage to that non-disruptive to critical network operation and RSTP/MSTP for that VLAN to provide connectivity if at all possible.

- NetConf/TLS could then report unsecured nearest neighbor discovery (802.1AB, LLDP with scope limited group Reserved Address per 802.1Q) to identify adjacent neighbor requiring a shared PSK. NetConf/TLS PSK Distribution to these neighbors then followed by LLDP over the MACsec secured connectivity between the neighbors to confirm configuration. Use of 802.1X Announcements, which can carry LLDP TLVs, also possible to support neighbor identification.
- Another deployment model would make use of device manufacturer pre-configured CAK/PSKs. A centralized network controller in the system network incorporating the device would use insecure, VLAN segregated and limited, bandwidth to discover the presence of the device and identifying information (serial number and manufacturer). The centralized controller is presumed to have greater network and authentication capabilities, sufficient to establish mutual authentication to its manufacturer (effectively the system's manufacturer) requesting the manufacturer to request the PSK for the identified deployed device from the device manufacturer. Checks that a given authenticated network controller was not making more requests for any device type that its network was designed to contain can be made by its manufacturer, and checks that the deployed device had not been the subject of an unauthorized move/theft (or that the request made was for a device already deployed in a different system) could also be made by the device manufacturer. On receiving the PSK the centralized network controller could then use it to check MACsec connectivity to the deployed device (confirming its identity) and provide the PSK to the device's immediate neighbor (several detailed possibilities at this stage).

**Disposition:** For further discussion.

9. Future meetings. The Security TG will meet during the July 2023 802 plenary session in Berlin, Germany.

14.37 EEST 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) held electronic meetings on generic TSN topics whose minutes are incorporated to these session minutes by reference as follows:

- Minutes of the TSN TG meeting held 2023-03-27, 11:00 – 13:00 ET  
<https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;36ebbc09.23&S=>
- Minutes of the TSN TG meeting held 2023-04-03, 11:00 – 13:02 ET  
<https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;3881dbac.23&S=>
- Minutes of the TSN TG meeting held 2023-04-17, 11:00 – 13:03 ET  
<https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;16bc0c39.23&S=>
- Minutes of the TSN TG meeting held 2023-04-24, 11:00 – 13:03 ET  
<https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;5ec92e85.23&S=>
- Minutes of the TSN TG meeting held 2023-05-03, 10:00 – 12:00 ET  
<https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;38101f68.23&S=>
- Minutes of the TSN TG meeting held 2023-05-08, 09:00 – 10:50 ET  
<https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;947ef811.23&S=>

- Minutes of the TSN TG meeting held 2023-05-08, 11:00 – 13:00 ET  
<https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;ca9dffe8.23&S=>

Between this session and the preceding session, the IEEE 802.1 Time-Sensitive Networking (TSN) Task Group (TG) held electronic meetings on P802.1DG whose minutes are incorporated to these session minutes by reference as follows:

- Minutes of the IEEE P802.1DG meeting held 2023-04-04 09:00 - 10:02 ET  
<https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;df2f67f5.23&S=>
- Minutes of the IEEE P802.1DG meeting held 2023-05-02 09:00 - 10:08 ET  
<https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;d7c2b7a4.23&S=>

See section 1 for attendance and affiliation information.

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

Minutes of the IEEE P802.1DP/SAE AS 6675 joint project electronic meeting are in section 5.2.

**Call to order** May 15, 2023 8:08 EEST 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 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-0721-v01.pdf>.

The 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 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. Approval of agenda. The Chair presented the agenda in <https://1.ieee802.org/2023-05-interim-tsn-agenda/>.

**Disposition:** The agenda was reviewed, and updated as recorded by these minutes.

3. The chair showed the incoming liaisons and communication:

- “Access to IEEE 802.1 Drafts”  
<https://www.ieee802.org/1/files/public/docs2023/liaison-LNI40-testbedwhitepaperanddraftaccess-0423.pdf> in connection with “LNI 4.0 Testbed TSN – Whitepaper OPC UA over TSN”  
<https://www.ieee802.org/1/files/public/docs2023/liaison-LNI40-WhitepaperOPCUAoverTSNv17-0423.pdf>
- “LS/r on work items related to deterministic networking and deterministic communication service in ITU-T SG13 (IEEE 802.1-LS71)”  
<https://www.ieee802.org/1/files/public/docs2023/liaison-itu-t-SG13-DetermNetworkingandCommunics-0523.pdf>.

**Disposition:** Incoming liaisons and communication discussed. Further discussion needed.

4. Josef Dorr and János Farkas presented <https://www.ieee802.org/1/files/public/docs2023/new-dorr-mstp-YANG-0523-v01.pdf>, PAR <https://www.ieee802.org/1/files/public/docs2023/dy-farkas-draft-PAR-0523-v00.pdf> and CSD <https://www.ieee802.org/1/files/public/docs2023/dy-farkas-draft-PAR-0523-v00.pdf> drafts (individual contributions) for MSTP YANG, and led the development of PAR for and CSD for MSTP YANG.

**Disposition:** Presentation discussed. Draft PAR and CSD:

- <https://www.ieee802.org/1/files/public/docs2023/dy-draft-PAR-0523-v01.pdf>
- <https://www.ieee802.org/1/files/public/docs2023/dy-draft-CSD-0523-v01.pdf>

10:00 EEST recess

**Call to order** May 15, 2023 13:32 EEST by János Farkas, IEEE 802.1 TSN TG Chair (Chair), who presided. Johannes Specht, IEEE 802.1 TSN TG Secretary (Secretary), wrote the minutes.

5. 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.
6. Stephan Kehrer, P802.1Qdj editor, presented a draft for P802.1Qdj PAR extension <https://www.ieee802.org/1/files/public/docs2023/dj-kehrer-draft-PAR-extension-0523-v01.pdf> (individual contribution) and led the development of the P802.1Qdj PAR extension.  
**Disposition:** Draft PAR extension: <https://www.ieee802.org/1/files/public/docs2023/dj-draft-PAR-extension-0523-v01.pdf>.
7. Stephan Kehrer, P802.1Qdj editor, presented “IEEE P802.1Qdj Status Overview” <https://www.ieee802.org/1/files/public/docs2023/dj-kehrer-status-d1-1-0522-v01.pdf>.  
**Disposition:** Presentation discussed. Further discussion needed.
8. Feng Chen, P802.1Qdd editor, led the resolution of comments received on <https://www.ieee802.org/1/files/private/dd-drafts/d0/802-1Qdd-d0-7.pdf>.  
**Disposition:** Comments 17-21, 63, 43, 44 and 57 resolved. Disposition per agenda item 21.

15:33 – 16:00 EEST recess

9. Geoffrey Garner, P802.1ASdm editor, presented “Several Details Related to Resolution of Comments 69, 70, and 88 on 802.1ASdm/D1.0” <https://www.ieee802.org/1/files/public/docs2023/dm-garner-several-details-comments-69-70-88-d1-0-0523-v00.pdf>, “P802.1ASdm/D1.0 Editor’s Report Proposed Comment Resolution for WG Ballot Version 7” <https://www.ieee802.org/1/files/public/docs2023/dm-garner-d1-0-wg-ballot-editors-report-0323-v07.pdf> and led the resolution of comments received on <https://www.ieee802.org/1/files/private/asdm-drafts/d1/802-1ASdm-d1-0.pdf>. **Disposition:** Comments 2, 27, 28, 54, 69, 70, 85 and 88 resolved. Resolution per agenda item 32.

18:10 EEST recess

**Call to order** May 16, 2023 10:30 EEST by Craig Gunther, IEEE 802.1 TSN TG Vice-Chair (Chair), who presided and wrote the minutes.

10. 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.
11. The Chair reviewed the agenda in [https://1.ieee802.org/2023-05-interim-tsn-agenda/#TSN\\_8211\\_P8021DG](https://1.ieee802.org/2023-05-interim-tsn-agenda/#TSN_8211_P8021DG). **Disposition:** The agenda was reviewed, discussed and agreed (informally, none dissenting) as presented.
12. János Farkas, IEEE 802.1 TSN TG Chair, and Max Turner, P802.1DG editor, presented the draft P802.1DG PAR extension in <https://www.ieee802.org/1/files/public/docs2023/dg-draft-PAR-extension-0523-v00.pdf>. **Disposition:**
- Updated PAR extension: <https://www.ieee802.org/1/files/public/docs2023/dg-draft-PAR-extension-0523-v01.pdf>.
13. Max Turner, P802.1DG Editor, presented <https://www.ieee802.org/1/files/private/dg-drafts/d2/in-prep-for-802-1DG-d2-0-not-for-voting-0523.pdf> as a text contribution. **Disposition:** Presented text discussed and intended to be used as the basis for the next P802.1DG draft. It was recommended that an informational liaison be sent to AUTOSAR informing them of a reference to one of their standards in the next P802.1DG draft.

12:30 EEST recess

**Call to order** May 16, 2023 13:35 EEST by János Farkas, IEEE 802.1 TSN TG Chair (Chair), who presided. Johannes Specht, IEEE 802.1 TSN TG Secretary (Secretary), wrote the minutes.

14. 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.
15. Marina Gutiérrez, P802.1Qcw editor, led the resolution of comments received on <https://www.ieee802.org/1/files/private/cw-drafts/d2/802-1Qcw-d2-2.pdf>. **Disposition:** Final disposition (uploaded post-session): <https://www.ieee802.org/1/files/private/cw-drafts/d2/802-1Qcw-d2-2-dis-v00.pdf>.
16. Paul Bottorff, P802.1Qcj editor, and Mick Seaman led the resolution of comments received on <https://www.ieee802.org/1/files/private/cj-drafts/d2/802-1Qcj-d2-0.pdf>. **Disposition:** Final disposition (uploaded post-session): <https://www.ieee802.org/1/files/private/cj-drafts/d2/802-1Qcj-d2-0-dis-v03.pdf> (where the

first row on page 9 is to be disregarded).

17. Feng Chen, P802.1Qdd editor, continued the resolution of comments received on <https://www.ieee802.org/1/files/private/dd-drafts/d0/802-1Qdd-d0-7.pdf>.

**Disposition:** Comments 1-5, 8-11, 22, 23, 36, 37, 66, 67 resolved. Disposition per agenda item 21.

15:37 EEST recess

**Call to order** May 17, 2023 13:30 EEST by János Farkas, IEEE 802.1 TSN TG Chair (Chair), who presided. Johannes Specht, IEEE 802.1 TSN TG Secretary (Secretary), wrote the minutes.

18. 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.

19. Hiroki Nakano, P802.1Qdq editor, presented <https://www.ieee802.org/1/files/private/dq-drafts/d0/802-1Qdq-d0-3.pdf>.

**Disposition:** Draft discussed. Further discussion needed.

20. Norman Finn, P802.1DC editor, reported the status of P802.1DC verbally.

**Disposition:** Report discussed. Further discussion needed.

21. Feng Chen, P802.1Qdd editor, continued the resolution of comments received on <https://www.ieee802.org/1/files/private/dd-drafts/d0/802-1Qdd-d0-7.pdf>.

**Disposition:** Comments 6, 7, 24-27, 31-33, 42, 45, 54, 56, 58, 59, 62, 64, 65, 68-70 resolved. Partial disposition (uploaded post-session):

<https://www.ieee802.org/1/files/private/dd-drafts/d0/802-1Qdd-d0-7-pdis-v03.pdf>.

15:31 – 16:00 EEST recess

22. Nader Zein presented “Initial Proposal Hosting IEEE802.1 January 2024 Interim in Heidelberg Germany” <https://www.ieee802.org/1/files/public/docs2023/admin-zein-january-2024-interim-proposal-0523-v01.pdf>.

**Disposition:**

- Presentation discussed. Further discussion needed.
- The Chair conducted the following straw polls:
  - Will you attend the January Interim session in Heidelberg (Germany) if it is in-person only (i.e., couldn't secure AV equipment)?
    - A.Yes. 33/49 (67%)
    - B.No. 4/49 (8%)
    - No Answer 12/49 (24%)
  - Will you attend the January Interim session (Heidelberg, Germany) if it is mixed-mode?
    - A.Yes, in-person. 30/49 (61%)
    - B.Yes, remote. 8/49 (16%)
    - C.No. 0/49 (0%)
    - No Answer 11/49 (22%)

23. Balázs Varga presented “TSN Cloudification FRER Extensions to Support Cloudification” <https://www.ieee802.org/1/files/public/docs2023/new-varga-FRER-extensions-to-support-cloudification-0523-v01.pdf>.

**Disposition:** Presentation discussed. Further discussion needed.

24. Geoffrey Garner, P802.1ASdm editor, presented “Several Details Related to Resolution of Comments 69, 70, and 88 on 802.1ASdm/D1.0” <https://www.ieee802.org/1/files/public/docs2023/dm-garner-several-details-comments-69-70-88-d1-0-0523-v00.pdf>, “P802.1ASdm/D1.0 Editor’s Report Proposed Comment Resolution for WG Ballot Version 7” <https://www.ieee802.org/1/files/public/docs2023/dm-garner-d1-0-wg-ballot-editors-report-0323-v07.pdf> and continued the resolution of comments received on <https://www.ieee802.org/1/files/private/asdm-drafts/d1/802-1ASdm-d1-0.pdf>.

**Disposition:** Comments 16- 21, 29, 84, 118 and 125 resolved. Disposition per agenda item 33.

18:05 EEST recess

**Call to order** May 18, 2023 08:00 EEST by János Farkas, IEEE 802.1 TSN TG Chair (Chair), who presided. Johannes Specht, IEEE 802.1 TSN TG Secretary (Secretary), wrote the minutes.

25. 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.
26. Geoffrey Garner, P802.1ASdm editor, continued the resolution of comments received on <https://www.ieee802.org/1/files/private/asdm-drafts/d1/802-1ASdm-d1-0.pdf>.

**Disposition:** Comments 23, 32, 33 and 90 resolved. Disposition per agenda item 33.

10:00 – 10:30 EEST recess

27. Johannes Specht presented “P802.1DU - Content Proposal” <https://www.ieee802.org/1/files/public/docs2023/du-specht-contentproposal-0523-v01.pdf>.

**Disposition:** Presentation discussed. Further discussion needed.

28. Konstantinos Alexandris presented “Extensions on the TSN UNI traffic specification proposal” <https://www.ieee802.org/1/files/public/docs2023/new-alexandris-extensions-on-the-tsn-uni-traffic-specification-0523-v01.pdf>.

**Disposition:** Presentation discussed. Rogue comment 174 added to <https://www.ieee802.org/1/files/private/dj-drafts/d1/802-1Qdj-d1-0-dis-v02.pdf>.

29. Stephan Kehrer, P802.1Qdj editor, led the resolution of comments received on <https://www.ieee802.org/1/files/private/dj-drafts/d1/802-1Qdj-d1-0.pdf>.

**Disposition:** Comment 174 resolved. Updated final disposition: <https://www.ieee802.org/1/files/private/dj-drafts/d1/802-1Qdj-d1-0-dis-v02.pdf>.

30. Geoffrey Garner, P802.1ASdm editor, continued the resolution of comments received on <https://www.ieee802.org/1/files/private/asdm-drafts/d1/802-1ASdm-d1-0.pdf>.

**Disposition:** Comments 25, 24 and 83 resolved. Resolution per agenda item 33.

12:30 EEST recess

**Call to order** May 19, 2023 08:00 EEST by János Farkas, IEEE 802.1 TSN TG Chair (Chair), who presided. Johannes Specht, IEEE 802.1 TSN TG Secretary (Secretary), wrote the minutes.

31. 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.

32. Johannes Specht presented “IEEE P802.1ASdm/D1.0 Rogue Comments related to Figure 17-3” <https://www.ieee802.org/1/files/public/docs2023/dm-specht-rogue-comments-0523-v02.pdf>, related to <https://www.ieee802.org/1/files/public/docs2023/dm-specht-d10-figure173-0523-v00.pdf>.

**Disposition:** Comments 161-164 on P802.1ASdm/D1.0 added.

33. Geoffrey Garner, P802.1ASdm editor, continued the resolution of comments received on <https://www.ieee802.org/1/files/private/asdm-drafts/d1/802-1ASdm-d1-0.pdf>.

**Disposition:** Comment 38 and 161-164 resolved. Final disposition:

<https://www.ieee802.org/1/files/private/asdm-drafts/d1/802-1ASdm-d1-0-dis-v00.pdf>.

9:30 EEST recess

## 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 2023-03-27 9:00 - 09:50 ET <https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;ec8f76b1.23&S=>
- Minutes of the IEC/IEEE 60802 Joint Project meeting held 2023-04-24 9:00 - 11:00 ET <https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;e0677db7.23&S=>
- Minutes of the IEC/IEEE 60802 Joint Project meeting held 2023-05-08 9:00 - 11:00 ET <https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;609eae8a.23&S=>
- Minutes of the IEC/IEEE 60802 Joint Project meeting held 2023-05-12 9:00 - 11:00 ET <https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;e78099af.23&S=>

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

- Minutes of the IEC/IEEE 60802 Joint Project Time Sync Ad Hoc meeting held 2023-03-24 9:00 - 11:00 ET <https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;a88d9f.23&S=>
- Minutes of the IEC/IEEE 60802 Joint Project Time Sync Ad Hoc meeting held 2023-03-31 9:00 - 10:40 ET <https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;a345ab0f.23&S=>
- Minutes of the IEC/IEEE 60802 Joint Project Time Sync Ad Hoc meeting held 2023-04-14 9:00 - 11:00 ET <https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;fbeb5a1f.23&S=>
- Minutes of the IEC/IEEE 60802 Joint Project Time Sync Ad Hoc meeting held 2023-04-21 9:00 - 10:51 ET <https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;43ea36e8.23&S=>
- Minutes of the IEC/IEEE 60802 Joint Project Time Sync Ad Hoc meeting held 2023-04-28 9:00 - 11:00 ET <https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;3a11f440.23&S=>
- Minutes of the IEC/IEEE 60802 Joint Project Time Sync Ad Hoc meeting held 2023-05-05 9:00 - 11:00 ET <https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;ab541bb.23&S=>

See section 1 for attendance and affiliation information.

**Call to order** May 15, 2023 at 10:30 EEST by Ludwig Winkel, IEC 65C/WG18 Convenor and IEC/IEEE 60802 Joint Project Chair (60802 Chair), who presided with János Farkas, IEEE 802.1 TSN TG Chair (TSN TG Chair). Josef Dorr, IEC/IEEE 60802 Joint Project Secretary (60802 Secretary), wrote the minutes.

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” <http://www.ieee802.org/1/files/public/templates/admin-TG-intro-0721-v01.pdf>.

The 60802 Chair announced that the meeting is subject to these Policies as read and displayed at the opening Time-Sensitive Networking Task Group meeting.

The 60802 Chair made the Calls for Potentially Essential Patents at the beginning of each IEC/IEEE 60802 Joint Project 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 60802 Chair explained that the IEC/IEEE 60802 Joint Project also follows the usual IEC patent [https://www.iec.ch/members\\_experts/tools/patents/patent\\_policy.htm](https://www.iec.ch/members_experts/tools/patents/patent_policy.htm) and copyright

[https://www.iec.ch/standardsdev/resources/draftingpublications/overview/rules\\_requirements/copyright.htm](https://www.iec.ch/standardsdev/resources/draftingpublications/overview/rules_requirements/copyright.htm) policies.

The 60802 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 60802 Chair presented the agenda in [https://1.ieee802.org/2023-05-interim-tsn-agenda/#TSN\\_8211\\_IECIEEE\\_60802](https://1.ieee802.org/2023-05-interim-tsn-agenda/#TSN_8211_IECIEEE_60802).

**Disposition:** The agenda was reviewed, discussed, and updated as recorded by these minutes.

3. 60802 PAR Modification. Martin Mittelberger presented “60802 PAR Modification” <https://www.ieee802.org/1/files/public/docs2023/60802-Mittelberger-et-al-PAR-Modification-0523-v02.pdf> and the TSN TG Chair led the drafting of a modified PAR based on <https://www.ieee802.org/1/files/public/docs2023/60802-Mittelberger-draft-PAR-modification-0523-v02.pdf>.

**Disposition:** Draft modified PAR: <https://www.ieee802.org/1/files/public/docs2023/60802-draft-PAR-modification-0523-v00.pdf>.

4. Editor’s report. Jordon Woods, IEC/IEEE 60802 Joint Project Editor (60802 Editor), presented “Editor’s Report 60802 Draft 2.0” <https://www.ieee802.org/1/files/public/docs2023/60802-woods-D2-0-update-0523-v01.pdf>.

The comments from IEC are not included yet in this report.

**Disposition:** For information.

5. IEC/IEEE 60802 D2.0 comment resolution. Jordon Woods, 60802 Editor, led the resolution of comments received on <https://www.ieee802.org/1/files/private/60802-drafts/d2/60802-d2-0.pdf>.

**Disposition:** Partial disposition. Ballot comments 364, 639 were resolved.

12:30 EEST recess

**Call to order** May 16, 2023 at 13:30 EEST by Ludwig Winkel, IEC 65C/WG18 Convenor and IEC/IEEE 60802 Joint Project Chair (60802 Chair). Josef Dorr, IEC/IEEE 60802 Joint Project Secretary (60802 Secretary), wrote the minutes.



6. Meeting introduction and other administrative items. The 60802 Chair announced that the 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 minute taker.
7. Time Sync Ad Hoc.
  - David McCall presented “60802 Time Sync – External Clock Normative Requirements” <https://www.ieee802.org/1/files/public/docs2023/60802-McCall-External-Clock-Normative-Requirements-0523-v01.pdf>. The presentation was discussed.
  - David McCall presented “60802 Time Sync – Rate Ratio Drift Tracking & Error Compensation” <https://www.ieee802.org/1/files/public/docs2023/60802-McCall-RR-Drift-Tracking-Error-Compensation-0523-v02.pdf>. The presentation was discussed.

**Disposition:** More discussion is needed.

15:30 EEST recess

**Call to order** May 17, 2023 at 10:30 EEST by Ludwig Winkel, IEC 65C/WG18 Convenor and IEC/IEEE 60802 Joint Project Chair (60802 Chair), who presided. Josef Dorr, IEC/IEEE 60802 Joint Project Secretary (60802 Secretary), wrote the minutes.

8. Meeting introduction and other administrative items. The 60802 Chair announced that the 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 minute taker.  
The 60802 Chair proposed to cancel the IEC/IEEE 60802 Joint Project weekly meeting on May 22, 2023, due to many participants being unavailable: proposal agreed (informally, none dissenting).
9. IEC/IEEE 60802 D2.0 comment resolution. Jordon Woods, 60802 Editor, led the resolution of comments received on <https://www.ieee802.org/1/files/private/60802-drafts/d2/60802-d2-0.pdf>.

**Disposition:** Partial disposition. Ballot comments 593, 28, 592, 406, 682, 26, 89, 595, 619, 27, 5, 231, 618, 371, 275, 597, 596, 598 were resolved.

12:30 – 13:30 EEST recess

10. Time Sync Ad Hoc. David McCall continued the presentation of “60802 Time Sync – Rate Ratio Drift Tracking & Error Compensation” <https://www.ieee802.org/1/files/public/docs2023/60802-McCall-RR-Drift-Tracking-Error-Compensation-0523-v02.pdf>. The presentation was discussed.

**Disposition:** More discussion is needed.

15:30 EEST recess

**Call to order** May 18, 2023 at 13:30 EEST by Ludwig Winkel, IEC 65C/WG18 Convenor and IEC/IEEE 60802 Joint Project Chair (60802 Chair), who presided. Josef Dorr, IEC/IEEE 60802 Joint Project Secretary (60802 Secretary), wrote the minutes.

11. Meeting introduction and other administrative items. The 60802 Chair announced that the 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 minute taker.

12. IEC/IEEE 60802 D2.0 comment resolution. Jordon Woods, IEC/IEEE 60802 Joint Project Editor (60802 Editor), led the resolution of comments received on <https://www.ieee802.org/1/files/private/60802-drafts/d2/60802-d2-0.pdf>.  
**Disposition:** Partial disposition. Ballot comments 425, 676, 402, 21, 450, 556, 424, 311, 463, 32, 599 were resolved.

15:30 – 16:00 EEST recess

13. Time Sync Ad Hoc. David McCall presented “60802 Time Sync - Monte Carlo and Time Series Simulation Configuration Including NRR and RR Drift Tracking & Error Compensation” <https://www.ieee802.org/1/files/public/docs2023/60802-McCall-Time-Sync-Simulation-Configuration-NRR-RR-Algorithms-v02.pdf>.  
**Disposition:** More discussion is needed.

18:00 EEST recess

**Call to order** May 19, 2023 at 09:30 ET by Ludwig Winkel, IEC 65C/WG18 Convenor and IEC/IEEE 60802 Joint Project Chair (60802 Chair), who presided. Josef Dorr, IEC/IEEE 60802 Joint Project Secretary (60802 Secretary), wrote the minutes.

14. Meeting introduction and other administrative items. The 60802 Chair announced that the 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 minute taker.
15. Time Sync Ad Hoc. David McCall continued the presentation of “60802 Time Sync – External Clock Normative Requirements” <https://www.ieee802.org/1/files/public/docs2023/60802-McCall-External-Clock-Normative-Requirements-0523-v01.pdf>. The presentation was discussed.  
**Disposition:** More discussion is needed.

10:00 – 10:30 EEST recess

16. Time Sync Ad Hoc.
- David McCall resumed the presentation of “60802 Time Sync – External Clock Normative Requirements” <https://www.ieee802.org/1/files/public/docs2023/60802-McCall-External-Clock-Normative-Requirements-0523-v01.pdf>. The presentation was discussed.
  - David McCall presented “60802 Time Sync – Effect on dTE of Varying Local Clock Frequency (TSGE)” <https://www.ieee802.org/1/files/public/docs2023/60802-McCall-dTE-Varying-Clock-Freq-TSGE-0523-v02.pdf>. The presentation was discussed.  
**Disposition:** More discussion is needed.
17. IEC/IEEE 60802 D2.0 comment resolution. Jordon Woods, 60802 Editor, led the resolution of comments received on <https://www.ieee802.org/1/files/private/60802-drafts/d2/60802-d2-0.pdf>.  
**Disposition:** Partial disposition. Ballot comments 277, 601 were resolved.

12:30 – 13:30 EEST recess

18. Project Planning. The 60802 Chair presented “IEC Late Project Problem” <https://www.ieee802.org/1/files/public/docs2023/60802-Winkel-LateProjectMinutes-0523.pdf>, and proposed to have an ad hoc session in July 2023 to accelerate the Joint

Project. Three straw polls asking for potential attendance at an ad hoc session in Frankfurt, Germany were conducted to help with planning:

1. I would attend the Frankfurt ad hoc before the Berlin Plenary
  - A. in-person 14/40 ( 35%)
  - B. remote (if it will be possible) 12/40 ( 30%)
  - C. not 6/40 ( 15%)
  - No Answer 8/40 ( 20%)
2. I would attend the Frankfurt ad hoc after the Berlin Plenary
  - A. yes, in-person 13/40 ( 33%)
  - B. yes, remote (if provided) 11/40 ( 28%)
  - C. no 8/40 ( 20%)
  - No Answer 8/40 ( 20%)
3. If both weeks are available for the ad hoc which week do you prefer
  - A. the week before the Berlin Plenary 14/41 ( 34%)
  - B. the week after the Berlin Plenary 12/41 ( 29%)
  - No Answer 14/41 ( 34%)

Planning decisions for the ad hoc session are expected by the next IEC/IEEE 60802 Joint Project weekly meeting on May 26, 2023. A corresponding ePoll is expected.

15:30 – 16:00 EEST recess

19. PAR modification (background). The TSN TG Chair led the drafting of <https://www.ieee802.org/1/files/public/docs2023/60802-draft-PAR-modification-0523-v00.pdf>.

Disposition:

- Updated PAR: <https://www.ieee802.org/1/files/public/docs2023/60802-draft-PAR-modification-0523-v01.pdf>

20. IEC/IEEE 60802 D2.0 comment resolution. Jordon Woods, IEC/IEEE 60802 Joint Project Editor (60802 Editor), led the resolution of comments received on <https://www.ieee802.org/1/files/private/60802-drafts/d2/60802-d2-0.pdf>.

**Disposition:** Partial disposition. Ballot comments 276, 625, 623, 30, 624, 600 were resolved. The comment dispositions are documented in

<https://www.ieee802.org/1/files/private/60802-drafts/d2/60802-d2-0-pdis-v05.pdf>.

21. Review of minutes. The minutes were reviewed under the lead of the 60802 Secretary.

Before adjournment the 60802 Chair expressed his deep thanks to Marius-Petru Stanica and Kirsi Vartianen for hosting the interim session at a stunning location in Helsinki.

18:00 EEST adjournment

## 5.2 IEEE P802.1DP/SAE AS6675 joint project

Between this session and the preceding session, the IEEE 802.1 Time-Sensitive Networking (TSN) Task Group (TG) held electronic meetings on P802.1DP/SAE AS 6675 whose minutes are incorporated to these session minutes by reference as follows:

- Minutes of the IEEE P802.1DP/SAE AS6675 meeting held 2023-03-29 10:00 - 12:02 ET, <https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;965a9f94.23&S=>
- Minutes of the IEEE P802.1DP/SAE AS6675 meeting held 2023-04-12 10:00 - 12:02 ET, <https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;5f668736.23&S=>

See section 1 for attendance and affiliation information.

**Call to order** May 17, 2023 at 8:01 EEST by János Farkas, IEEE 802.1 TSN TG Chair. Abdul Jabbar and János Farkas, IEEE P802.1DP/SAE AS6675 joint project co-Chairs, presided. Marina Gutiérrez, IEEE P802.1DP/SAE AS6675 Secretary, wrote the minutes.

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” <http://www.ieee802.org/1/files/public/templates/admin-TG-intro-0721-v01.pdf>.  
János Farkas, IEEE P802.1DP/SAE AS6675 co-Chair, announced that the meeting is subject to these Policies as read and displayed at the opening TSN TG meeting.  
János Farkas, IEEE P802.1DP/SAE AS6675 co-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.  
János Farkas, IEEE P802.1DP/SAE AS6675 co-Chair, explained that the IEEE P802.1DP/SAE AS6675 Joint Project also follows the usual SAE IP and copyright <https://www.sae.org/about/legal-policies/intellectual-property> policies.
2. Approval of agenda. János Farkas, IEEE P802.1DP/SAE AS6675 co-Chair, presented the agenda in [https://1.ieee802.org/2023-05-interim-tsn-agenda/#TSN\\_8211\\_P8021DPAS6675](https://1.ieee802.org/2023-05-interim-tsn-agenda/#TSN_8211_P8021DPAS6675).  
**Disposition:** The agenda was reviewed, discussed and updated as recorded by these minutes.
3. Abdul Jabbar, IEEE P802.1DP/SAE AS6675 editor, presented the first draft <https://www.ieee802.org/1/files/private/dp-drafts/d0/802-1DP-d0-2.pdf>  
**Disposition:** Draft was discussed. Anticipated next: first task group ballot.
4. Abdul Jabbar presented "P802.1Qdx: YANG Data Models for the Credit-Based Shaper" <https://www.ieee802.org/1/files/public/docs2023/dx-markham-CBS-YANG-Model-0523-v02.pdf>.  
**Disposition:** Presentation was discussed. More discussion is needed.
5. Abdul Jabbar presented "Scheduled Traffic on Multi-gPTP domain Bridges" <https://www.ieee802.org/1/files/public/docs2023/dp-jabbar-multi-gPTP-domain-bridges-0523-v02.pdf>.  
**Disposition:** Presentation was discussed. More discussion is needed.

10:07 EEST adjournment

## 6 Nendica

Between this session and the preceding session, the IEEE 802 “Network Enhancements for the Next Decade” Industry Connections Activity (Nendica) held electronic meetings whose minutes are incorporated to these session minutes by reference as follows:

- Minutes of the Nendica meeting held 2023-03-30 09:00-11:00 ET <https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;211ff8dc.23>
- Minutes of the Nendica meeting held 2023-04-13 09:00-11:00 ET <https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;b6bf201.23>
- Minutes of the Nendica meeting held 2023-04-27 09:00-11:00 ET <https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;929771aa.23>
- Minutes of the Nendica meeting held 2023-05-11 09:00-11:00 ET <https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;332ea07b.23>

**Call to order** May 18, 2023 8:43 EEST by Jessy Rouyer, acting Nendica Chair, who presided. Scott Mansfield wrote the minutes.

Agenda items and dispositions:

1. Meeting introduction and other administrative items. 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-prePAR-intro-0323-v01.pdf>. The acting Nendica Chair showed this presentation advising that the following applies:

- 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 the Nendica meeting, whether verbal, recorded, or in written form, is a Contribution and shall comply with the IEEE SA Copyright Policy.

The acting Nendica 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 acting Nendica Chair presented the agenda in <https://1.ieee802.org/802-nendica-agenda-2023-05-18/>. The Mentor server document list was noted.

**Disposition:** The agenda was reviewed, discussed and updated to add the “Lead” to agenda item 8.

3. Minutes. The acting Nendica Chair presented the draft “Minutes of the Nendica meeting held 2023–05-11 09:00-11:00 ET” <https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;c0ac54fb.23&S=>.

**Disposition:** Agreed (informally, none dissenting) to approve these minutes.

4. Update. No discussion.

5. Nendica Organization. The acting Nendica Chair presented:

- Nendica ICAID renewal instructions in <https://mentor.ieee.org/802.1/dcn/23/1-23-0005-00-ICne-nendica-icaid-renewal-instructions.docx>
- Nendica ICAID renewal template (supplied by ICCOM) in <https://mentor.ieee.org/802.1/dcn/23/1-23-0006-01-ICne-nendica-icaid-renewal-template-supplied-by-iccom.docx>
- “Draft Nendica ICAID renewal to September 2025” <https://mentor.ieee.org/802.1/dcn/23/1-23-0004-04-ICne-draft-nendica-icaid-renewal-to-september-2025.docx>

Discussion:

- The 802.1 Chair noted regarding 8.3 that the names and affiliations need not be reset but should be reviewed.
- The 802.1 Chair noted regarding 7.1 that process should be verified to determine whether a change requires a letter of support or whether an LMSC motion suffices.
- The acting Nendica Chair encouraged participants to inform the Nendica Chair of any changes needed in 8.3 of this draft.

**Disposition:** Further review, following updates, needed.

- Draft Nendica ICCOM report in <https://mentor.ieee.org/802.1/dcn/23/1-23-0007-01-ICne-draft-nendica-iccom-report.pptx>

Discussion:

- The 802.1 Chair noted that on slide 2, item 1 should be augmented with a link to the minutes being described, and item 2 should be updated to reflect the three open Study Items and the fact that they are not 100% complete.

As such, the percentage provided in item 2 should be lowered.

**Disposition:** Action to the Nendica Chair to update per discussion for further review.

6. CTF Study Item. The Study Item Leader, Johannes Specht, provided an update. A content proposal for P802.1DU is to be presented in the Time-Sensitive Networking Task Group meeting to be held May 18, 2023 at 10:30 EEST. The acting Nendica Chair noted that NesCom had recommended approval of the PAR.

**Disposition:** For information.

7. ELLA Study Item. No discussion.
8. Vetting and New Topics. Huajie Bao presented “Industrial Campus Network for Virtualized Programmable Logic Controller (PLC)” <https://mentor.ieee.org/802.1/dcn/23/1-23-0012-01-1Cne-industrial-campus-network-for-virtualized-plc.pdf>.

Discussion:

- The contribution’s “Call for interest” is limited to Nendica.
- A participant considered the subject area is interesting to investigate.
- Is it the case that virtualized PLCs are an industry trend? Is there any standardization work in the area? Industry report references or other documentation as well as pointers to the companies involved in the evolution towards virtualized PLCs would be welcome.
- IEC standards may be of relevance.

**Disposition:** More discussion needed. Further contributions invited. Contributor may reach out to other participants to help Nendica assess potential support for creating a Nendica work item.

9. Future Meetings. The biweekly Nendica electronic meetings resume on May 25, 2023.
10. Any Other Business. No other business was discussed by Nendica in this session.

9:49 EEST 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 2023-04-11 10:00 –10:43 ET  
<https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;dfa8d950.23&S=>
- Minutes of the YANGsters meeting held 2023-05-09 10:01 –10:34 ET  
<https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;ba7dfc24.23&S=>

See section 1 for attendance and affiliation information.

**Call to order** May 16, 2023, at 16:04 EEST 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 Patent Policy and IEEE SA Copyright and Participation Policies were provided beforehand as part of “MEETING INTRODUCTION” <https://www.ieee802.org/1/files/private/templates/admin-prePAR-intro-0323-v01.pptx>.

The YANGsters Chair announced that the meeting is subject to these Policies as read and displayed at the opening plenary meeting.

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/may-2023-interim-session-helsinki-finland-yangsters-agenda/>.

**Disposition:** The agenda was reviewed, discussed, and updated as recorded by these minutes.

3. Introduction to YANGsters. The YANGsters Chair introduced YANGsters by presenting
  - <https://1.ieee802.org/yangsters/>,
  - <https://1.ieee802.org/yangsters/yangsters-call-information/>, - <https://1.ieee802.org/category/yangsters-agenda/>, and
  - <https://1.ieee802.org/yangsters/yangsters-guidelines/yangsters-faq/>.

**Disposition:** For information.

4. Achievements since last Plenary meeting. The YANGsters Chair introduced the topic by showing “YANG Slides” <https://www.ieee802.org/1/files/public/docs2023/yangsters-smansfield-helsinki-interim-status-0523-v01.pdf>.

- An overview of the MAC address formatting issue was given.
- The connection between YANG for 802.3 LLDP and the MAC address issue was explained.

**Disposition:** For information.

5. Status of YANG Projects. The YANGsters Chair introduced the topic by showing slide 4 of “YANG Slides” <https://www.ieee802.org/1/private/contrib/yangsters-smansfield-helsinki-interim-status-0523-v01.pdf>.

- The YANG modules for published standards are up to date.
- The editors of active projects are encouraged to review the table of slide 4 and point out any missing or incorrect information in that table.

**Disposition:** For information.

6. UML Description. The YANGsters Chair presented the topic by showing [https://1.ieee802.org/yangsters/yangsters-guidelines/yangsters-faq/#UML-like Diagram Description](https://1.ieee802.org/yangsters/yangsters-guidelines/yangsters-faq/#UML-like-Diagram-Description).

- The “UML-like Diagram Description” needs to be updated to remove the suggestion of hatched patterns as a background for boxes modified by a standard. A dark grey background should be used instead.

**Disposition:** For information.

7. NACM Discussion. Martin Mittelberger introduced the topic.

- It was explained how access is controlled using NACM in the IEC/IEEE 60802 project:
  - There is a default access-right, which is set in the YANG module (e.g., `nacm:default-deny-all`).
  - Users are assigned to groups.
  - For groups, it is possible to define additional access rules for individual parts of the YANG tree.
- It was unclear how the parameter “module-name” in a module should be set in the case where the nodes that are to be access-controlled are defined within a grouping that is defined in a separate module without its own YANG tree.
- It was confirmed that the module-name in such a module needs to be the base module name of the augmented module.

- An example to show this in more detail is ietf-interface where ietf-ethernet-interface adds augmentations. In this case, the access control should be defined with module-name ietf-interface, specifying the desired part of the augmented tree in the path variable.

**Disposition:** For information.

8. Open Discussion: What is new, upcoming, or topics that need investigation in the YANG area?
  - Nothing to discuss.
9. Weekly Call Agenda Requests. The YANGsters Chair introduced the topic and led the discussion.
  - The next electronic meeting for YANGsters is planned to be Jun 6, 2023.
  - Information on YANGsters electronic meetings can be found at <https://1.ieee802.org/yangsters/yangsters-call-information/>.
10. Any Other Business. No other business was discussed in this meeting.
  - YANGsters that are interested in participating in the electronic meeting of IEC TC65C/AG4 in May 2023 to discuss the topic “Common Data Dictionary and ECLASS relationship with YANG” with that group should contact Ludwig Winkel, Convenor of the IEC TC65C/AG4, for an invitation.

16:56 EEST adjournment

## 8 Next Session

Jul 10-14, 2023 mixed mode plenary session in Berlin, Germany.