

IEEE 802.1 Working Group

May 18-22, 2020 Interim Session

Electronic

Session Minutes

The Working Group (WG) Chair, Glenn Parsons, presided.

The 802.1 Recording Secretary, Jessy Rouyer, wrote the minutes including minutes written by subgroup Chairs or their Secretaries.

Note that, throughout this document, minuted/recorded inputs from any attendee can not/shall not be assumed to represent a position of their employer or affiliated organization.

1 Attendance and affiliation

The table in this section reflects the attendance and affiliation of participants who registered their attendance in IMAT.

			Time-Sensitive Networking TG (Friday, 22-May-2020, 09:00 - 13:00)															
			Maintenance TG (Thursday, 21-May-2020, 14:00 - 16:00)															
			Time-Sensitive Networking TG (Thursday, 21-May-2020, 11:30 - 13:30)															
			Time-Sensitive Networking TG (Thursday, 21-May-2020, 09:00 - 11:00)															
			Nendica (Thursday, 21-May-2020, 09:00 - 11:00)															
			Security TG (Wednesday, 20-May-2020, 13:30 - 15:30)															
			Time-Sensitive Networking TG (Wednesday, 20-May-2020, 11:30 - 13:30)															
			Time-Sensitive Networking TG + IEC/IEEE 60802 Joint Project (Wednesday, 20-May-2020, 09:00 - 11:00)															
			Nendica (Wednesday, 20-May-2020, 09:00 - 11:00)															
			TSN ad-hoc (Tuesday, 19-May-2020, 14:00 - 16:00)															
			Security TG (Tuesday, 19-May-2020, 13:30 - 15:30)															
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			YANGsters (Tuesday, 19-May-2020, 10:00 - 11:00)															
			Time-Sensitive Networking TG (Tuesday, 19-May-2020, 09:00 - 10:00)															
			Time-Sensitive Networking TG (Monday, 18-May-2020, 14:00 - 16:00)															
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			Time-Sensitive Networking TG (Monday, 18-May-2020, - PM1 11:00 - 13:00)															
			Time-Sensitive Networking TG + IEC/IEEE 60802 Joint Project (Monday, 18-May-2020, 09:00 - 11:00)															
Last Name	First Name	Affiliation																
Abdul	Amin	Molex Canada	.	.	.					.	.	.	.	.	.	.	.	.
ADEMAJ	Astrit	TTTech Computertechnik AG	.		.													
Andersdotter	Amelia	Article 19		.			.											
Arunarathi	Venkat	Broadcom Corporation			.													
Assmann	Ralf	Marvell Semiconductor, Inc.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
AYAZ	SERKAN	Representing myself			.		.		.	.	.	.	.	.	.	.	.	.
Bechtel	Gordon	Bechtel																.
Belliardi	Rudy	Schneider Electric; IEC TC 65	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Bierschenk	Jens	Robert Bosch GmbH	.							.								
Boiger	Christian	b-plus GmbH	.	.		.		.		.	.	.	.	.	.	.	.	.
bordogna	mark	Intel													.			
Bottorff	Paul	Hewlett-Packard Development Company, L.P.	.				.			.	.	.	.	.	.	.	.	.
Canchi	Radhakrishna	Kyocera International Inc	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Chen	Feng	Siemens AG	.	.	.			.	.	.	.	.	.	.	.	.	.	.
Chen	Lihao	Huawei Technologies Co. Ltd	.	.						.				.	.	.	.	.
Chou	Vincent	Marvell Semiconductor, Inc.			.										.			
Choudhury	Abhijit	Broadcom Corporation			.													.
Congdon	Paul	Huawei Technologies Co. Ltd; Tallac Networks; Huawei	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cummings	Rodney	National Instruments Corporation	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
DeLaOlivaDelgado	Antonio	Universidad Carlos III Madrid												.				
Dorr	Josef	Siemens AG	.	.	.			.	.	.	.	.	.	.	.	.	.	.
Dubrawski	Richard	ViaSat, Inc.		.			.		.		.		.
Ehlers	Kristian	Microchip Technology, Inc.	.					.										
Ellison	Mark	Independent			.													

IEEE 802.1 May 18-22, 2020 Interim Session (Electronic)

[illegible]

IEEE 802.1 May 18-22, 2020 Interim Session (Electronic)

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Last Name	First Name	Affiliation										
Riegel	Maximilian	Nokia										
Rodrigues	Silvana	Huawei Technologies Co. Ltd;Huawei Technologies Co., Ltd	•	•	•	•		•	•		•	•
Rouyer	Jessy	Nokia	•	•	•	•	•	•		•	•	•
Ruffini	Stefano	Ericsson AB	•									
Sato	Atsushi	Yokogawa Electric Corporation	•	•				•	•		•	•
Seaman	Michael	Individual			•			•				•
Seewald	Maik	Cisco Systems, Inc.	•	•	•	•		•	•		•	•
Sivakolundu	Ramesh	Cisco Systems, Inc.	•	•		•	•	•	•		•	•
Soeda	Tatsuo	Yaskawa	•						•			
Specht	Johannes	Self;University of Duisburg-Essen and General Motors Company	•		•	•		•		•		•
Stanica	Marius	ABB AB	•	•	•	•		•	•	•	•	
Stanton	Kevin	Intel Corporation	•	•								
Steindl	Guenter	Siemens AG	•	•				•		•	•	
Sun	Liyang	HUAWEI								•		
Takita	Daisuke	Mitsubishi Electric Corporation	•							•		
Tarui	Isao	Mitsubishi Electric Corporation	•	•						•		
Tatolov	Ievgen	Robert Bosch Car Multimedia GmbH	•	•								•
Teichmann	Thies	C&S group GmbH			•							
traore	karim	Microchip/Microsemi Corporation	•	•	•			•		•	•	•
Turner	Max	Ethernovia	•	•	•	•		•	•	•	•	•
Varga	Balazs	Ericsson AB	•	•				•		•	•	•
Wamsser	Reiner	IEC SC65C MT9-Member	•	•						•		
Wang	Tongtong	Huawei Technologies Co. Ltd	•	•	•			•	•	•		•
Wang	Xinyuan	Huawei Technologies Co. Ltd		•		•	•	•	•	•	•	•
Winkel	Ludwig	PNO e.V.	•	•	•					•	•	
Woods	Jordon	Analog Devices Inc.	•	•	•	•		•		•	•	•
Wuesteney	Lukas	Hirschmann Automation and Control, Inc.						•		•		
YU	Yi	Rockwell Automation	•	•		•				•	•	•
Zein	Nader	NEC Europe (NLE)	•	•	•	•	•	•	•	•	•	•
Zhao	William	Siemens AG		•	•	•		•	•	•	•	•
Zhou	Chuanhai	Marvell Semiconductor, Inc.				•						•
Ziegler	Alexander	Siemens AG								•		
Zuponicic	Steven	Rockwell Automation	•	•						•	•	•

2 802.1 Officers and Management

Glenn Parsons	Working Group Chair
John Messenger	Working Group Vice-Chair
Jessy Rouyer	Working Group Secretary
Paul Congdon	Maintenance Task Group Chair
Mick Seaman	Security Task Group Chair
Karen Randall	Security Task Group Vice-Chair
János Farkas	Time-Sensitive Networking Task Group Chair
Craig Gunther	Time-Sensitive Networking Task Group Vice-Chair
Marina Gutiérrez	Time-Sensitive Networking Task Group Secretary
Ludwig Winkel	IEC/IEEE 60802 Joint Project Chair
Josef Dorr	IEC/IEEE 60802 Joint Project Secretary
Roger Marks	Nendica Chair
Scott Mansfield	YANGsters Chair
Stephan Kehrer	YANGsters Vice-Chair and Secretary
Mark Hantel	Email Maintenance and IEC/IEEE 60802 Joint Project Website Maintenance
Paul Unbehagen	Website Maintenance
Hal Keen	Email Maintenance

3 Maintenance Task Group

Minutes of TG conference calls held between sessions are available at <https://1.ieee802.org/maintenance/>.

3.1 Thursday May 21, 2020

3.1.1 2:00 – 4:26 PM EDT

Paul Congdon, Maintenance TG Chair, presided and wrote the minutes.

Attendance as recorded in IMAT by individual participants is in section 1.

2:00 PM EDT call to order by the TG Chair

At the beginning of the meeting the Paul Congdon presented the IEEE-SA Copyright Policy <https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/copyright-policy-WG-meetings.potx>, and the IEEE- SA PatCom Patent Slides for Standards Development Meetings <https://development.standards.ieee.org/myproject/Public/mytools/mob/slideset.pdf>, the IEEE 802 Participation slide <https://mentor.ieee.org/802-ec/dcn/17/ec-17-0093-05-0PNP-ieee-802-participation-slide-ppt.ppt>, and made the Call for Potentially Essential Patents. There were no responses to the call prior to the end of the meeting.

The Maintenance Task Group Chair, Paul Congdon, presided and wrote the minutes.

The TG Chair introduced the agenda per *Maintenance Task Group Meeting May 21, 2020 Agenda* <http://www.ieee802.org/1/files/public/docs2020/maint-congdon-concall-bis-0520-v01.pdf> that was approved.

- A question regarding how and when the TG would review the response to 802.3 PAR comments made previously.

Disposition: Since 802.3 has not yet officially provided a response to 802.1 comments, the TG wasn't in a position to discuss further at this meeting.

Karen Randall:

- Led the discussion of the 802.1 WG response to 802.1Q FDIS comments in <http://www.ieee802.org/1/files/public/docs2020/maint-randall-SC6CmtResp8021QFDIS-0520-v01.pdf>.
 - **Disposition:** No additional changes were suggested to the response. Sending the reviewed response will be the subject of a future ePoll.
- Led the discussion of SC6 status in <http://www.ieee802.org/1/files/public/docs2020/maint-congdon-concall-bis-0520-v01.pdf>
 - **Disposition:** It was pointed out that the TG is not tracking 802.1CS and since it is heading to SA ballot, it would be ready to be sent for information. The following standards are ready for a motion to be sent for adoption once published via a future ePoll; Qcr, AE-Cor, CMde, and Qcx.

The TG Chair:

- Led the discussion of existing maintenance items:
 - [0242](#): IEEE Std 802.1Qcp-2018: Collected issues on data consistency and others – YANGsters Update
 - [0248](#): Managed objects for ECP in 802.1Q-2018
 - [0254](#): 802.1Q-2018 5.4 VLAN Bridge Component Requirements item p)
 - [0258](#): 802.1CB-2017 7.4.3.3 SequenceRecoveryReset – TSN Update
- Led the discussion of new maintenance items with contributions provided by others:
 - [0263](#): 802.1AS-2020: Number of TLVs in one Signaling message and TLV lengths shown in table 10-13
 - [0264](#): Erroneous xpath statements
 - Don Fedyk led the discussion of this item using *Maintenance Item 0264: Erroneous xpath statements* <http://www.ieee802.org/1/files/public/docs2020/maint-fedyk-item-0264-0520-v01.pdf>.
 - [0265](#): 802.1CB-2017 7.4.3.5 MatchRecoveryAlgorithm
 - Balázs Varga led the discussion of this item using “265” – *FRERMatchRecoveryAlgorithm* <http://www.ieee802.org/1/files/public/docs2020/maint-varga-265-FRER-matchrecovery-0420-v01.pdf>
 - [0266](#): 802.1Q-2018 12.29.1.2.1 GateControlEntry
- **Disposition on maintenance item discussions:** 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’.

Future meetings/teleconferences

A future conference call will be proposed in approximately two weeks to address agenda items that were not covered during this session. Additional meetings should be expected where specific dates/times are to be announced subject to notice of at least 10 days to the 802.1 email exploder.

Any Other Business

No further business was discussed in this meeting.

4:26 PM EDT adjournment

Post-meeting, the TG Chair provided session slides updated based on discussion in <http://www.ieee802.org/1/files/public/docs2020/maint-congdon-concall-bis-0520-v02.pdf>. The TG website at <http://www.ieee802.org/1/maint.html> provides further details and discussion.

4 Security Task Group

Minutes of TG conference calls held between sessions are available at <https://1.ieee802.org/security/security-task-group-minutes/>.

4.1 Monday May 18, 2020

4.1.1 1:30 – 3:38 PM EDT

Mick Seaman, Security TG Chair, presided and wrote the minutes.

Attendance as recorded in IMAT by individual participants is in section 1.

Attendance as recorded by the TG Chair follows:

- Amelia Andersdotter (Independent)
- Rich Dubrawski (Viasat Inc)
- Don Fedyk (LabN Consulting)
- Randy Kelsey (Engineering Solutions, Inc.)
- Glenn Parsons (Ericsson)
- Karen Randall (Randall Consulting)

Mick Seaman (Independent, 802.1 Security Task Group Chair, minutes of this meeting)
[Note that minuted contributions from any attendee can not/should not be assumed to represent a position of their employer or affiliated organization as shown. Participation in 802.1 is on individual basis as for all IEEE 802 meetings: <https://mentor.ieee.org/802-ec/dcn/17/ec-17-0093-05-0PNP-ieee-802-participation-slide-ppt.ppt>.]

0. The chair called the meeting to order at 1.30 Eastern Time and showed the SA PatCom Patent Slides for Standards Development Meetings

<https://development.standards.ieee.org/myproject/Public/mytools/mob/slideset.pdf>,

the IEEE 802 Participation slide <https://mentor.ieee.org/802-ec/dcn/17/ec-17-0093-05-0PNP-ieee-802-participation-slide-ppt.ppt>,

the IEEE-SA Copyright Policy slides <https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/copyright-policy-WG-meetings.potx>.

There were no responses to the call for patents.

1. Agenda

- P802.1AEdk MAC Security: MAC Privacy protection
Draft development

2. P802.1AEdk MAC Security: MAC Privacy protection

Don Fedyk (P802.1AEdk Editor) reviewed work done on Clause 20 and presented *Simplified EDE Management adjusted for mapping* <http://www.ieee802.org/1/files/public/docs2020/dk-fedyk-dot1aedk-simple-management-0520-v00.pdf>

Disposition: terminology should align with existing .1AE figure 15-6.

Mick Seaman presented the first slide (Alternate PrY and SecY client relationships) of *MAC Privacy protection in system*

<http://www.ieee802.org/1/files/public/docs2020/dk-seaman-privacy-protection-in-systems-0520-v00.pdf>

Disposition: proceed with alternative B, PrY/SecY combination offers single Private Port (secured) to user with frames not requiring any privacy protection identified by ISS connection_identifier subparameter (see 8092.1AC-2016 11.1 and 802.1CB-2017 6.2).

3. Meeting adjourned: the teleconference concluded 3.38 pm Eastern Time.

4.2 Tuesday May 19, 2020

4.2.1 11:00 AM – 11:52 AM EDT

Mick Seaman, Security TG Chair, presided and wrote the minutes.

Attendance as recorded in IMAT by individual participants is in section 1.

Attendance as recorded by the TG Chair follows:

- Amelia Andersdotter (Independent)
- Rich Dubrawski (Viasat Inc)
- Don Fedyk (LabN Consulting)
- Jodi Haasz (IEEE Staff)
- Jerome Henry (Cisco)
- Randy Kelsey (Engineering Solutions, Inc.)
- Glenn Parsons (Ericsson)
- Karen Randall (Randall Consulting)
- Max Riegel (Nokia)

Mick Seaman (Independent, 802.1 Security Task Group Chair, minutes of this meeting)

[Note that minuted contributions from any attendee can not/should not be assumed to represent a position of their employer or affiliated organization as shown. Participation in 802.1 is on individual basis as for all IEEE 802 meetings: <https://mentor.ieee.org/802-ec/dcn/17/ec-17-0093-05-0PNP-ieee-802-participation-slide-ppt.ppt>.]

0. The chair called the meeting to order at 11.00 Eastern Time and showed the SA PatCom Patent Slides for Standards Development Meetings

<https://development.standards.ieee.org/myproject/Public/mytools/mob/slideset.pdf>,

the IEEE 802 Participation slide <https://mentor.ieee.org/802-ec/dcn/17/ec-17-0093-05-0PNP-ieee-802-participation-slide-ppt.ppt>,

the IEEE-SA Copyright Policy slides <https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/copyright-policy-WG-meetings.potx>.

There were no responses to the call for patents.

1. Agenda

- P802E Recommended Practice for Privacy Considerations for IEEE 802 Technologies 1st SA Recirculation Ballot Comment Resolution

2. P802E: 1st Recirculation Ballot Comment Resolution

Jerome Henry (P802E Editor) presented the proposed disposition of comments:

<http://www.ieee802.org/1/files/private/802-e-drafts/d2/802E-d2-0-sponsor-pdis0.pdf>

Following discussion it was agreed (none dissenting) that the draft would be recirculated (2nd SA recirculation) without further changes to the draft or the comment responses.

[A file copy of the proposed disposition has been renamed as "...-dis" to reflect conclusion of this stage of the ballot. This copy also notes those comments received on the initial ballot that accompanied a Disapprove, were must Be Satisfied, and where the commenter has not agreed that they have been satisfactorily resolved.

<http://www.ieee802.org/1/files/private/802-e-drafts/d2/802E-d2-0-sponsor-dis.pdf>

3. Meeting adjourned: the teleconference concluded 11.52 am Eastern Time.

4.2.2 1:30 – 3:10 PM EDT

Mick Seaman, Security TG Chair, presided and wrote the minutes.

Attendance as recorded in IMAT by individual participants is in section 1.

Attendance as recorded by the TG Chair follows:

- Rich Dubrawski (Viasat Inc)
- Don Fedyk (LabN Consulting)
- Randy Kelsey (Engineering Solutions, Inc.)
- Glenn Parsons (Ericsson)
- Karen Randall (Randall Consulting)

Mick Seaman (Independent, 802.1 Security Task Group Chair, minutes of this meeting)

[Note that minuted contributions from any attendee can not/should not be assumed to represent a position of their employer or affiliated organization as shown. Participation in 802.1 is on individual basis as for all IEEE 802 meetings: <https://mentor.ieee.org/802-ec/dcn/17/ec-17-0093-05-0PNP-ieee-802-participation-slide-ppt.ppt>.]

0. The chair called the meeting to order at 1.30 Eastern Time and showed the SA PatCom Patent Slides for Standards Development Meetings

<https://development.standards.ieee.org/myproject/Public/mytools/mob/slideset.pdf>,

the IEEE 802 Participation slide <https://mentor.ieee.org/802-ec/dcn/17/ec-17-0093-05-0PNP-ieee-802-participation-slide-ppt.ppt>,

the IEEE-SA Copyright Policy slides <https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/copyright-policy-WG-meetings.potx>.

There were no responses to the call for patents.

1. Agenda

- P802.1AEdk MAC Security: MAC Privacy protection Draft development

2. P802.1AEdk MAC Security: MAC Privacy protection

Don Fedyk (P802.1AEdk Editor) presented *Clause 20 pictures*

<http://www.ieee802.org/1/files/public/docs2020/dk-fedyk-dot1aedk-clause-20-0520-v00.pdf>. These

would be updated based on our May 19, 2020 teleconference. Discussion of bandwidth sharing between channels when both Standard and Express Channel map to the same access priority. No buffering (or at least minimal while an MPPDU is being filled) within the PrY. In a bridge it is the Forwarding Process that determines the order of frame transmission.

3. Meeting adjourned: the teleconference concluded 3.10 pm Eastern Time.

4.3 Wednesday May 20, 2020

4.3.1 1:30 – 3:28 PM EDT

Mick Seaman, Security TG Chair, presided and wrote the minutes.

Attendance as recorded in IMAT by individual participants is in section 1.

Attendance as recorded by the TG Chair follows:

- Rich Dubrawski (Viasat Inc)
- Don Fedyk (LabN Consulting)
- Randy Kelsey (Engineering Solutions, Inc.)
- Scott Mansfield (Ericsson)
- Glenn Parsons (Ericsson)
- Karen Randall (Randall Consulting)
- Jessy Rouyer (Nokia)
- Mick Seaman (Independent, 802.1 Security Task Group Chair, minutes of this meeting)
- Marius Stanica (ABB)
- Max Turner (Ethernova)
- William Zhao (Siemens)

[Note that minuted contributions from any attendee can not/should not be assumed to represent a position of their employer or affiliated organization as shown. Participation in 802.1 is on individual basis as for all IEEE 802 meetings: <https://mentor.ieee.org/802-ec/dcn/17/ec-17-0093-05-0PNP-ieee-802-participation-slide-ppt.ppt>.]

0. The chair called the meeting to order at 1.30 Eastern Time and showed the SA PatCom Patent Slides for Standards Development Meetings

<https://development.standards.ieee.org/myproject/Public/mytools/mob/slideset.pdf>,

the IEEE 802 Participation slide <https://mentor.ieee.org/802-ec/dcn/17/ec-17-0093-05-0PNP-ieee-802-participation-slide-ppt.ppt>,

the IEEE-SA Copyright Policy slides <https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/copyright-policy-WG-meetings.potx>.

There were no responses to the call for patents.

1. Agenda

- P802.1AEdk MAC Security: MAC Privacy protection Draft development
- A.O.B.
- Future meetings/teleconferences

2. P802.1AEdk MAC Security: MAC Privacy protection

Mick Seaman presented an update on suggested text for Clause 17, following on from the discussion in the March teleconferences:

<http://www.ieee802.org/1/files/public/docs2020/dk-seaman-dk17-suggested-text-0503-v01.pdf>

This had not been updated to reflect the May 18, 2020 discussion of selective privacy protection. Discussion of the recommendation (should, page 24 line 35) to use the PAE Group Address used by MACsec to address the peer PrY. This permits use of an individual address for the peer to accommodate PrY/SecY separation. An individual address should be used in this case to avoid accidental flooding of unintelligible frames. Use of an individual address not recommended in the general case, because that could dictate the network topology and the topology should not depend on the enabled/disabled state of privacy. Need to be sensitive to the need to deploy in stages, and to be able to check as deployment proceeds – which is why PrY operation is not tied to MACsec confidentiality.

Don Fedyk (P802.1AEdk Editor) reviewed *YANG based Config for MAC Privacy 802.1AEdk Questions* <http://www.ieee802.org/1/files/public/docs2020/dk-fedyk-dot1aedk-document-open-questions-0520-v00.pdf>. Discussion of “minimal configuration”. Expect experience to add to transmitter strategy over time, while receiver behavior is simpler and remain tolerant of a range of strategies. Needs basic management to be useful for a customer (equipment procurement) perspective, offering enough basic capability. Organization of the management data is management protocol dependent - the natural organization for SNMP (with weak table capabilities) can differ from that for YANG (with weak default capabilities). Balance between a complete self-contained YANG solution and the way that YANG is predominantly used with additional supporting tools. Need to ensure that having complete YANG is not the project length determining item. additional discussion of priority mapping tables, with some possibility of combination for simplification - more in line with a YANG augmentation approach than the separate approach of SNMP.

Next steps will be assembling current material into a rough draft to facilitate comments, although that draft will be made available as soon as possible so will not incorporate the results of this session's teleconferences.

[Draft now available at <http://www.ieee802.org/1/files/private/dk-drafts/d0/802-1AEdk-d0-1.pdf>]

3. A.O.B.

There was no other business.

4. Future meetings/teleconferences

Will be scheduled as necessary, subject to the usual notice, when there is further input material to review.

5. Meeting adjourned: the teleconference concluded 3.28 pm Eastern Time.

5 Time-Sensitive Networking Task Group

Minutes of TG conference calls held between sessions are available at <https://1.ieee802.org/tsn-calls/>.

5.1 Monday May 18, 2020

5.1.1 9:00 – 11:00 AM EDT

Electronic meeting: IEC/IEEE 60802 Joint Project
This electronic meeting was based on the announcement; see IEC collaboration tool <http://collaboration.iec.ch/> and <http://www.ieee802.org/1>

Date: 2020-05-18

IEC WG9/PT 60802 Convenor and IEC/IEEE 60802 Joint Project chair:

Ludwig Winkel

Minutes by: Josef Dorr (60802 Secretary)

Attendance as recorded in IMAT by individual participants is in section 1.

Ludwig Winkel, IEC/IEEE 60802 Joint Project Chair (60802 Chair) called the meeting to order at 09:00 AM ET.

Agenda (as previously circulated at <https://1.ieee802.org/2020-05-tsn-agenda/>):

0. János Farkas, TSN TG Chair, presented the IEEE SA copyright and patent policy slides: <http://www.ieee802.org/1/files/public/docs2019/admin-farkas-60802-call-intro-1219-v01.pdf>. The 60802 Chair explained that the IEC/IEEE 60802 Joint Project follows the usual policies, including IEC patent (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) policies, as well as IEEE SA patent (<https://standards.ieee.org/about/sasb/patcom/materials.html>) and copyright (<https://standards.ieee.org/ipr/index.html>) policies. There was no response to the call for patents.

The 60802 Chair repeated the information given last week that the IEC changed the organization by discarding PT60802 and established instead a new WG 18 within IEC SC65C hosting now IEC/IEEE 60802 and future other projects like the test-spec for 60802.

1. Jordon Woods provided the *Editor's Report 60802 Draft 1.2* <http://www.ieee802.org/1/files/public/docs2020/60802-woods-D1-2-update-0520-v01.pdf>.
2. Geoffrey Garner presented and led the discussion on *New simulation results for time error performance for transport over an IEC/IEEE 60802 network* <http://www.ieee802.org/1/files/public/docs2020/60802-garner-new-simulation-results-dte-60802-network-0520-v00.pdf>.
A total number of 30 simulation results was presented, which were based on various modified assumptions for simulations.
Disposition: Further discussion is needed. The discussion of next steps was scheduled on the IEC/IEEE Joint Project 60802 electronic meeting 20 May 2020.

11:00 AM ET adjournment

5.1.2 11:00 AM – 1:00 PM EDT

János Farkas, TSN TG Chair, presided. Marina Gutiérrez wrote the minutes.

Attendance as recorded in IMAT by individual participants is in section 1.

11:00 AM call to order by the TG Chair

0. The TSN TG Chair showed:
 - The IEEE SA Copyright Policy slides,
 - The IEEE SA PatCom Patent Slides for Standards Development Meetings,
 - The IEEE SA slides regarding IEEE Codes of Ethics and Conduct, participation in the "individual process", and dominance,
 - The decorum information, and
 - The reminder for participants to register their attendance in IMATcontained in MEETING INTRODUCTION <http://www.ieee802.org/1/files/public/docs2020/admin-farkas-tsn-electronic-meeting-intro-0520-v01.pdf> thereby providing the information on slides 2 and 5 of this presentation, and made the Calls for Potentially Essential Patents: there were no responses to these Calls prior to the end of the week's session.

1. Approval of agenda.

The TSN TG Chair presented the schedule and the agenda for the week:

<https://1.ieee802.org/2020-05-tsn-agenda/>.

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

2. P802.1ASdm PAR and CSD comments.

Rodney Cummings presented the comments received and led their resolution:

<http://www.ieee802.org/1/files/public/docs2020/dm-PAR-CSD-comments-0520-v03.pdf>

<http://www.ieee802.org/1/files/public/docs2020/dm-PAR-0520-v01.pdf>

<http://www.ieee802.org/1/files/public/docs2020/dm-CSD-0520-v01.pdf>

Disposition: ePolls #42 and #43 on PAR and CSD, respectively:

<http://www.ieee802.org/1/files/public/minutes/2020-05-exec-motions.pdf#pake=4>.

3. Ludwig Winkel presented changes in the organization of PT60802 in IEC using the incoming liaison http://www.ieee802.org/1/files/private/liaisons/65C-1025e-AC-new_WG18_creation-0520.pdf.

Disposition: for information only.

4. Silvana Rodrigues presented the *ITU-T SG15-LS258: latest draft of ITU-T New Rec. G.781.1* incoming liaison <http://www.ieee802.org/1/files/private/liaisons/liaison-SG15-LS258-g781-1-0420.pdf>.

Disposition: input is taken to the IEC/IEEE 60802 Joint Project. IEC access to be sorted out.

1:00 PM – 2:00 PM EDT: recess

5. Josef Dorr presented the *LNI 4.0 document exchange* incoming liaison

<http://www.ieee802.org/1/files/public/docs2020/liaison-LNI40-LRP-RAP-WP-0520-v01.pdf>.

Disposition: response to be written on Thursday: <https://1.ieee802.org/2020-05-tsn-agenda/#Thursday>

6. The TSN TG Chair presented *3GPP SA WG2: TSN support in 3GPP Release-16 stage 2 completion* incoming liaison <http://www.ieee802.org/1/files/public/docs2020/liaison-3GPP-S2-2003508-TSN-0420.pdf>

Disposition: ad hoc on Tuesday, 2:00 PM – 4:00 PM to draft liaison response:

https://1.ieee802.org/2020-05-tsn-agenda/#TSN_ad-hoc; response to be finalized on Thursday:

<https://1.ieee802.org/2020-05-tsn-agenda/#Thursday>

7. Jessy Rouyer presented the *MEF LS00308: Transport Services for Mobile Networks* incoming liaison http://www.ieee802.org/1/files/public/docs2020/liaison-MEF-LS00308-Transport_Services_for_Mobile_Networks-0520.pdf

Disposition: for information, no response needed

8. Rodney Cummings presented *Options for P802.1ASdn YANG*

<http://www.ieee802.org/1/files/public/docs2020/dn-cummings-as-yang-options-0520-v01.pdf>

Disposition: PAR and CSD to be written on Thursday: <https://1.ieee802.org/2020-05-tsn-agenda/#Thursday>

9. Marina Gutiérrez, P802.1Qcw Editor, led the resolution of comments received on <http://www.ieee802.org/1/files/private/cw-drafts/d1/802-1Qcw-d1-1.pdf>.

No comment was resolved.

Disposition: comment resolution to be continued on Tuesday: https://1.ieee802.org/2020-05-tsn-agenda/#Generic_TSN-2.

No other business was discussed on this call.

4:00 PM adjourn

5.2 Tuesday May 19, 2020

5.2.1 9:00 – 10:00 AM ET

Craig Gunther, TSN TG Vice-Chair, presided. Marina Gutiérrez wrote the minutes.

Attendance as recorded in IMAT by individual participants is in section 1.

9:00 AM call to order by the TG Vice Chair

Agenda and dispositions:

0. Craig Gunther, TSN TG Vice-Chair, presented the copyright, patent, and participation slides <http://www.ieee802.org/1/files/public/docs2020/admin-cgunther-tsn-dg-automotive-intro-slides-0520-v03.pdf> and made the Call for Potentially Essential Patents: there were no responses.

1. Craig Gunther, P802.1DG Editor, presented *P802.1DG/D1.2 Editor's Report for Ballot Comment Resolution (v2)* <http://www.ieee802.org/1/files/public/docs2020/dg-cgunther-editors-report-d1-2-0520-v02.pdf> and continued the resolution of comments received on <http://www.ieee802.org/1/files/private/dg-drafts/d1/802-1DG-d1-2.pdf>.

Disposition: Ballot comments 33, 96, 151 were discussed and resolved as documented in <http://www.ieee802.org/1/files/private/dg-drafts/d1/802-1DG-d1-2-pdis-v03.pdf>

11:00 AM adjourn

5.2.2 11:30 AM – 1:30 PM EDT

János Farkas, TSN TG Chair, presided. Marina Gutiérrez wrote the minutes.

Attendance as recorded in IMAT by individual participants is in section 1.

11:30 AM call to order by the TG Chair

Agenda (as previously circulated at <https://1.ieee802.org/2020-05-tsn-agenda/>):

0. János Farkas, TSN TG Chair, presented the IEEE SA copyright and patent policy slides: <http://www.ieee802.org/1/files/public/docs2020/admin-farkas-tsn-electronic-meeting-intro-0520-v01.pdf>. There was no response to the call for patents.

1. Christophe Mangin, P802.1CBdb Editor, presented *802.1CBdb/D0.6 Intermediate draft status* <http://www.ieee802.org/1/files/public/docs2020/db-mangin-d0-6-status-0520-v01.pdf>

Disposition: <http://www.ieee802.org/1/files/private/db-drafts/d0/802-1CBdb-d0-6.pdf> is an intermediate draft. The next TG ballot would be on a new draft.

2. Feng Chen, P802.1Qdd Editor, presented <http://www.ieee802.org/1/files/private/dd-drafts/d0/802-1Qdd-d0-2.pdf> and *Examples for Using Multiple-Context Talker Announce for Redundancy* <http://www.ieee802.org/1/files/public/docs2020/dd-chen-multiple-context-talker-announce-examples-0520-v01.pdf>

Disposition: TG ballot on D0.2.

3. Marina Gutiérrez, P802.1Qcw Editor, led the resolution of comments received on <http://www.ieee802.org/1/files/private/cw-drafts/d1/802-1Qcw-d1-1.pdf>.

Disposition: Comments 87, 84, 81, 82, 83, 49, 48 65, 66, 70, 71, 75, 78, 79, 85, 86, 88, 91, 92, 95, 54, 55, 56, 57, 58, 59, 60, 61, 76, 77 were resolved. Comment resolution to be continued on Thursday: <https://1.ieee802.org/2020-05-tsn-agenda/#Thursday>.

01:30 PM adjourn

5.2.3 2:00 – 4:00 PM EDT

János Farkas, TSN TG Chair, presided. Marina Gutiérrez wrote the minutes.

Attendance as recorded in IMAT by individual participants is in section 1.

2:00 PM EDT call to order by the TG Chair

Agenda (as previously announced at <https://1.ieee802.org/2020-05-tsn-agenda/>):

0. János Farkas, TSN TG Chair, presented the IEEE SA copyright and patent policy slides: <http://www.ieee802.org/1/files/public/docs2020/admin-farkas-tsn-electronic-meeting-intro-0420-v01.pdf>. There was no response to the call for patents.

1. János Farkas led the drafting of a response to the <http://www.ieee802.org/1/files/public/docs2020/liaison-3GPP-S2-2003508-TSN-0420.pdf> incoming liaison

Disposition: discuss further in TSN TG on May 21, 2020: <https://1.ieee802.org/2020-05-tsn-agenda/#Thursday>

5.3 Wednesday May 20, 2020

5.3.1 9:00 – 11:00 AM EDT

Electronic meeting: IEC/IEEE 60802 Joint Project

This electronic meeting was based on the announcement; see IEC collaboration tool <http://collaboration.iec.ch/> and <http://www.ieee802.org/1>

Date: 2020-05-20

65C/WG18 Convenor and IEC/IEEE 60802 Joint Project chair:

Ludwig Winkel

Minutes by: Josef Dorr (60802 Secretary)

Attendance as recorded in IMAT by individual participants is in section 1.

Agenda (as previously circulated at <https://1.ieee802.org/2020-05-tsn-agenda/>):

Ludwig Winkel, IEC/IEEE 60802 Joint Project Chair (60802 Chair) called the meeting to order at 09:00 AM ET.

0. János Farkas, TSN TG Chair, presented the IEEE SA copyright and patent policy slides:
<http://www.ieee802.org/1/files/public/docs2019/admin-farkas-60802-call-intro-1219-v01.pdf>.

The 60802 Chair explained that the IEC/IEEE 60802 Joint Project follows the usual policies, including IEC patent (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) policies, as well as IEEE SA patent (<https://standards.ieee.org/about/sasb/patcom/materials.html>) and copyright (<https://standards.ieee.org/ipr/index.html>) policies.

There was no response to the call for patents.

1. The discussion on *New simulation results for time error performance for transport over an IEC/IEEE 60802 network* <http://www.ieee802.org/1/files/public/docs2020/60802-garner-new-simulation-results-dte-60802-network-0520-v01.pdf> was continued under the lead of Geoffrey Garner.

Disposition: Further discussion is needed. Günter Steindl and others will upload a contribution concerning industrial synchronization requirements. The discussion about next steps will be continued on the email reflector.

2. Günter Steindl presented and led the discussion on *IEC/IEEE 60802 Application Timing models* <http://www.ieee802.org/1/files/public/docs2020/60802-Steindl-TimingModels-0520-v2.pdf>.

Disposition: Further work and discussion on the contribution is needed.

3. Günter Steindl provided an update on *Example Selections* (<http://www.ieee802.org/1/files/public/docs2020/60802-Steindl-et-al-ExampleSelection-0520-v24.pdf>) and *Tables* (<http://www.ieee802.org/1/files/public/docs2020/60802-Steindl-et-al-ExampleSelectionTables-0520-v24.pdf>). Günter Steindl thanked all contributors to the *Example Selections* for their intense and fruitful cooperation. No further work on the Example Selections is planned.

Disposition: Next step will be to integrate in a future 60802 draft to start broader discussion.

4. Günter Steindl started to present *IEC/IEEE 60802 Inter TSN domain communication concept* <http://www.ieee802.org/1/files/public/docs2020/60802-Steindl-et-al-InterTsnDomainCommunication-0520-v1.pdf>.

Disposition: The presentation will be continued in the next IEC/IEEE 60802 electronic meeting on June 8, 2020.

5. Draft minutes were reviewed at the end of the electronic meeting under the lead of the 60802 Secretary.

11:00 AM ET adjournment

5.3.2 11:30 AM – 1:30 PM EDT

János Farkas, TSN TG Chair, presided. Marina Gutiérrez wrote the minutes.

Attendance as recorded in IMAT by individual participants is in section 1.

11:30 AM call to order by the TG Chair

Agenda (as previously circulated at <https://1.ieee802.org/2020-05-tsn-agenda/>):

0. János Farkas, TSN TG Chair, presented the IEEE SA copyright and patent policy slides: <http://www.ieee802.org/1/files/public/docs2020/admin-farkas-tsn-electronic-meeting-intro-0520-v01.pdf>. There was no response to the call for patents.

1. Stephan Kehrer, P802.1Qdj Editor, presented *IEEE P802.1Qdj Update on draft d0.0* <http://www.ieee802.org/1/files/public/docs2020/dj-kehrer-P8021Qdj-d0-0-update-0520-v01.pdf>

Disposition: further discussion needed, contributions were encouraged.

2. Paul Congdon, P802.1Qcz Editor, led the resolution of comments received on <http://www.ieee802.org/1/files/private/cz-drafts/d1/802-1Qcz-d1-0.pdf>.

- Simulations available at <https://github.com/PaulCongdon/tr-sim>.

Disposition: Comments 6, 11, 18, 20, 21 were resolved. Comment resolution to be continued on Thursday: <https://1.ieee802.org/2020-05-tsn-agenda/#Thursday>.

01:30 PM adjourn

5.4 Thursday May 21, 2020

5.4.1 9:00 AM – 1:30 PM EDT

János Farkas, TSN TG Chair, presided. Marina Gutiérrez wrote the minutes.

Attendance as recorded in IMAT by individual participants is in section 1.

09:00 AM call to order by the TG Chair

Agenda (as previously circulated at <https://1.ieee802.org/2020-05-tsn-agenda/>):

0. János Farkas, TSN TG Chair, presented the IEEE SA copyright and patent policy slides: <http://www.ieee802.org/1/files/public/docs2020/admin-farkas-tsn-electronic-meeting-intro-0520-v01.pdf>. There was no response to the call for patents.

1. Rodney Cummings led the development of the P802.1ASdn PAR/CSD.

<http://www.ieee802.org/1/files/public/docs2020/dn-draft-PAR-0520-v01.pdf>

<http://www.ieee802.org/1/files/public/docs2020/dn-draft-CSD-0520-v01.pdf>

Disposition: PAR and CSD to be pre-circulated for the July 2020 IEEE 802 plenary session.

2. The TSN TG Chair led the drafting of the *Liaison response on document exchange* <http://www.ieee802.org/1/files/public/docs2020/liaison-response-LNI-4-0-document-exchange-0520-v01.pdf>.

Disposition: ePoll #45: <http://www.ieee802.org/1/files/public/minutes/2020-06-exec-motions.pdf#page=6>.

3. The TSN TG Chair led the drafting of the *Response to LS on TSN support in 3GPP Release-16 stage 2 completion* <http://www.ieee802.org/1/files/public/docs2020/liaison-response-TSN-support-in-3GPP-Release-16-0520-v01.pdf>

Disposition: ePoll #44: <http://www.ieee802.org/1/files/public/minutes/2020-06-exec-motions.pdf#page=5>.

4. Stephan Kehrer, P802.1CBcv Editor, led the resolution of comments received on

<http://www.ieee802.org/1/files/private/cv-drafts/d0/802-1CBcv-d0-3.pdf>.

Disposition: Final disposition: <http://www.ieee802.org/1/files/private/cv-drafts/d0/802-1CBcv-d0-3-dis-v01.pdf>. Next: further TG ballot.

5. Paul Congdon, P802.1Qcz Editor, continued the resolution of comments received on <http://www.ieee802.org/1/files/private/cz-drafts/d1/802-1Qcz-d1-0.pdf>.

Disposition: Final disposition: <http://www.ieee802.org/1/files/private/cz-drafts/d1/802-1Qcz-d1-0-dis-v01.pdf>. Next: WG recirculation ballot.

01:30 PM adjourn

5.5 Friday May 22, 2020

5.5.1 9:00 AM – 1:30 PM EDT

János Farkas, TSN TG Chair, presided. Marina Gutiérrez wrote the minutes.

Attendance as recorded in IMAT by individual participants is in section 1.

09:00 AM call to order by the TG Chair

Agenda (as previously circulated at <https://1.ieee802.org/2020-05-tsn-agenda/>):

0. János Farkas, TSN TG Chair, presented the IEEE SA copyright and patent policy slides: <http://www.ieee802.org/1/files/public/docs2020/admin-farkas-tsn-electronic-meeting-intro-0520-v01.pdf>. There was no response to the call for patents.

1. P802.1DG/D1.2 TG ballot comment resolution with Editor's report.

Craig Gunther, the Editor, continued the resolution of comments received on <http://www.ieee802.org/1/files/private/dg-drafts/d1/802-1DG-d1-2.pdf>.

Disposition: Comments 23, 31, 32, 34, 43, 55, 56, 58, 71 were resolved. As noted in <http://www.ieee802.org/1/private/email2/msg30513.html>, comments 21, 22, 28, 30, 36, 37, 63, 78, 93, 134, 135, 154, 160 were resolved without discussion.

Partial disposition: <http://www.ieee802.org/1/files/private/dg-drafts/d1/802-1DG-d1-2-pdis-v04.pdf>.

Comment resolution to be continued in P802.1DG calls.

11:00 – 11:30 AM recess

2. János Farkas led the drafting of <http://www.ieee802.org/1/files/public/docs2020/liaison-response-LNI-4-0-document-exchange-0520-v01.pdf>.

Disposition: ePoll #45: <http://www.ieee802.org/1/files/public/minutes/2020-06-exec-motions.pdf#page=6>.

3. Marina Gutiérrez, P802.1Qcw Editor, continued the resolution of comments received on <http://www.ieee802.org/1/files/private/cw-drafts/d1/802-1Qcw-d1-1.pdf>.

Disposition: Comments 80, 105, 104, 106, 50, 51, 47, 102, 99, 101, 46, 53, 45, 44, 52, 93, 68, 69, 103, 72, 73 were resolved. Partial disposition: <http://www.ieee802.org/1/files/private/cw-drafts/d1/802-1Qcw-d1-1-pdis-v01.pdf>. Comment resolution to be continued on a future TSN TG call.

01:30 PM adjournment

6 Nendica

Minutes of Nendica conference calls held between sessions are available at <https://1.ieee802.org/nendica-meeting-history/>.

6.1 Wednesday May 20, 2020

6.1.1 9:00 – 9:55 AM EDT

The IEEE 802 Network Enhancements for the Next Decade Industry Connections Activity (Nendica) Chair, Roger Marks, presided and wrote the minutes.

Attendance as recorded in IMAT by individual participants is in section 1.
Attendance as recorded by the TG Chair follows:

Name	Affiliation
Congdon, Paul	Tallac Networks; Huawei
guo, liang	China Academy of Information and Communications Technology (China Academy of TeleCommunication Research, MIIT) CAICT (CATR)
Krieger, Ann	US Department of Defense
Marks, Roger	EthAirNet Associates
Maruhashi, Kenichi	NEC Corporation
McMillan, Larry	Western Digital Corporation
Nakano, Hiroki	Kyoto University
Parsons, Glenn	Ericsson AB
QIU, WEI	Huawei Technologies Co., Ltd
Sun, Liyang	HUAWEI
Zein, Nader	NEC Europe (NLE)

The secretary noted no other attendees.

20 May 2020 09:15 ET (call to order by the Nendica Chair)

The Nendica Chair called the meeting to order and apologized for the delay due to an inconsistency among the links to the teleconference. He offered to review the web pages and ensure that future meeting links are consistent.

The Nendica Chair reviewed the IEEE-SA Guidelines for IEEE-SA Meetings <https://development.standards.ieee.org/myproject/Public/mytools/mob/preparslides.pdf>, the IEEE SA Copyright Slides <https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/copyright-policy-WG-meetings.potx> (information on Slide 2 provided; slides provided beforehand), the IEEE SA Participation Slides <https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/Participant-Behavior-Individual-Method.pdf>, the IEEE 802 Participation slide <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180.pdf>, and IEEE ICCOM requirements <https://1.ieee802.org/802-nendica/ieee-iccom-requirements/>.

Agenda Approval

The Nendica Chair presented the previously-available draft agenda in <https://mentor.ieee.org/802.1/dcn/20/1-20-0035-01.docx>.

Disposition: The agenda was reviewed and approved without change.

Update and Attendance

The Nendica Chair discussed how to record attendance for the meeting, using the link embedded in the agenda. The participant list above in section 1 is provided from the attendance logs.

Prior Minutes

The Nendica Chair reviewed the draft minutes of meeting of 2020-05-14 in <https://mentor.ieee.org/802.1/dcn/20/1-20-0034-00-ICne-draft-minutes-of-the-nendica-meeting-of-2020-05-14.docx>. Without objection, the minutes were approved.

Stream and Flow Interworking [SFI]

Roger Marks reported that “IEEE 802 Nendica Work Item Proposal: Network Stream and Flow Interworking” met on May 21, 2020 and would be the subject of tomorrow’s Nendica meeting as well. He indicated the expectation that a new SFI contribution would be available for discussion.

Data Center Networking [DCN]

Co-Editor Paul Congdon presented *Pre-Draft DCN Report* <https://mentor.ieee.org/802.1/dcn/20/1-20-0030-02-ICne.pdf>. The contribution included material that the editors had received from interested participants. The material was reviewed, and suggestions to the editors were discussed. Interested participants were encouraged to submit contributions toward the report to Mentor or to communicate with the editors.

Study Item: Managed LAN as a Service [MLaaS]

Wei Qiu reported that there was no new progress on this topic and the prior status report represents the current state of the Study Item. No discussion arose.

Future meetings

A regular Thursday meeting on 2020-05-21 (09:00 ET) will focus on the Streams and Flows Interworking [SFI] topic.

The next DCN-focused meeting is scheduled for Thursday 2020-05-28 (09:00 ET), unless cancelled to due lack of contributions.

A.O.B.

None.

Adjournment

The meeting was adjourned at 9:58 ET.

6.2 Thursday May 21, 2020

6.2.1 9:00 – 9:55 AM EDT

The IEEE 802 Network Enhancements for the Next Decade Industry Connections Activity (Nendica) Chair, Roger Marks, presided and wrote the minutes.

Attendance as recorded in IMAT by individual participants is in section 1.

21 May 2020 09:00 ET (call to order by the Nendica Chair)

The Nendica Chair reviewed the IEEE-SA Guidelines for IEEE-SA Meetings <https://development.standards.ieee.org/myproject/Public/mytools/mob/preparslides.pdf>, the IEEE SA Copyright Slides <https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/copyright-policy-WG-meetings.potx> (information on Slide 2 provided; slides provided beforehand), the IEEE SA Participation Slides <https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/Participant-Behavior-Individual-Method.pdf>, the IEEE 802 Participation slide <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180.pdf>, and IEEE ICCOM requirements <https://1.ieee802.org/802-nendica/ieee-iccom-requirements/>.

Agenda Approval

The Nendica Chair presented the previously-available draft agenda in <https://mentor.ieee.org/802.1/dcn/20/1-20-0036-01.docx>.

Disposition: The agenda was reviewed and approved without change.

Update and Attendance

The Nendica Chair discussed how to record attendance for the meeting, using the link embedded in the agenda.

Prior Minutes

The Nendica Chair reviewed the draft minutes of meeting of 2020-05-07 in <https://mentor.ieee.org/802.1/dcn/20/1-20-0033-00-ICne-draft-minutes-of-the-nendica-meeting-of-2020-05-07.docx>. Without objection, the minutes were approved.

Data Center Networking [DCN]

It was noted that, as yesterday's meeting of May 20, 2020, pre-draft r02 was presented and discussed, and the following meeting is scheduled for May 28, 2020.

Stream and Flow Interworking [SFI]

Marks introduced the SFI Work Item and the charter document *IEEE 802 Nendica Work Item Proposal: Network Stream and Flow Interworking* <https://mentor.ieee.org/802.1/dcn/20/1-20-0004-04-ICne.pdf>.

Marks presented *PRE-DRAFT IEEE 802 Nendica Report: Network Stream and Flow Interworking* <https://mentor.ieee.org/802.1/dcn/20/1-20-0032-01-ICne.pdf>.

Most of the discussion concerned the material in the new section "Stream and Flow Concepts in Standards," which summarized flow and stream concepts in IEEE Std 802.1, 802.1CB, and 1722. It was agreed that figures showing how StreamID is used in the AVTP frame of IEEE Std 1722 would be helpful, along with other figures from standards. The Editor requested review of the

material, and additional material, with inputs to the Editor, the reflector, or Mentor. The Editor noted that line numbers should be added to the next version.

Study Item: Managed LAN as a Service [MLaaS]

No report was presented and no discussion arose.

Future meetings

A regular Thursday meeting on 2020-06-04 (09:00 ET) will focus on the Streams and Flows Interworking [SFI] topic.

The next DCN-focused meeting is scheduled for Thursday 2020-05-28 (09:00 ET), unless cancelled to due lack of contributions.

A.O.B.

None.

Adjournment

The meeting was adjourned at 09:55 ET.

7 YANGsters

7.1 Tuesday May 19, 2020

7.1.1 10 – 11 AM EDT

Scott Mansfield, YANGsters Chair presided. Stephan Kehrer, YANGsters Secretary, wrote the minutes.

Attendance as recorded in IMAT by individual participants is in section 1.

Attendance as recorded by the TG Chair follows:

- Stephan Kehrer (Hirschmann Automation and Control, Inc.)
- Scott Mansfield (Telefon AB LM Ericsson)
- Don Fedyk (LabN Consulting, L.L.C.)
- Glenn Parsons (Ericsson AB)
- János Farkas (Ericsson)
- Jessy Rouyer (Nokia)
- Johannes Specht (University of Duisburg/Essen)
- Marc Holness (Ciena)
- Marina Gutiérrez (TTTech)
- Mark Ellison (Independent)
- Kenichi Maruhashi (NEC)
- Nader Zein (NEC Europe)
- Paul Congdon (Huawei Technologies Co., Ltd.)
- Ramesh Sivakolundu (Cisco Systems, Inc.)
- Razvan Petre (Spirent)
- Robert Wilton (Cisco)

- William Zhao (Siemens AG)
- Xinyuan Wang (Huawei)

Topics:

- At the beginning of the meeting the YANGsters Chair presented:
 - The IEEE SA Copyright Policy slides,
 - The IEEE SA PatCom Patent Slides for Standards Development Meetings,
 - The IEEE 802 Participation slide,
 - The Decorum information contained in <http://www.ieee802.org/1/files/public/docs2019/admin-farkas-TSN-meeting-intro-1119-v01.pdf>, and made the Call for Potentially Essential Patents. There were no responses to the call prior to the end of the meeting.
- Agenda bash
 - Agenda was agreed as presented on the slides (<http://www.ieee802.org/1/files/public/docs2020/yangsters-smansfield-meeting-agenda-w21-0519-v02.pdf>)
 - No new items
- Update on Hot Issues
 - Active
 - Press Release Discussion
 - The YANGsters chair has received the press release on IEEE Std 802.1Qcp that was written but not published.
 - The release was updated and rewritten into a new draft for a press release on the YANG work of 802.1.
 - The draft was presented by the YANGsters chair and discussed by YANGsters and can be found in [yangsters-smansfield-802-press-release-request-0520-v01.pdf](#).
 - In the next step the draft needs to be discussed and reviewed by IEEE staff to get it prepared for publication.
 - The publication is targeted at the release date of IEEE P802.1Qcx.
 - IEEE P802f Update
 - Information on this topic can be found in *IEEE P802f Open Issues (v6)* [802f-mansfield-open-issues-0420-v06.pdf](#)
 - IEEE P802f needs to handle two problems:
 - EtherTypes creation, maintenance and modifications
 - EtherTypes YANG module creation
 - Validation of the EtherTypes registry needs to be separated from the creation of the YANG module(s) in order to proceed.
 - Suggested activities that need to be done by the RAC (needs to be discussed with the RAC)
 - Add new columns to the EtherTypes registry
 - Provide a mechanism to alert subscribers when the EtherTypes registry changes
 - Validation and approval of the entries in the EtherTypes registry by the RAC is required.
 - Activities within the P802f project:

- Specify the process related to generating the EtherTypes YANG file whenever a notification is received that the EtherTypes registry has been updated.
 - Define the YANG structure and provide guidance for creating subsets of the information found in the EtherTypes registry.
- The next steps for going forward were discussed by the 802.1 chair and YANGsters. The next official step is to do a motion to allow the start of task group balloting.
- Continue Maintenance/Guidelines Discussion
 - See: *YANG Pretty Printer Introduction*
<http://www.ieee802.org/1/files/public/docs2019/maint-specht-yang-comments-0919-v01.pdf>
 - Issue #10:
 - Johannes Specht gave an overview over item #10 in the presentation.
 - Sub-item a) some leafs (e.g. static-entries, dynamic-entries, ...) provide redundant information because the associated list-nodes already provide the number of entries. It needs to be determined on a case-by-case basis if this needs to be corrected or if the separate objects are required.
 - Sub-item b) IEEE Std 802.1Q-2018 states in the normative text, that there is a single FDB object **per bridge**. In the YANG file this is modeled differently in that there can be one FDB object **per bridge component**.
 - This results in a discrepancy between the normative text and the YANG model. It needs to be discussed and determined if the text of the standard needs to be updated or the YANG model needs to be corrected.
 - Next steps: discuss in maintenance to determine if the statements in 12.7.1 of IEEE Std 802.1Q-2018 need to be corrected or if the YANG model needs to be aligned with the standards text.
 - Issue #11:
 - Sub-item a) decisions on what to do need to be made on a case-by-case basis.
 - Sub-item b) the permanent database object only contains a table for filtering entries but not for VLAN registration entries in the UML model in Figure 48-4 of IEEE Std 802.1Q-2018. This seems to be in conflict with a statement in 12.7.7.1.1.
 - The item needs to be looked at a bit more closely and a maintenance item needs to be introduced for it.
 - The rest of the discussion (starting at item #11) was postponed to the next YANGsters call.
 -
- Any Other Business
 - No other business.

8 ePolls

IEEE 802.1 had the following ePolls between the end of the January 2020 interim session and the end of the May 2020 interim session.

Start (ET)	ePoll Name	Topic	End (ET)	Votes [A/D/-]
09-Mar-2020 00:00:00 ET	17 - Approve Nendica FFloT Report	Confirm the approval of 'Flexible Factory IoT: Use Cases and Communication Requirements for Wired and Wireless Bridged Networks' https://mentor.ieee.org/802.1/dcn/19/1-19-0026-06-ICne.pdf as a Nendica Report and process it for publication, subject to editorial revision. Moved by Nader Zein, seconded by Hajime Koto	19-Mar-2020 23:59:59 ET	34/3/15
09-Mar-2020 00:00:00 ET	18 - P802.1CMde to RevCom	Approve sending P802.1CMde to RevCom. Proposed: Janos Farkas Second: Craig Gunther Supporting information: P802.1CMde D2.1 had 100% approval at the end of the last Standards Association recirculation ballot, which closed on February 28, 2020 with no Disapprove votes and no Must Be Satisfied (MBS) comments. The ballot disposition is available at: http://www.ieee802.org/1/files/private/drafts/d2/802-1CMde-d2-1-dis-v01.pdf	19-Mar-2020 23:59:59 ET	56/0/1
09-Mar-2020 00:00:00 ET	19 - P802.1CMde CSD	Approve CSD documentation in https://mentor.ieee.org/802-ec/dcn/18/ec-18-0240-00-ACSD-p802-1cmde.pdf Proposed: Janos Farkas Second: Craig Gunther Supporting information: P802.1CMde D2.1 had 100% approval at the end of the last Standards Association recirculation ballot, which closed on February 28, 2020 with no Disapprove votes and no Must Be Satisfied (MBS) comments. The ballot disposition is available at: http://www.ieee802.org/1/files/private/drafts/d2/802-1CMde-d2-1-dis-v01.pdf	19-Mar-2020 23:59:59 ET	56/0/1
09-Mar-2020 00:00:00 ET	20 - P802.1Qcx to RevCom	Approve sending P802.1Qcx to RevCom. Proposed: Marc Holness Second: Norman Finn Supporting information: P802.1Qcx D2.1 had 100% approval at the end of the last Standards Association recirculation ballot, which closed on February 28, 2020 with no Disapprove votes and no Must Be Satisfied (MBS) comments. The ballot disposition is available at:	19-Mar-2020 23:59:59 ET	55/0/2

		http://www.ieee802.org/1/files/private/cx-drafts/d2/802-1Qcx-d2-1-dis-v01.pdf .		
09-Mar-2020 00:00:00 ET	21 - P802.1Qcx CSD	<p>Approve CSD documentation in https://mentor.ieee.org/802-ec/dcn/17/ec-17-0159-00-ACSD-802-1qcx.pdf</p> <p>Proposed: Marc Holness Second: Norman Finn</p> <p>Supporting information: P802.1Qcx D2.1 had 100% approval at the end of the last Standards Association recirculation ballot, which closed on February 28, 2020 with no Disapprove votes and no Must Be Satisfied (MBS) comments. The ballot disposition is available at: http://www.ieee802.org/1/files/private/cx-drafts/d2/802-1Qcx-d2-1-dis-v01.pdf.</p>	19-Mar-2020 23:59:59 ET	54/0/3
09-Mar-2020 00:00:00 ET	22 - P802.1AE/cor1 to RevCom	<p>Approve sending P802.1AE-2018-Cor1 to RevCom. Proposed: Mick Seaman Second: Karen Randall</p> <p>Supporting information: P802.1AE-2018-Cor1 had 100% approval at the end of the Standards Association Ballot, which closed 11 January 2020, with no Disapprove votes and no Must Be Satisfied (MBS) comments. Maintenance PAR, there is no CSD. The ballot disposition is available at: http://www.ieee802.org/1/files/private/ae-2018-cor-1-drafts/d1/802-1AE-2018-Cor1-d1-0-sponsor-dis.pdf</p>	19-Mar-2020 23:59:59 ET	57/0/1
09-Mar-2020 00:00:00 ET	23 - Response to JTC1/SC6 on 802.1AR-2018 FDIS	<p>Approve liaison of the following comment response on IEEE 802.1AR-2018 http://www.ieee802.org/1/files/public/docs2020/maint-randall-SC6CommentResponse8021ARFDIS2020-0320-v01.pdf to ISO/IEC JTC1/SC6 under the PSDO agreement. Moved by Karen Randall, seconded by Mick Seaman</p>	19-Mar-2020 23:59:59 ET	53/0/3
16-Mar-2020 00:00:00 ET	24 - P802.1CS to SA ballot	<p>Approve sending P802.1CS D3.0 to Standards Association ballot Moved: Norman Finn Seconded: Don Pannell</p> <p>Supporting information: P802.1CS D2.6 had 100% approval at the end of the last WG ballot, which closed on March 9, 2020 with no Disapprove votes and no comments. The ballot disposition is available at: http://www.ieee802.org/1/files/private/cs-drafts/d2/802-1CS-d2-6-dis.pdf</p>	26-Mar-2020 23:59:59 ET	55/0/1
16-Mar-2020 00:00:00 ET	25 - P802.1CS CSD	<p>Confirm the CSD for P802.1CS in https://mentor.ieee.org/802-ec/dcn/16/ec-16-0215-00-ACSD-802-1cs.pdf</p>	26-Mar-2020 23:59:59 ET	56/0/0

0 ET		<p>Moved: Norman Finn Seconded: Don Pannell</p> <p>Supporting information: P802.1CS D2.6 had 100% approval at the end of the last WG ballot, which closed on March 9, 2020 with no Disapprove votes and no comments. The ballot disposition is available at: http://www.ieee802.org/1/files/private/cs-drafts/d2/802-1CS-d2-6-dis.pdf</p>	9 ET	
19-Mar-2020 00:00:00 ET	26 - P802.1Q-rev	<p>Approve forwarding P802.1Q-Rev PAR documentation in http://www.ieee802.org/1/files/public/docs2020/Q-rev-draft-PAR-0320-v01.pdf to NesCom Proposed: John Messenger Second: Norman Finn</p> <p>Note: there is no CSD statement since this maintenance project is not intended to provide any new functionality</p>	29-Mar-2020 23:59:59 ET	48/0/0
19-Mar-2020 00:00:00 ET	27 - P802.1CQ PAR extension	<p>Approve forwarding P802.1CQ PAR extension in http://www.ieee802.org/1/files/public/docs2020/cq-draft-PAR-ext-0120-v01.pdf to NesCom Proposed: Roger Marks Second: Scott Mansfield</p>	29-Mar-2020 23:59:59 ET	46/0/1
19-Mar-2020 00:00:00 ET	28 - P802.1CQ CSD	<p>Approve (unmodified) CSD documentation in https://mentor.ieee.org/802-ec/dcn/15/ec-15-0105-00-ACSD-802-1cq.pdf Proposed: Roger Marks Second: Scott Mansfield</p>	29-Mar-2020 23:59:59 ET	46/0/2
19-Mar-2020 00:00:00 ET	29 - minutes	<p>802.1 approves the November 2019 (Plenary) and January 2020 (Interim) minutes: http://www.ieee802.org/1/files/public/minutes/2019-11-minutes-v2.pdf http://www.ieee802.org/1/files/public/minutes/2020-01-minutes-v2.pdf http://www.ieee802.org/1/files/public/60802/2019-11-60802-meeting-v1.pdf http://www.ieee802.org/1/files/public/60802/2020-01-60802-meeting-v2.pdf</p> <p>Proposed: Jessy Rouyer Second: Stephan Kehrer</p>	29-Mar-2020 23:59:59 ET	46/0/2
19-Mar-2020 00:00:00 ET	30 - P802.1Qcz WG ballot	<p>802.1 authorizes Paul Congdon, the Editor of P802.1Qcz Bridges and Bridged Networks -- Amendment: Congestion Isolation to prepare drafts for and conduct Working Group balloting. Proposed: Janos Farkas</p>	29-Mar-2020 23:59:59 ET	46/0/1

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		Second: Craig Gunther		
19-Mar-2020 00:00:00 ET	31 - TSN pre-meeting	802.1 authorizes the TSN Task Group to hold pre-meeting on the Monday morning of the July 2020 Plenary session. Proposed: Janos Farkas Second: Stephan Kehrer	29-Mar-2020 23:59:59 ET	45/0/0
19-Mar-2020 00:00:00 ET	32 - TSN post-meeting	802.1 authorizes the TSN Task Group to hold an Interim meeting on July 17, 2020 (i.e., the Friday after the IEEE 802.1 Closing Plenary) together with IEC 65C/WG9 to progress the IEC/IEEE 60802 Joint Project. Proposed: Janos Farkas Second: Stephan Kehrer	29-Mar-2020 23:59:59 ET	45/0/1
19-Mar-2020 00:00:00 ET	33 - interim May 2021	802.1 approves to hold an 802.1 interim session May 2021 in Santa Fe, New Mexico, USA hosted by Analog Devices Inc. Proposal in http://www.ieee802.org/1/files/public/docs2020/admin-woods-May2021-interim-proposal-0120-v02.pdf Proposed: Jordon Woods Second: Janos Farkas	29-Mar-2020 23:59:59 ET	48/0/0
19-Mar-2020 00:00:00 ET	34 - Nendica WI	Initiate an IEEE 802 Nendica Work Item on "Network Stream and Flow Interworking", per 802.1-20-0004-04 (https://mentor.ieee.org/802.1/dcn/20/1-20-0004-04-ICne.pdf). Proposed: Roger Marks Second: Paul Congdon	29-Mar-2020 23:59:59 ET	30/2/15
19-Mar-2020 00:00:00 ET	35 - Nendica WI	Initiate an IEEE 802 Nendica Work Item to revise "The Lossless Network for Data Centers", per 802.1-20-0002-02 (https://mentor.ieee.org/802.1/dcn/20/1-20-0002-02-ICne.pptx). Proposed: Roger Marks Second: Paul Congdon	29-Mar-2020 23:59:59 ET	33/0/13
19-Mar-2020 00:00:00 ET	36 - Maintenance calls	802.1 authorizes the Maintenance TG to hold teleconferences to address task group matters and progress resolution of maintenance items documented in the maintenance database (https://www.802-1.org/). Dates/times to be announced subject to notice of at least 10 days to the 802.1 email exploder. Proposed: Paul Congdon Second: Jessy Rouyer	29-Mar-2020 23:59:59 ET	48/0/0
20-Mar-2020	37 - 60802 calls	802.1 authorizes the TSN Task Group to hold weekly teleconferences together with IEC 65C/MT9 to	30-Mar-2020	46/0/1

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00:00:00 ET		<p>progress the IEC/IEEE 60802 Joint Project on Mondays from 9AM (US-Eastern) to 11AM (US-Eastern).</p> <p>Access information is posted on the http://www.ieee802.org/1/tsn page and will be updated as necessary.</p> <p>Agenda will be announced on the 802.1 email reflector at least 5 days before the call.</p> <p>Proposed: Ludwig Winkel Second: Jordan Woods</p>	23:59:59 ET	
20-Mar-2020 00:00:00 ET	38 - ITU-T SG15 liaison	<p>Approve http://www.ieee802.org/1/files/public/docs2020/liaison-SG15-request-for-copy-of-g781-1-0320-v00.pdf as communication to ITU-T SG15, granting the IEEE 802.1 WG chair (or his delegate) editorial license. This approval is under LMSC OM "Procedure for public statements to government bodies"</p> <p>Proposed: Geoffrey Garner Second: Jordan Woods</p>	30-Mar-2020 23:59:59 ET	44/0/2
20-Apr-2020 00:00:00 ET	39 - P802.1DG calls	<p>802.1 authorizes the TSN Task Group to hold weekly teleconferences to progress the P802.1DG project on Tuesdays from 9AM (US-Eastern) to 10AM (US-Eastern) starting with May 5, 2020.</p> <p>Agenda will be announced on the 802.1 email reflector at least 5 days before the call.</p> <p>Access information is posted on the http://www.ieee802.org/1/tsn page and will be updated as necessary.</p> <p>Proposed: Janos Farkas Second: Craig Gunther</p>	30-Apr-2020 23:59:59 ET	44/0/0
20-Apr-2020 00:00:00 ET	40 - TSN calls	<p>802.1 authorizes the Time-Sensitive Networking TG to hold teleconferences to progress the projects of the Task Group.</p> <p>Dates/times to be announced subject to notice of at least 10 days to the 802.1 email exploder.</p> <p>Access information will be posted on the http://www.ieee802.org/1/tsn page.</p> <p>Proposed: Janos Farkas Second: Craig Gunther</p>	30-Apr-2020 23:59:59 ET	43/1/0
20-Apr-2020 00:00:00 ET	41 - 802.1AS YANG	<p>802.1 authorizes TSN conference calls to generate PAR and CSD for pre-circulation to the EC for an amendment to IEEE 802.1AS to specify a YANG data model.</p> <p>Proposed: Rodney Cummings Seconded: Norm Finn</p>	30-Apr-2020 23:59:59 ET	42/1/1
18-May-2020 00:00:00 ET	42 - P802.1ASdm PAR	<p>Approve forwarding P802.1ASdm PAR documentation in http://www.ieee802.org/1/files/public/docs2020/dm-PAR-0520-v01.pdf to NesCom</p>	28-May-2020 23:59:59 ET	55/1/0

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		Proposed: Rodney Cummings Second: Janos Farkas		
18-May-2020 00:00:00 ET	43 - P802.1ASdm CSD	Approve CSD documentation in http://www.ieee802.org/1/files/public/docs2020/dm-CSD-0520-v01.pdf Proposed: Rodney Cummings Second: Janos Farkas	28-May-2020 23:59:59 ET	55/1/0
22-May-2020 00:00:00 ET	44 - 3GPP SA2 liaison	Approve http://www.ieee802.org/1/files/public/docs2020/liaison-response-TSN-support-in-3GPP-Release-16-0520-v01.pdf as communication to 3GPP SA WG2, granting the IEEE 802.1 WG chair (or his delegate) editorial license. Proposed: Janos Farkas Second: Geoffrey Garner	01-Jun-2020 23:59:59 ET	47/0/0
22-May-2020 00:00:00 ET	45 - LNI liaison	Approve http://www.ieee802.org/1/files/public/docs2020/liaison-response-LNI-4-0-document-exchange-0520-v01.pdf as communication to LNI 4.0, granting the IEEE 802.1 WG chair (or his delegate) editorial license. Proposed: Janos Farkas Second: Geoffrey Garner	01-Jun-2020 23:59:59 ET	47/0/1
22-May-2020 00:00:00 ET	46 - SC6 liaison	Approve http://www.ieee802.org/1/files/public/docs2020/maint-randall-SC6CmtResp8021QFDIS-0520-v01.pdf as communication to ISO/IEC JTC1/SC6 granting the IEEE 802.1 WG chair (or his delegate) editorial license. Proposed: Paul Congdon Second: Karen Randall	01-Jun-2020 23:59:59 ET	46/0/2

9 Next session

July 13-20, 2020, Electronic