

IEEE 802.1 Working Group

10-13 July 2017 Plenary Meeting

Berlin, Germany

Meeting Minutes

The 802.1 Chair, Glenn Parsons, presided.

The 802.1 Recording Secretary, Jessy Rouyer, wrote the minutes in part based on input from 802.1 Task Group Chairs.

1 Attendance and affiliation

<i>Last Name</i>	<i>First Name</i>	<i>Affiliation</i>
Abt	Werner	HMS
Assmann	Ralf	Marvell Semiconductor, Inc.
Bao	Shenghua	HUAWEI
Bechtel	Gordon	Bechtech
Bierschenk	Jens	Robert Bosch GmbH
Bjornstad	Steinar	TransPacket
Boiger	Christian	b-plus GmbH
Bottorff	Paul	Hewlett-Packard Development Company, L.P.
Brand	Hermann	IEEE STAFF
Brunner	Stefan	Continental Automotive Systems AG
Cam-Winget	Nancy	Cisco Systems, Inc.
Chang	Xin	Huawei Technologies Co. Ltd
Chen	David	Nokia
Chen	Feng	Siemens AG
Cheng	Weiyang	Coriant
CHOI	changho	ETRI
Congdon	Paul	Tallac Networks
Cummings	Rodney	National Instruments Corporation
Elbakoury	Hesham	Huawei Technologies Co. Ltd
Elbers	Jorg	ADVA Optical Networking Ltd.
EMMELMANN	MARC	Self
Fan	Xiaojing	Fujitsu Research & Development Center
Farkas	Janos	Ericsson
Finn	Norman	Huawei Technologies Co. Ltd
Gangula	Sridhara	ADVA Optical Networking Ltd.
Garner	Geoffrey	Broadcom Corporation
Geilhardt	Frank	Deutsche Telekom AG
Gray	Eric W	Ericsson AB
Gunther	Craig	HARMAN INTERNATIONAL INDUSTRIES, INCORPORATED

Gutierrez	Marina	TTTech Computertechnik AG
Haddock	Stephen	Stephen Haddock Consulting, LLC
Hamilton	Mark	Ruckus Wireless
Han	Ruibo	China Mobile Communications Corporation (CMCC)
Hantel	Mark	Rockwell Automation
Holness	Marc	Ciena Corporation
HOSAKO	IWAO	NICT
Hotta	Yoshifumi	Mitsubishi Electric Corporation
Hung	Soar	Realtek Semiconductor Corp.
Itaya	Satoko	NICT
Jeffries	Timothy	Huawei R&D USA
Kang	Taekyu	Electronics and Telecommunications Research Institute (ETRI)
Kehrer	Stephan	Hirschmann Automation and Control, Inc.
kim	ajung	sejong
Kojima	Fumihide	National Institute of Information and Communications Technology (NICT)
KOTO	Hajime	National Institute of Information and Communications Technology (NICT)
Laubach	Mark	Broadcom Corporation
Li	Yizhou	Huawei Technologies Co. Ltd
Mangin	Christophe	Mitsubishi Electric Corporation
Mansfield	Scott	Telefon AB LM Ericsson
Mardmoeller	Christian	Renesas Electronics Corporation
Marks	Roger	EthAirNet Associates; Huawei
Maruhashi	Kenichi	NEC Corporation
McIntosh	James	Microsemi Corporation
Messenger	John	ADVA Optical Networking Ltd.
Moskowitz	Robert	HTT Consultant
Murthy	Ram	Spirent Communications
Mustala	Tero	Nokia Networks
Myles	Andrew	Cisco Systems, Inc.
Nakano	Hiroki	Kyoto University
Natarajan	Sriram	Cisco Systems, Inc.
Ohsawa	Tomoki	NICT
Pannell	Donald R	Marvell Semiconductor, Inc.
Parsons	Glenn	Ericsson AB
Pienciak	Walter	IEEE
Potts	Michael	General Motors Company
QIU	WEI	Huawei Technologies Co., Ltd
Riegel	Maximilian	Nokia Networks
Rouyer	Jessy	Nokia

Roy	Rajeev	NXP Semiconductors
Sakata	Ren	TOSHIBA Corporation
Sambasivan	Sam	AT&T
Samii	Soheil	General Motors Company
Sato	Atsushi	Yokogawa Electric Corporation
Schewe	Frank	Phoenix Contact
Schmitt	Juergen	Siemens AG
Schwenk	Martin	FUJITSU
Seaman	Michael	Individual
Shen	Li	Huawei Technologies Co., Ltd
Specht	Johannes	University of Duisburg-Essen and General Motors Company
Sun	Liyang	HUAWEI
Thaler	Patricia	Broadcom Limited
Thubert	Pascal	Cisco Systems, Inc.
traore	karim	Microsemi Corporation
Unbehagen	Paul	Avaya Inc.
Veisllari	Raimena	TransPacket
Walter	Edward	AT&T
wang	haifei	Huawei Technologies Co. Ltd
Wang	Hao	Fujitsu Research & Development Center
Wang	Lei	Huawei R&D USA
Wang	Tongtong	Huawei Technologies Co. Ltd
Weber	Karl	Beckhoff
Weis	Brian	Cisco Systems, Inc.
Woods	Jordon	Innovasic, Inc.
Yamaura	Takahiro	Toshiba
Yin	Yue	Huawei Technologies Co., Ltd
YU	XIANG	Huawei Technologies Co., Ltd
Zein	Nader	NEC Corporation
Zinner	Helge	Continental Automotive Systems AG
Zweck	Harald	Infineon Technologies AG

2 Opening Plenary Meeting

Call to order: 10 July 2017, 10:32 AM.

The 802.1 Chair, Glenn Parsons, presided.

The 802.1 Recording Secretary, Jessy Rouyer, wrote the minutes.

The Chair presented the *Opening Agenda* slides available at <http://www.ieee802.org/1/files/public/minutes/2017-07-opening-plenary-slides.pdf>.

During this presentation, the Chair:

- Showed the agenda on slide 2, which was tacitly approved.
- Showed slides 3 through 8 (reproducing slides 0 through 4 of the IEEE-SA PatCom Patent Slides for Standards Development Meetings, separately available at <http://standards.ieee.org/about/sasb/patcom/materials.html>).

The Chair:

- Presented information on these slides, which included:
 - Instructions for the WG Chair (and TG Chairs);
 - Participants, Patents and Duty to Inform;
 - Patent Related Links;
 - Call for Potentially Essential Patents; and
 - Other Guidelines for IEEE WG Meetings.
- Advised WG attendees that:
 - The 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 the IEEE is not aware. Additionally, neither the 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.
- Made the "Call for Potentially Essential Patents" thereby providing an opportunity for participants to identify patent claim(s)/patent application claim(s) and/or the holder of patent claim(s)/patent application claim(s) of which the participant is personally aware and that may be essential for the use of that standard.
There were no responses to the call.
- Reminded the 802.1 TG Chairs of their daily obligations (per slide 8) with respect to presenting the IEEE-SA PatCom Patent Slides for Standards Development Meetings and making the "Call for Potentially Essential Patents".
- Reviewed general administrative information including:
 - Meeting "Decorum" or rules, including the policies on public reporting, and on photography or recording (slide 9);
 - Participation in IEEE 802 meetings on an individual basis (slide 10);
 - Hotel and meeting room security (slide 11);
 - General information on 802.1 (slide 12), including information on 802.1 operation available at <http://www.ieee802.org/1/files/public/minutes/802-1-general-info-v3.pdf>, a reminder that contributions are to be uploaded before presentation, how to access meeting minutes and schedule, and how to report meeting session attendance;
 - There was no newcomers orientation at this meeting.
 - Meeting logistics (slide 13).
- Introduced 802.1 Officers and provided 802.1 website information (slide 14).

- Reviewed the list of 802.1 voting members, including information about individuals who may lose, gain or have requested to withdraw from 802.1 voting membership (slides 15-20). The Chair indicated he would remind of their obligations to return letter ballots current voters who have not met these obligations and are therefore at risk of losing voting member status (slide 21). The Chair reminded individual participants about 802.11 reciprocal credit, which was continued at this meeting (slide 22).
- Introduced ongoing updates to the 802.1 website scheduled to go live after this plenary meeting (slide 23).
- Reviewed the schedule for future interim meetings (slide 24), which included:
 - September 5-8, 2017 in St. John's, Newfoundland, Canada
 - The 802.1 Chair presented <http://www.ieee802.org/1/files/public/docs2017/admin-parsons-nfld-interim-update-0717-v2.pdf>.
 - January 22-26, 2018 in Geneva, Switzerland
 - The Chair noted that this interim meeting will be the first one to take place over five vs. four days currently, and will be followed by a joint workshop with ITU-T SG15 (on such topics as CFM, YANG and synchronization). He also confirmed that the ITU meeting rate can be requested by 802.1 participants.
 - May 21-25, 2018 (location to be determined) hosted by Ethernet Alliance.
 - September 10-13(14?), 2018 in Oslo, Norway
- Reviewed the schedule for future plenary meetings (slide 25), which included:
 - November 5-10, 2017 in Orlando, FL, USA
 - March 4-9, 2018 in Chicago, IL, USA
 - July 9-13, 2018 in San Diego, CA, USA
 - November 12-16, 2018 in Bangkok, Thailand
 - March 10-15, 2019 in Vancouver, BC, Canada
 - July 14-19, 2019 in Vienna, Austria
 - November 10-15, 2019 in Waikoloa, HI, USA
- Presented options regarding meeting time (slide 26) and conducted a straw poll to gauge 802.1 participants' interest in future 802.1 plenary meetings being held:
 - "Sunday to Thursday": 9
 - "Monday to Friday": 38
 - "Status quo": 36The Chair indicated he would move forward an administrative motion at the closing plenary for holding future 802.1 plenary meetings Monday to Friday.
- Reported the following items out of the 802 Executive Committee (EC) executive session (slide 27):
 - Fellowship program in July ([EC-17-126](#))
 - 4 regulators from India, Burkina Faso, Senegal & Uganda
 - 802 Task Force
 - Tools discussion (executive session)
 - P&P, WG & CG change proposals ([EC-17-121](#))
 - CFI and tutorials do not require registration/badges
 - New visa request process [for plenaries]
 - Venues ([EC-17-122](#))
 - Reviewing options for 2020/2021
 - Treasurer ([EC-17-124](#))
 - Vancouver loss was \$50k
 - Surplus on 2016 - \$300k (to \$1.6M)
 - Projected 2017 budget - \$200k loss
- Reviewed the list of 802 EC meetings to be held this week (slide 28).
- Provided an update on myProject (slide 29).

- Introduced the IEEE open source offering (slide 30), in part by presenting <https://mentor.ieee.org/802-ec/dcn/17/ec-17-0103-00-00SA-ieee-open-source-offering.pdf> and encouraging participation to the dedicated session (Tuesday 7:00 AM) in view of the variety of opinions expressed on the two questions asked on slide 30.
- Provided information about Public Review (slide 31) and indicated one email ballot (ePoll) was conducted since the last plenary (slide 32).
- Pointed out PARs and CSDs that are up for vote at this meeting (slide 33).
- Introduced the 802.1 Industry Connections activity (slide 34) and the tutorials to be held 10 July 2017 6:00 PM-10:30 PM (slide 35).
- Reviewed the list of liaisons within 802 (joint and standing committee meetings, 802 task force) for which meetings were to be held during this 802 plenary week (slide 36), and both the list of liaisons incoming to 802.1 and a press release of relevance to TSN TG (slide 37).
 - The Chair introduced the BBF *Liaison to IEEE 802.3 on Flex Ethernet for IP/MPLS Networks* http://www.ieee802.org/3/minutes/may17/incoming/BBF_to_IEEE_802d3_May_2017.pdf (no response needed).
- Provided his anticipation of next actions with respect to projects in the current WG's workload asking editors to review for correctness (slide 38) and discussed the promotion of the work that the WG is doing (slide 39).
 - Craig Gunther presented *TSN/A Conference 2017 Technology & Applications (September 20-21, 2017 Stuttgart, Germany) An opportunity for participation from the IEEE 802.1 Working Group* <http://ieee802.org/1/files/public/docs2017/admin-cgunther-TSNA2017-0717-v01.pdf>
- Asked editors of the projects listed at the bottom of slide 38 to nominate future Standards Project Awards recipients (slide 40).
- Provided TG Chairs with guidance regarding the preparation of the motions for this week's consent agenda and closing plenary meeting, and requested to be provided with EC required supporting material (PAR to NesCom, drafts to Sponsor ballot, drafts to RevCom) before these motions are considered (slide 41).
- Showed the 802.1 plenary schedule/agenda for this meeting, which was tacitly approved following indication that the sessions scheduled to start at 6:30 PM on Tuesday were rescheduled to start at 6:00 PM and close at 9:00 PM on the same day (slide 42).
- Requested the 802.1 TG Chairs to introduce their TG agenda (slide 43):
 - Mick Seaman presented the Security TG agenda (slide 44).
 - János Farkas presented the TSN TG agenda (slide 45).
 - Maximilian Riegel presented the OmniRAN TG agenda (slides 46-47).
 - Patricia Thaler presented the DCB TG agenda (slide 49).
 - John Messenger presented the Maintenance TG agenda for 11 July 2017 (slide 48).
- Introduced the 802 Network Enhancements Industry Connections activity (slide 50).

There was no other business to discuss (slide 51) and the opening plenary meeting was adjourned at 12:43 PM.

3 Task Group Meetings

3.1 Data Center Bridging

The Data Center Bridging (DCB) Task Group Chair, Patricia Thaler, presided and wrote the minutes.

At the beginning of the meeting on Wednesday, Patricia Thaler presented the IEEE-SA PatCom Patent Slides for Standards Development Meetings, and made the “Call for Potentially Essential Patents”. There were no responses to the calls prior to the end of the week’s sessions.

Wednesday 12 July 2017 8:00 AM-12:00 PM

Call to order: 12 July 2017, 8:00 AM

Patricia Thaler presented the following agenda for the meeting:

- P802.1Qcn - resolution of comments from NVO3 on the draft
- P802c preparation for publication (fixed in time to 9:00 AM)

This agenda was approved.

Li Yizhou and Paul Bottorff, P802.1Qcn editors, began resolving comments received from IETF NVO3 participants on <http://www.ieee802.org/1/files/private/cn-drafts/d0/802-1qcn-d0-5.pdf>.

Disposition: Ballot comments resolution recorded in <http://www.ieee802.org/1/files/private/cn-drafts/d0/802-1Qcn-d0-5-pdis-v01.pdf>

Roger B Marks, P802c editor, led a discussion regarding the preparation for publication of P802c:

- Additional attendees for this topic: Bob Grow, Geoff Thompson, Michelle Turner, Patrick Gibbons.
- Discussed how to incorporate notes referencing the EUI, OUI and CID tutorial in 802c and how to handle placement of the new tutorial on the RA website.
- Discussed amendment numbering, i.e., whether to follow prior IEEE 802.1 convention to number the amendments consecutively from the original IEEE std 802 or follow present IEEE convention and number from the latest revision. The 802.1 Chair is to decide.
- Discussed process for posting the new RAC tutorial.

The TG recessed at 10:00 AM and resumed at 10:30 AM.

Li Yizhou and Paul Bottorff, P802.1Qcn editor, finished resolving comments received in the comments received from IETF NVO3 participants on <http://www.ieee802.org/1/files/private/cn-drafts/d0/802-1qcn-d0-5.pdf> and discussed next steps.

Disposition: Ballot comments resolution recorded in <http://www.ieee802.org/1/files/private/cn-drafts/d0/802-1Qcn-d0-5-pdis-v01.pdf>. The draft is complete and the TG will request authorization to prepare and conduct WG balloting.

The DCB TG also discussed confusion over the IEEE P802.1Qcn PAR designation with the QCN protocol in IEEE Std 802.1Q.

3.2 Maintenance

The Maintenance Task Group minutes are incorporated in these minutes by reference and are available at <http://ieee802.org/1/files/public/maint/2017-07-maintenance-meeting-v1.pdf>.

3.3 OmniRAN

OmniRAN Task Group meeting minutes are incorporated into these minutes by reference and are available at <https://mentor.ieee.org/omniran/dcn/17/omniran-17-0061-00-00TG-july-2017-f2f-meeting-minutes.docx>.

Current status of OmniRAN Task Group activities (including future meeting announcements, past meeting and conference call minutes) is available via a wiki located at <https://mentor.ieee.org/omniran/bp/StartPage>.

3.4 Security

Call to order: 10 July 2017 01:30 PM. The Security Task Group met Monday 10 July 2017 starting at 1:30 PM, Tuesday 11 July 2017 starting at 10:30 AM following the Maintenance TG meeting, and Wednesday 12 July 2017 starting at 9:00 AM.

The Security Task Group Chair, Mick Seaman presided and wrote the minutes.

The IEEE-SA PatCom Patent Slides for Standards Development Meetings were presented and the "Call for Potentially Essential Patents" were made at the start of Monday's meetings in the 802.1 plenary, by the Chair of the Maintenance TG at the beginning of Tuesday's meetings, and by the Security TG Chair at the beginning of the Wednesday meeting. There were no responses to the calls prior to the end of the week's session.

Mick Seaman proposed the following agenda (as discussed in the 802.1 opening plenary, detail with the later addition of item 6.2) for the Security Task Group meeting week:

1. P802.1AE-Rev (*MAC Security*) PAR (roll-up/maintenance)
2. P802.1Xck (*Port-Based Network Access Control: YANG Data Model*)
3. P802.1AR-Rev (*Secure Device Identity*)
4. P802E Privacy (*Recommended Practice for Privacy Considerations for IEEE 802 Technologies*)
5. JTC1 SC6 SC participation
6. A.O.B
 - 6.1. Security in the car
 - 6.2. 802.1X MKA maintenance issue
7. Further meetings/teleconferences

This agenda was approved.

Minutes of the discussion of each of the agenda items (above) in the Security Task Group, follow.

1. P802.1AE-Rev (MAC Security) PAR (roll-up/maintenance)

The Task Group had previously generated a PAR which was updated with new end dates during the March plenary meeting, but not in time for consideration by the Executive Committee (EC) at that meeting. It had accordingly been pre-circulated to the EC. Minor comments were received from 802.3 (requesting RAC review of previously approved registry content, in order to ensure terminology and descriptions of use are up to date) and from 802.11 (list full name of all cited standards), and considered in Wednesday's meeting.

The TG chair prepared the responses, now at:

<http://www.ieee802.org/1/files/public/docs2017/ae-rev-par-response-to-comments-0717-v01.txt>

and updated the PAR accordingly:

<http://www.ieee802.org/1/files/public/docs2017/ae-seaman-rev-draft-par0717-v04.pdf>.

Forwarding of this PAR to NesCom was approved by the closing 802.1 plenary, and post-meeting by the EC at their closing meeting.

2. P802.1Xck (Port-Based Network Access Control: YANG Data Model)

Marc Holness, P802.1Xck editor, had not yet been able to complete the agreed (see March 2017 minutes) example scenarios annex (an 'instance' document in YANG terminology). In the Monday PM and Tuesday PM sessions he presented, and the TG discussed in detail, examples of the configuration of the hosts and of the network access point in 802.1X clause 7.1 and Figure 7-1, and in 802.1X clause 7.3 and Figure 7-6. An updated presentation, taking into account comments received during the meeting, is now at:

<http://www.ieee802.org/1/files/public/docs2017/xck-mholness-YANG-instance-document-0717-v05.pdf>

Mick Seaman offered to help prepare the proposed annex. Completion of draft 1.2, and a further WG ballot will not occur before the September 2017 interim. Initial ballot resolution should be by teleconference, with anticipated final resolution in the November plenary.

The discussion highlighted the ways in which our model is affected by general YANG modeling limitations, including (a) the assumption that a single 'default' value would apply to all uses of a model, and (b) the cumbersome separation into a 'read-tree' and a 'write-tree'. There are discussions in the YANG community on addressing these, including the introduction of equipment 'profiles' to address the first, but final resolution is expected to be beyond the timescale of P802.1Xck, which we agreed to complete promptly, living with the existing limitations.

[Post-meeting note: There was discussion of how the read-only 'logon' variable would be set, with some feeling that we might have gotten it wrong. However, in past discussion we decided not to supplant aspects of the overall configuration that should be in other cooperating YANG models – in particular our YANG dealing with EAPOL should not encroach on what should be in an EAP YANG model. A YANG model or models that deal with authentication credentials and their acquisition/invocation should be in control of asserting 'logon'].

3. P802.1AR-Rev (Secure Device Identity)

802.1 requested, in its closing plenary, sending draft 2.2 to Sponsor Ballot. This request was approved post-meeting by the EC. The Sponsor Ballot pool is in the process of being formed. No other P802.1AR-Rev discussion at this meeting.

4. P802E (Recommended Practice for Privacy Considerations for IEEE 802 Technologies)

No work scheduled for this meeting. Resolution of the first TG ballot (by teleconference) is pending.

5. JTC1 SC6 SC participation

See Maintenance TG minutes as JTCS SC6 SC participation was not separately discussed in the Security TG. P802.1AR will be forwarded for information.

6. A.O.B.

6.1. 802.1 networks in the car

The joint 802.1/802.3 Monday night tutorial on the in-car use of Ethernet included a security presentation, referencing the use of 802.1X, 802.1AE, and 802.1AR in conjunction with other 802.1 standards as previously discussed in the TG. Related points were discussed in the TG meeting on Tuesday and Wednesday.

The TG discussed the car manufacturing process flow as it affects enrollment, authentication and authorization (who can do what/when securely). This ongoing discussion ties to our use/support of IETF protocols under development (particularly those related to IoT). It was indicated that these protocols will need mapping to 802.1/TSN infrastructure (at some stage) as e.g. did EAP (with .1X EAPOL).

It was pointed out that using GCM in Integrity only mode did actually require fewer AES operation than Integrity-with-Confidentiality, and hence potentially less power (a crucial resource in this application). It was mentioned that the simple presence of gates, whether in use or not would draw some current and that this effect would be more pronounced at elevated temperatures to be tolerated (up to 120 C).

Discussion of the various ways in which 802.1AE might be deployed, including 802.1AEcg like use to provide protection/verification only at select nodes, concluded that there was no present need for further standardization to explain this.

[Post-meeting note: exploratory discussions were mentioned regarding hub-and-spoke configured networks, each spoke comprising connected two-port devices with low-level cut-through along the spoke and being treated as shared media rather than cut-through bridging, all communication occurring between a device on the spoke and the hub. If these discussions get formally underway they might be an interesting MACsec use case. To be followed up at the next meeting.]

6.2. 802.1X MKA maintenance issue

Key-rollover (SAK to SAK) works just fine. But interoperability testing has revealed inconsistency in the 802.1X specification as to when the 'latest' key becomes the 'old' key. Does this occur when the prior 'old' is no longer used, or when a new 'latest' is to be distributed? Implementations can interoperate with either interpretation by being 'permissive' on receipt (checking the 'old' key PN field for potential key exhaustion if the 'latest' key PN field is not being used). A full problem statement and a suggested change need to be developed for a maintenance item.

7. Future meeting/teleconference planning

The Security Task Group will not meet at the September 2017 802.1 interim (in St. John's, NF, Canada), as ballots will not be completed by then. Initial ballot resolution and progression of work will be by teleconference. The TG will meet at the November 2017 802 plenary (in Orlando, FL, USA) though attendance may be low due to the IETF meeting in Singapore the following week.

3.5 Time-Sensitive Networking

The Time-Sensitive Networking (TSN) Task Group Chair, János Farkas, presided. Craig Gunther wrote the minutes.

At the beginning of the meetings on Monday, Tuesday, Wednesday, and Thursday, János Farkas presented the IEEE-SA PatCom Patent Slides for Standards Development Meetings <https://development.standards.ieee.org/myproject/Public/mytools/mob/slideset.pdf>, and made the Call for Potentially Essential Patents. There were no responses to the calls prior to the end of the week's session.

Monday 10 July 2017 8:00 AM-10:00 AM (Pre-meeting)

Call to order: 10 July 2017, 8:00 AM

János Farkas presented the agenda for the TSN Task Group meeting week:

<http://ieee802.org/1/files/public/docs2017/admin-tsn-agenda-0717-v00.pdf>

Disposition: This agenda was approved.

Rodney Cummings, P802.1Qcc editor, presented *802.1Qcc D1.5: Intro for Comment Resolution*

<http://ieee802.org/1/files/public/docs2017/cc-cummings-d15-comments-intro-0717-v0.pdf>

and led the resolution of comments received in the WG recirculation ballot on

<http://www.ieee802.org/1/files/private/cc-drafts/d1/802-1Qcc-d1-5.pdf>

Disposition: Ballot comments resolution recorded in <http://ieee802.org/1/files/private/cc-drafts/d1/802-1Qcc-d1-5-dis-v01.pdf>.

Monday 10 July 2017 1:30 PM-6:00 PM

Call to order: 10 July 2017, 1:30 PM

Jessy Rouyer presented *ITU-T SG15 LS43 CFM YANG*

http://www.ieee802.org/1/files/public/docs2017/liaison-ITUT-SG15-LS43_CFM_YANG-0717.pdf

Disposition: Incoming liaison letter, response needed

János Farkas presented *ITU-T SG15 LS54 5G transport*

http://www.ieee802.org/1/files/public/docs2017/liasons-ITUT-SG15-LS54_5G_transport-0717.pdf

Disposition: Incoming liaison letter, response needed

János Farkas presented *ITU-T SG15 LS51 full timing support*

http://www.ieee802.org/1/files/public/docs2017/liasons-ITUT-SG15-LS51_full_timing_support-0717.zip

Disposition: Incoming liaison letter, response needed

Jordan Woods presented *Liaison - ODVA Overview*

<http://www.ieee802.org/1/files/public/docs2017/liaison-ODVA-802.1-Liaison-Request-0617.pdf>

Disposition: Incoming liaison letter, response needed

Tero Mustala presented *eCPRI Update for TSN*

<http://ieee802.org/1/files/public/docs2017/cm-mustala-eCPRI-update-0717.pdf>

Disposition: Related to ongoing project: update

János Farkas presented *P802.1CM/D0.7 TG ballot comments resolution*

<http://ieee802.org/1/files/public/docs2017/cm-farkas-editor-report-d0-7-0717-v02.pdf>

and led the resolution of comments received in the TG ballot on

<http://www.ieee802.org/1/files/private/cm-drafts/d0/802-1CM-d0-7.pdf>

Disposition: Ballot comments resolution recorded in <http://www.ieee802.org/1/files/private/cm-drafts/d0/802-1CM-d0-7-dis-v01.pdf>

Johannes Specht, P802.1Qcr editor, presented *P802.1Qcr/D0.1 ATS TG ballot comments resolution* <http://www.ieee802.org/1/files/private/cr-drafts/d0/802-1Qcr-d0-1.pdf>

Disposition: Ballot comments resolution recorded in

<http://www.ieee802.org/1/files/private/cr-drafts/d0/802-1Qcr-D0-1-pdis-v2.pdf>

Tuesday 11 July 2017 10:30 AM-6:00 PM

Call to order: 11 July 2017, 10:30 AM

Marc Holness, P802.1Qcp editor, presented *IEEE P802.1Qcp and P802.1Xck Update*

<http://www.ieee802.org/1/files/public/docs2017/cp-mholness-YANG-update-0717-v01.pdf>.

Disposition: Editor's update on ongoing project.

Marc Holness, P802.1Qcp editor, led the resolution of comments received in the WG ballot on <http://www.ieee802.org/1/files/private/cp-drafts/d1/802-1Qcp-d1-1.pdf>

Disposition: Ballot comments resolution recorded in

<http://www.ieee802.org/1/files/private/cp-drafts/d1/802-1Qcp-d1-1-dis-v02.pdf>

Stephen Haddock, P802.1AX-Rev editor, presented an *Editor's report*

<http://ieee802.org/1/files/public/docs2017/ax-rev-haddock-editors-report-0717-v1.pdf> (updated as <http://www.ieee802.org/1/files/public/docs2017/ax-rev-haddock-editors-report-0717-v3.pptx>)

and led the resolution of comments received in the TG ballot on

<http://www.ieee802.org/1/files/private/ax-rev-drafts/d0/802-1ax-rev-d0-1.pdf>

Disposition: Ballot comments resolution recorded in <http://www.ieee802.org/1/files/private/ax-rev-drafts/d0/802-1AX-Rev-d0-1-pdis-v02.pdf>

Mick Seaman discussed *The LACP MUX machine*

<http://www.ieee802.org/1/files/public/docs2017/ax-rev-seaman-mux-0717-v01.pdf>

Disposition: Supports ballot comments.

Rodney Cummings completed P802.1Qcc/D1.5 comments resolution from Monday.

Ganesh Venkatesan presented *IEEE 802.1AS REV D5.0 Review Comments*

<http://www.ieee802.org/1/files/public/docs2017/as-rev-venkatesan-use-of-FTM-0717-v01.pdf>

Disposition: Supports ballot comments.

Geoff Garner, P802.1AS-Rev editor, led the resolution of comments received in the WG ballot on <http://www.ieee802.org/1/files/private/as-rev-drafts/d5/802-1AS-rev-d5-0.pdf>

Disposition: Ballot comments resolution recorded in <http://www.ieee802.org/1/files/private/as-rev-drafts/d5/p802-1AS-d5-0-pdis-v1.pdf>

Wednesday 12 July 2017 8:00 AM-6:00 PM

Call to order: 12 July 2017, 8:00 AM

János Farkas led the review of comments received on the draft P802.1Qcx PAR <http://www.ieee802.org/1/files/public/docs2017/cx-draft-PAR-0517-v01.pdf> and CSD <http://www.ieee802.org/1/files/public/docs2017/cx-draft-CSD-0517-v01.pdf> <http://www.ieee802.org/1/files/public/docs2017/cx-PAR-CSD-comments-0717-v01.pdf>

Disposition: Response: <http://www.ieee802.org/1/files/public/docs2017/cx-PAR-CSD-comments-0717-v00.pdf>, updated as <http://www.ieee802.org/1/files/public/docs2017/cx-PAR-CSD-comments-0717-v01.pdf>

- Updated draft PAR: <http://www.ieee802.org/1/files/public/docs2017/cx-draft-PAR-0517-v02.pdf>
- Updated draft CSD: <http://www.ieee802.org/1/files/public/docs2017/cx-draft-CSD-0517-v02.pdf>

Marc Holness, P802.1Qcp editor, led the review of the draft P802.1Qcp PAR modification at <http://www.ieee802.org/1/files/public/docs2017/cp-PAR-modification-draft-0717-v00.pdf>

Disposition: Updated draft PAR: <http://www.ieee802.org/1/files/public/docs2017/cp-PAR-modification-draft-0717-v01.pdf>

Rodney Cummings, P802.1Qcc editor, led the review of a comment received on the draft P802.1Qcc PAR extension at <http://www.ieee802.org/1/files/public/docs2017/cc-PAR-extension-0517-v01.pdf>

Disposition: Response: <http://www.ieee802.org/1/files/public/docs2017/cc-PAR-extension-comments-0717-v1.pdf>

Geoff Garner, P802.1AS-Rev editor, led the review of comments received on the draft P802.1AS-REV PAR extension at <http://www.ieee802.org/1/files/public/docs2017/as-rev-PAR-modification-0517-v01.pdf>

Disposition: Response: <http://www.ieee802.org/1/files/public/docs2017/as-rev-PAR-modification-comments-0717-v01.pdf>

- Updated draft PAR modification: <http://www.ieee802.org/1/files/public/docs2017/as-rev-PAR-modification-0517-v02.pdf>

Stephan Kehrer led the review of the comments received on the draft P802.1CBcv PAR <http://www.ieee802.org/1/files/public/docs2017/cv-draft-PAR-0517-v01.pdf> and CSD <http://www.ieee802.org/1/files/public/docs2017/cv-draft-CSD-0517-v01.pdf>.

Disposition: Response: <http://www.ieee802.org/1/files/public/docs2017/cv-kehrer-response-to-par-and-csd-comments-v00.pdf>, updated as <http://www.ieee802.org/1/files/public/docs2017/cv-kehrer-response-to-par-and-csd-comments-v01.pdf>

- Updated draft PAR: <http://www.ieee802.org/1/files/public/docs2017/cv-draft-PAR-0517-v02.pdf>
- Updated draft CSD: <http://www.ieee802.org/1/files/public/docs2017/cv-draft-CSD-0517-v02.pdf>

Marina Gutiérrez led the review of the comments received on the draft P802.1ABcu PAR <http://www.ieee802.org/1/files/public/docs2017/cu-draft-PAR-0517-v01.pdf> and CSD <http://www.ieee802.org/1/files/public/docs2017/cu-draft-CSD-0517-v01.pdf>

Disposition: Response: <http://www.ieee802.org/1/files/public/docs2017/cu-PAR-CSD-comments-0717-v00.pdf>, updated as <http://www.ieee802.org/1/files/public/docs2017/cu-PAR-CSD-comments-0717-v01.pdf>

- Updated draft PAR: <http://www.ieee802.org/1/files/public/docs2017/cu-draft-PAR-0517-v02.pdf>
- Updated draft CSD: <http://www.ieee802.org/1/files/public/docs2017/cu-draft-CSD-0517-v02.pdf>

Marina Gutiérrez led the review of the comments received on the draft P802.1Qcw PAR <http://www.ieee802.org/1/files/public/docs2017/cw-draft-PAR-0517-v01.pdf> and CSD <http://www.ieee802.org/1/files/public/docs2017/cw-draft-CSD-0517-v01.pdf>.

Disposition: Response: <http://www.ieee802.org/1/files/public/docs2017/cw-PAR-CSD-comments-0717-v00.pdf>, updated as <http://www.ieee802.org/1/files/public/docs2017/cw-PAR-CSD-comments-0717-v01.pdf>

- Updated draft PAR: <http://www.ieee802.org/1/files/public/docs2017/cw-draft-PAR-0517-v02.pdf>
- Updated draft CSD: <http://www.ieee802.org/1/files/public/docs2017/cw-draft-CSD-0517-v02.pdf>

John Messenger, 802.1AC editor, led the review of the draft PAR for a corrigendum to 802.1AC in <http://www.ieee802.org/1/files/public/docs2017/new-messenger-ac-cor1-draft-par-0717-v2.pdf>

Disposition: Updated draft PAR: <http://www.ieee802.org/1/files/public/docs2017/new-messenger-ac-cor1-draft-par-0717-v3.pdf>

Geoff Garner continued P802.1AS-Rev/D5.0 comments resolution from Tuesday.

Stephen Haddock continued P802.1AX-Rev/D0.1 comments resolution from Tuesday.

Johannes Specht continued P802.1Qcr/D0.1 comments resolution from Monday.

Paul Unbehagen presented *P802.1Qcj update* <http://www.ieee802.org/1/files/private/cj-drafts/d0/802-1Qcj-d0-2.pdf>

Disposition: Editor's update on ongoing project

Norman Finn, P802.1CB editor, led a discussion about P802.1CB/D2.9 <http://www.ieee802.org/1/files/private/cb-drafts/d2/802-1CB-d2-9.pdf>

Disposition: Editor's update on ongoing project

Norman Finn, P802.1CS editor, presented <http://www.ieee802.org/1/files/private/cs-drafts/d0/802-1CS-d0-1.pdf>

Disposition: Editor's update on ongoing project

Norman Finn presented *Timing model for TSN*

<http://www.ieee802.org/1/files/public/docs2017/cr-finn-timing-model-0617-v00.pdf>

Disposition: Supports ballot comment(s)

Johannes Specht continued P802.1Qcr/D0.1 comments resolution from earlier in the day.

An 802.1 TSN TG – 802.24.1 Smart Grid TG joint meeting was called to order at 4:37 PM:

- The TSN TG Chair, János Farkas, presided. Craig Gunther wrote the minutes.
- The TSN TG Chair made the Call for Potentially Essential Patents. There were no responses to the call prior to the end of the joint meeting.
- The TSN TG Chair provided an oral update of the conference call held June 14, 2017 whose outcome was summarized in <https://mentor.ieee.org/802.24/dcn/17/24-17-0015-01-sgtg-tsn-white-paper-teleconference.pptx>.
- Tim Godfrey presented slides 26-29 in <https://mentor.ieee.org/802.24/dcn/17/24-17-0017-02-0000-july-2017-meeting-presentation.pptx> (updated based on discussions as <https://mentor.ieee.org/802.24/dcn/17/24-17-0017-03-0000-july-2017-meeting-presentation.pptx>) providing an update on the 802.24 draft *Utility Applications of Time Sensitive Networking White Paper*, based on links embedded in the linked presentation.
- Tim Godfrey showed the following documents:
 - *Time-sensitive and Deterministic Networking Whitepaper*
<http://www.ieee802.org/1/files/public/docs2017/tsn-finn-tsn-detnet-whitepaper-0717-v00.pdf>
 - *Deterministic Networking Use Cases* <https://tools.ietf.org/html/draft-ietf-detnet-use-cases-12>
- There was no other business to discuss and the joint meeting was adjourned at 4:57PM

Thursday 13 July 2017 8:00 AM-12:30 PM

Call to order: 13 July 2017, 8:00 AM

János Farkas presented *ITU-T SG15 LS43 CFM YANG - response*

<http://iee802.org/1/files/public/docs2017/liaison-response-ITU-T-SG15-LS43-0717-v01.pdf>

Disposition: Liaison response; motion will be proposed

Jordan Woods presented *ODVA Response*

<http://iee802.org/1/files/public/docs2017/liaison-response-ODVA-0717-v01.pdf>

Disposition: Liaison response; motion will be proposed

Geoff Garner presented *IEEE 1588 liaison*

<http://www.ieee802.org/1/files/public/docs2017/liaison-1588-0717-v01.pdf>

Disposition: Liaison letter; motion will be proposed

János Farkas presented *ITU-T SG15 LS54 5G transport - response*

<http://www.ieee802.org/1/files/public/docs2017/liaison-response-ITU-T-SG15-LS54-0717-v01.pdf>

Disposition: Liaison response; motion will be proposed

János Farkas presented *ITU-T SG15 LS51 full timing support - response*

<http://www.ieee802.org/1/files/public/docs2017/liaison-response-ITU-T-SG15-LS51-0717-v01.pdf>

Disposition: Liaison response; motion will be proposed

János Farkas presented *3GPP RAN3 liaison*

<http://www.ieee802.org/1/files/public/docs2017/liaison-3GPP-RAN3-0717-v01.pdf>

Disposition: Liaison letter; motion will be proposed

János Farkas led the review of TSN TG motions as finalized starting slide 47 in <http://www.ieee802.org/1/files/public/minutes/2017-07-closing-plenary-slides.pdf>

Disposition: Motions review

János Farkas led a review of the automotive flyer as finalized at http://standards.ieee.org/downloads/TSN_for_Automotive_Networks.pdf

Disposition: Flyer update

Norman Finn led the review of a rogue comment received in the Sponsor recirculation ballot on <http://www.ieee802.org/1/files/private/cb-drafts/d2/802-1CB-d2-8.pdf>. The corresponding ballot summary is at <http://www.ieee802.org/1/files/private/cb-drafts/d2/802-1CB-d2-8-sponsor-ballot-2-reponse-summary.pdf>

Disposition: Ballot comment resolution

Scott Mansfield presented *DRAFT YANG FOR CFM P802.1QCX* <http://ieee802.org/1/files/public/docs2017/cx-mansfield-draft-YANG-0717-v01.pdf>

Disposition: Related to new project; more discussion needed

Scott Mansfield presented *DRAFT YANG FOR LLDP P802.1ABcu* <http://ieee802.org/1/files/public/docs2017/cu-mansfield-draft-YANG-0717-v01.pdf>

Disposition: Related to new project; more discussion needed

Feng Shen presented *More details on RAP (Resource Allocation Protocol)* <http://ieee802.org/1/files/public/docs2017/new-chen-RAP-details-0717-v02.pdf>

Disposition: New proposal; more discussion needed

Rodney Cummings presented *TSN Configuration Roadmap* <http://www.ieee802.org/1/files/public/docs2017/new-cummings-tsn-config-roadmap-0717-v0.pdf>

Disposition: New proposal; more discussion needed

Christophe Mangin presented *Extension of Stream identification functions* <http://ieee802.org/1/files/public/docs2017/new-mangin-extension-stream-id-0717-v01.pdf>

Disposition: New proposal; more discussion needed

Tongtong Wang presented *MTTFPA Consideration in Cut Through Mode* <http://ieee802.org/1/files/public/docs2017/new-tsn-wangtt-MTTFPAConsideration-inCutThroughMode-0717.pdf>

Disposition: New proposal; more discussion needed

Christian Boiger presented *Pdelay-IEEE P802.1AS-Rev vs IEEE P1588-Rev* <http://ieee802.org/1/files/public/docs2017/as-boiger-pdelay-802-1AS-vs-1588-0717-v01.pdf>

Disposition: Supports ballot comment

4 802.1-802.15 joint meeting

Call to order: 11 July 2017 6:12 PM

802.1 and 802.15 held a joint meeting to discuss topics of mutual interest. The 802.1 Chair, Glenn Parsons, and the 802.15.12 Chair, Pat Kinney, presided. The 802.1 Recording Secretary, Jessy Rouyer, wrote the minutes.

The 802.1 Chair made the Call for Potentially Essential Patents based on presentation of Slide #3 of the IEEE-SA PatCom Patent Slides for Standards Development Meetings <https://development.standards.ieee.org/myproject/Public/mytools/mob/slideset.pdf>. There were no responses to the call prior to the end of the joint meeting.

The 802.1 Chair introduced the agenda:

1. P802.15.12 update
2. P802.1Acct PAR comments resolution
3. A.O.B.

The agenda was approved.

1. P802.15.12 update

The 802.15.12 Chair provided an oral update on 802.15.12 and solicited help on 802.1X. The 802.1 Chair indicated that an 802.1 view could either be obtained through the joint meeting or through a future joint meeting with the 802.1 Security TG, once the issue is framed. It was agreed that 802.15.12 would frame the issue in time for the November 2017 plenary and that 802.1 would allocate time early in the week of that plenary to allow discussion between 802.1 (including 802.1 Security TG) and 802.15.12.

2. P802.1Acct PAR comments resolution

Thomas Kürner, Chair of 802.15 TG3d, led the review of 802.3 and 802.11 comments received on the draft PAR (<http://www.ieee802.org/1/files/public/docs2017/ACct-draft-PAR-0517-v01.pdf>) and CSD (<http://www.ieee802.org/1/files/public/docs2017/ACct-draft-CSD-0517-v01.pdf>) for P802.1Acct (Support for IEEE Std 802.15.3) by presenting draft responses to comments on both the PAR and CSD: <https://mentor.ieee.org/802.15/dcn/17/15-17-0411-00-003d-responses-to-par-802-1acct-amendment-review-comments.pptx> and <https://mentor.ieee.org/802.15/dcn/17/15-17-0198-04-003d-draft-csd-for-801-1ac-amendment.docx>. The former was updated based on joint meeting discussion as <https://mentor.ieee.org/802.15/dcn/17/15-17-0411-01-003d-responses-to-par-802-1acct-amendment-review-comments.pptx>. The draft PAR and CSD were updated based on joint meeting discussion as follows:

- Updated draft PAR: <http://www.ieee802.org/1/files/public/docs2017/ACct-draft-PAR-0517-v02.pdf>
- Updated draft CSD: <http://www.ieee802.org/1/files/public/docs2017/ACct-draft-CSD-0517-v02.pdf>

3. A.O.B.

There was no other business to discuss and the joint meeting adjourned at 6:42 PM.

5 Closing Plenary Meeting

Call to order: 13 July 2017, 1:38 PM.

The 802.1 Chair, Glenn Parsons, presided.

The 802.1 Recording Secretary, Jessy Rouyer, wrote the minutes.

The Chair presented the *802.1 Closing Plenary* slides available at <http://www.ieee802.org/1/files/public/minutes/2017-07-closing-plenary-slides.pdf>.

During this presentation, the Chair:

- Introduced the agenda on slide 2, which was tacitly approved.
- Showed slides 3 through 7 (reproducing slides 0 through 4 of the IEEE-SA PatCom Patent Slides for Standards Development Meetings, separately available at <http://standards.ieee.org/about/sasb/patcom/materials.html>):
 - The Chair made the “Call for Potentially Essential Patents”. There were no responses to the call.
- Showed the 802.1 Officers (slide 8) asking that the 802.1 password not be shared.
- Reviewed the list of 802.1 voting members, including information about individuals who have gained, may gain or will lose 802.1 voting membership at this meeting (slides 9 through 13).
- Reviewed the schedule for future 802.1 interim meetings, which remained unchanged from the opening plenary (slide 14), and noted that the location for the May 21-25, 2018 interim should be known by the November 2017 plenary meeting, and that confirmation is pending from the host of the September 2018 interim meeting regarding extending the original dates to include September 14.
 - It was agreed to have a motion to include January 22 in the January 2018 interim meeting and another motion to authorize the joint workshop with ITU-T SG15.
- Reviewed the schedule for future 802.1 plenary meetings, which remained unchanged from the opening plenary (slide 15).
- Reviewed future meeting durations (slide 16):
 - 5 day Interims from January 2018
 - Proposal for November plenary
 - Monday to Friday
 - Closing plenary on Friday morning – AM2
 - Mid-week plenary Wednesday – PM1
 - Reorganize task groups?
 - Split some work out of TSN TG...
 - No change at this time
- Discussed plans to update the 802.1 website around August 2017 (slide 17)
- Reviewed the current WG’s work load: 25 active projects, including in-progress PARs (slide 18).
- Requested presentations of the reports on 802 Standing Committees (slide 19):
 - Patricia Thaler reported on the IETF SC:
 - Joint coordination meeting the Saturday immediately following this plenary meeting: <https://www.iab.org/activities/joint-activities/iab-ieee-coordination/>
 - John Messenger reported on the JTC1 SC: <https://mentor.ieee.org/802-ec/dcn/17/ec-17-0129-01-INTL-itu-standing-committee-agenda-july-2017.pdf>
 - The 802.1 Chair reported on the ITU SC: <https://mentor.ieee.org/802.11/dcn/17/11-17-1136-00-0jtc-ieee-802-jtc1-sc-closing-report-berlin-july-2017.pptx>

- Reported on the 802 Task Force (slide 20):
 - Standards mascots
 - [Zappy](#) @zappysquirrel
 - Squirrel with an affinity for engineering, impressionist art, and educating the world about Standards. And acorns.
 - [New](#) game
 - Fellowship program
 - 4 attendees (IN, BF, SN, UG) attended, including a tutorial program
 - The 802.1 Chair thanked Janos Farkas on behalf of 802.1 for presenting on 802.1 activities to various government regulators in the fellowship program.
 - IEEE Get 802
 - Now on [IEEE Xplore](#)
 - It was suggested that the new URL should appear on the new 802.1 website.
 - myProject (including IMAT & Mentor, WG balloting) replacement
 - Indeterminate delay, but not earlier than Q4 2018
 - IEEE-SA staff support
 - Program: Jonathan Goldberg & Kathryn Bennett
 - Editors: Michelle Turner
 - International: Jodi Haasz
- Summarized the outcome of discussions at this plenary meeting on:
 - The IEEE Open Source offering (slide 21), noting that 802.1 participants had no objection to the general direction reflected under “IEEE 802 view” on slide 21, and that the EC would discuss a position as a result.
 - The corresponding EC position/memorandum agreed post-meeting is in <https://mentor.ieee.org/802-ec/dcn/17/ec-17-0140-01-00EC-open-source-memorandum.docx>.
 - The common approach to style and layout among YANG projects in various 802 WGs (slide 22), noting that 802.1 participants had no objection to scheduling a regular virtual meeting for discussion.
- Requested the 802.1 TG Chairs to provide reports on the activities of their TGs (slide 23; see individual TG minutes above for details):
 - Mick Seaman gave an oral update of Security TG progress (slide 24).
 - Patricia Thaler presented DCB TG progress (slide 25).
 - János Farkas presented TSN TG progress (slide 26)
 - Maximilian Riegel presented OmniRAN TG progress (slides 27-29).
 - John Messenger presented Maintenance TG progress (slides 30-36)
- Provided a summary of the Tuesday session on Industry Connections (slide 37).
- Asked for draft outgoing liaisons (slide 39), some of which were in response to incoming liaisons (slide 38), to be reviewed.
 - The TSN TG Chair led the review of all outgoing liaisons.
 - It was noted, based on discussions, that the 802.1 Chair is to prepare “liaison organization cover letters” to accompany 802.1 drafts being shared with other organizations marking all for “Technical coordination”.

- Conducted votes on the following motions, the TSN TG Chair having to temporarily interrupt the voting session to present additional 802.11 comments (received in <https://mentor.ieee.org/802.11/dcn/17/11-17-0858-02-0PAR-par-review-meeting-agenda-and-comment-slides-july-2017-berlin.pptx>), comments that were addressed based on the TSN TG Chair proposed responses in <http://www.ieee802.org/1/files/public/docs2017/admin-farkas-11-rebuttal-responses-0717-v1.pdf>, which were updated based on discussion as <http://www.ieee802.org/1/files/public/docs2017/admin-farkas-11-rebuttal-responses-0717-v2.pdf>:
 - Administrative motions:
 - 802.1 approves the March 2017 (Plenary) and May 2017 (Interim) minutes:
 - <http://ieee802.org/1/files/public/minutes/2017-03-minutes.pdf>
 - <http://ieee802.org/1/files/public/minutes/2017-05-minutes.pdf>Proposed: Jessie Rouyer Seconded: John Messenger
 - Approved by Acclamation
 - IEEE 802.1 WG approves to hold three plenary sessions at the November IEEE 802 plenary as follows:
 - Opening plenary – Monday AM2
 - Midweek plenary – Wednesday PM1
 - Closing plenary – Friday AM2Proposed: Eric Gray Seconded: Janos Farkas
 - Approved by Acclamation
 - Approve virtual conferences Monthly on the last Wednesday of every month from 9AM (US-Eastern) to 10AM (US- Eastern) to facilitate IEEE 802 YANG editor coordination.
 - Access information is <http://join.me/ieee802.1> and will also be posted on the <http://www.ieee802.org/1> page and will be updated as necessary.Proposed: Marc Holness Second: Scott Mansfield
 - Approved by Acclamation
 - 802.1 approves changing the dates of the interim meeting in January 2018 as follows:
 - January 22-26, 2018802.1 approves participation in a Joint Workshop with ITU-T SG15 at ITU-T Headquarters in Geneva, Switzerland:
 - January 27, 2018Proposed: McIntosh Second: Messenger
 - Approved by Acclamation
 - Motions – EC Consent agenda
 - PARs to NesCom (ME)
 - Approve forwarding P802.1ACct PAR documentation in <http://www.ieee802.org/1/files/public/docs2017/ACct-draft-PAR-0517-v02.pdf> to NesCom
 - Approve CSD documentation in <http://www.ieee802.org/1/files/public/docs2017/ACct-draft-CSD-0517-v02.pdf>
 - Proposed: John Messenger Second: Jessie Rouyer
 - For_26_Against_0 Abstain__0In EC, mover: Glenn Parsons Second: Pat Thaler
 - (y/n/a): <y>,<n>,<a>

- Approve forwarding P802.1AC/Cor-1 PAR documentation in <http://ieee802.org/1/files/public/docs2017/new-messenger-ac-cor1-draft-par-0717-v3.pdf> to NesCom
Proposed: Messenger Second: Rouyer
 - For_27_Against_0 Abstain_0In EC, mover: Glenn Parsons Second: Pat Thaler
 - (y/n/a): <y>,<n>,<a>Note: there are no CSD responses for this maintenance PAR.
- Approve forwarding P802.1ABcu PAR documentation in <http://www.ieee802.org/1/files/public/docs2017/cu-draft-PAR-0517-v02.pdf> to NesCom Approve CSD documentation in <http://www.ieee802.org/1/files/public/docs2017/cu-draft-CSD-0517-v02.pdf>
 - In the WG (y/n/a): 28, 0, 0Proposed: János Farkas Second: John Messenger
In EC, mover: Glenn Parsons Second: Pat Thaler
 - (y/n/a): <y>,<n>,<a>
- Approve forwarding P802.1AS-Rev PAR modification in <http://www.ieee802.org/1/files/public/docs2017/as-rev-PAR-modification-0517-v02.pdf> to NesCom
 - In the WG (y/n/a): 30, 0, 0Proposed: János Farkas Second: John Messenger
In EC, mover: Glenn Parsons Second: Pat Thaler
 - (y/n/a): <y>,<n>,<a>Note: there are no CSD responses for this maintenance PAR.
- Approve forwarding P802.1CBcv PAR documentation in <http://ieee802.org/1/files/public/docs2017/cv-draft-PAR-0517-v02.pdf> to NesCom Approve CSD documentation in <http://ieee802.org/1/files/public/docs2017/cv-draft-CSD-0517-v02.pdf>
 - In the WG (y/n/a): 31, 0, 0Proposed: János Farkas Second: John Messenger
In EC, mover: Glenn Parsons Second: Pat Thaler
 - (y/n/a): <y>,<n>,<a>
- Approve forwarding P802.1Qcc PAR documentation in <http://www.ieee802.org/1/files/public/docs2017/cc-PAR-extension-0517-v01.pdf> to NesCom
 - In the WG (y/n/a): 31, 0, 0Proposed: János Farkas Second: John Messenger
In EC, mover: Glenn Parsons Second: Pat Thaler
 - (y/n/a): <y>,<n>,<a>Note: there are no CSD responses for this maintenance PAR.
- Approve forwarding P802.1Qcw PAR documentation in <http://ieee802.org/1/files/public/docs2017/cw-draft-PAR-0517-v02.pdf> to NesCom Approve CSD documentation in <http://ieee802.org/1/files/public/docs2017/cw-draft-CSD-0517-v02.pdf>
 - In the WG (y/n/a): 31, 0, 0Proposed: János Farkas Second: John Messenger
In EC, mover: Glenn Parsons Second: Pat Thaler
 - (y/n/a): <y>,<n>,<a>

- Approve forwarding P802.1Qcx PAR documentation in <http://ieee802.org/1/files/public/docs2017/cx-draft-PAR-0517-v02.pdf> to NesCom
Approve CSD documentation in <http://ieee802.org/1/files/public/docs2017/cx-draft-CSD-0517-v02.pdf>
 - In the WG (y/n/a): 29, 0, 0
Proposed: János Farkas Second: John Messenger
In EC, mover: Glenn Parsons Second: Pat Thaler
 - (y/n/a): <y>,<n>,<a>
- Approve forwarding P802.1AE PAR documentation in <http://www.ieee802.org/1/files/public/docs2017/ae-seaman-rev-draft-par0717-v04.pdf> to NesCom
 - In the WG (y/n/a): 29, 0, 0
Proposed: James McIntosh Second: John Messenger
In EC, mover: Glenn Parsons Second: Pat Thaler
 - (y/n/a): <y>,<n>,<a>

Note: there are no CSD responses for this maintenance PAR.
- Drafts to Sponsor Ballot
 - Approve sending P802.1Q-Rev/D2.0 to Sponsor Ballot.
Proposed: Messenger Second: Rouyer
 - For 33__Against_0 Abstain__0EC proposed: Parsons Second: Thaler
 - For __Against Abstain

Note: There are no CSD for this maintenance PAR.
 - Conditionally approve sending P802.1Qcc D2.0 to Sponsor Ballot
Confirm the CSD for P802.1Qcc in <http://www.ieee802.org/1/files/public/docs2013/new-p802-1qcc-draft-5c-0513-v2.pdf>
P802.1Qcc D1.5 had 100% approval at the end of the last WG recirculation ballot
 - In the WG (y/n/a): 33, 0, 0
Proposed: János Farkas Second: John Messenger
In EC, mover: Glenn Parsons Second: Pat Thaler
 - (y/n/a): <y>,<n>,<a>
 - Conditionally approve sending P802.1Qcp D2.0 to Sponsor Ballot
Confirm the CSD for P802.1Qcp in <http://www.ieee802.org/1/files/public/docs2015/cp-draft-Qcp-csd-0715-v1.docx>
P802.1Qcp D1.1 had 100% approval at the end of the last WG recirculation ballot
 - In the WG (y/n/a): 34, 0, 0
Proposed: János Farkas Second: John Messenger
In EC, mover: Glenn Parsons Second: Pat Thaler
 - (y/n/a): <y>,<n>,<a>
- JTC1 SC6 PSDO items
 - Approve liaison of the following comment responses to ISO/IEC JTC1/SC6 under the PSDO agreement:
 - IEEE 802.1Q-2014/Cor 1-2015, IEEE 802.1AB-2016, IEEE 802.1Qca-2015, IEEE 802.1Qbv-2015, and IEEE 802.1AC- 2016:
<http://www.ieee802.org/1/files/public/docs2017/liaison-randall-SC6Responses0717-v01.pdf>Proposed: Messenger Second: Rouyer
 - For 34 Against_0 Abstain_0__EC proposed: Parsons Second: Thaler
 - For Against Abstain

- Approve liaison of the following draft(s) to ISO/IEC JTC1/SC6 for information under the PSDO agreement:
 - P802.1Qcc
 - P802.1Qcp
 - P802.1AR-Rev
 - P802.1Q-RevProposed: Messenger Second: Rouyer
 - For 34__Against 0__Abstain__0EC proposed: Parsons Second: Thaler
 - For __Against Abstain
 - It was agreed that these drafts be submitted for technical coordination between IEEE 802.1 and ISO/IEC JTC1/SC6.
- Security motions
 - Approve sending P802.1AR-Rev D2.2 “Secure Device Identity” to Sponsor Ballot Confirm the CSD for P802.1AR-Rev in <http://www.ieee802.org/1/files/public/docs2016/ar-seaman-rev-draft-csd-0916-v02.pdf>
See <http://www.ieee802.org/1/files/private/ar-rev-drafts/d2/802-1AR-rev-d2-2-dis.pdf> for supporting documentation
 - Ballot closed 18th May 2017
 - Approve 18 Disapprove 0 Abstain 17 – Return rate > 50%
 - No Disapproves/Outstanding comments – 100% approvalIn the WG:
 - Moved: James McIntosh Seconded: Eric Gray
 - Y_25_N_0_A 0In the EC:
 - Moved: Glenn Parsons Seconded: Pat Thaler
 - Y N A
 - 802.1 authorizes the Security Task Group to hold teleconferences to progress P802.1AR- Rev, P802.1AE-Rev, P802.1Xck, P802E and task group matters arising:
 - Dates/times to be announced subject to notice of at least 10 days to the 802.1 email exploderProposed: McIntosh Second: Weis
 - Approved Acclamation
- TSN motions
 - Conditionally approve sending P802.1CB D2.9 to RevCom. Approve CSD (5C) documentation in <http://www.ieee802.org/1/files/public/docs2013/new-p802-1CB-draft-5c-0313.pdf>
There are no outstanding Disapprove votes.
A 10-day Recirculation #3 on D2.8 is underway, with a single rogue technical comment.
A 10-day Recirculation #4 will be run on D2.9, which will include the fix.
 - In the WG (y/n/a): 27, 0 , 1Proposed: Norman Finn Second: Eric Gray
In EC, mover: Glenn Parsons Second: Pat Thaler
 - (y/n/a): <y>,<n>,<a>

- Approve forwarding P802.1Qcp PAR modification documentation in <http://ieee802.org/1/files/public/docs2017/cp-PAR-modification-draft-0717-v01.pdf> to NesCom
Approve CSD documentation in <https://mentor.ieee.org/802-ec/dcn/15/ec-15-0071-00-ACSD-802-1qcp.docx>
Approve precirculation of the PAR to EC.
 - In the WG (y/n/a): 26, 0, 0Proposed: Marc Holness Second: John Messenger
- Approve IEEE 802.1 to be a Lead Exhibitor at the TSN/A Conference 2017 as described in this presentation <http://ieee802.org/1/files/public/docs2017/admin-cgunther-TSNA2017-0717-v01.pdf>, providing booth space is made available. The event is scheduled to occur on September 20- 21, 2017 in Stuttgart, Germany.
 - In the WG (y/n/a): 29, 0, 1Proposed: Craig Gunther Second: Stephan Kehrer
In EC, mover: Glenn Parsons Second: Pat Thaler
 - (y/n/a): <y>,<n>,<a>
- 802.1 authorizes János Farkas, the Editor of P802.1CM TSN for Fronthaul, to prepare drafts for and conduct Working Group balloting.
Proposed: John Messenger
Second: David Chen
 - In the WG (y/n/a): 27, 0, 0
- 802.1 authorizes Norman Finn, the Editor of P802.1CS Link-local Registration Protocol to prepare drafts for and conduct Task Group balloting.
Proposed: Norman Finn
Second: Jordon Woods
 - In the WG (y/n/a): 27, 0, 0
- Approve liaison of the following response to ODVA
 - <http://www.ieee802.org/1/files/public/docs2017/liaison-response-ODVA-0717-v01.pdf>
 - In the WG (y/n/a): 26, 0, 0Proposed: Jordon Woods Second: Mark Hantel
In EC, mover: Glenn Parsons Second: Pat Thaler
 - (y/n/a): <y>,<n>,<a>
 - It was agreed to submit the mentioned IEEE P802.1Qcc, P802.1CB, P802.1AS-Rev, P802.1Qcp and P802.1Qch drafts for technical coordination between IEEE 802.1 and ODVA.
- Approve liaison of the following response (to LS 43) to ITU-T SG15
 - <http://www.ieee802.org/1/files/public/docs2017/liaison-response-ITU-T-SG15-LS43-0717-v01.pdf>
 - In the WG (y/n/a): 27, 0, 0Proposed: Jessy Rouyer Second: Geoff Garner
In EC, mover: Glenn Parsons Second: Pat Thaler
 - (y/n/a): <y>,<n>,<a>

- Approve liaison of the following response (to LS 51) to ITU-T SG15
 - <http://www.ieee802.org/1/files/public/docs2017/liaison-response-ITU-T-SG15-LS51-0717-v01.pdf>
 - In the WG (y/n/a): 27, 0, 0
Proposed: John Messenger Second: Jessy Rouyer
In EC, mover: Glenn Parsons Second: Pat Thaler
 - (y/n/a): <y>,<n>,<a>
 - It was agreed to submit P802.1CM/D1.0 for technical coordination between IEEE 802.1 and ITU-T SG15.
- Approve liaison of the following response (to LS 54) sent to ITU-T SG15 with copy to ITU-T SG13 WP1, JCA- IMT2020, CPRI Cooperation, NGMN, MEF, BBF, and IETF
 - <http://www.ieee802.org/1/files/public/docs2017/liaison-response-ITU-T-SG15-LS54-0717-v01.pdf>
 - In the WG (y/n/a): 27, 0, 0
Proposed: John Messenger Second: János Farkas
In EC, mover: Glenn Parsons Second: Pat Thaler
 - (y/n/a): <y>,<n>,<a>
- Approve liaison of the following letter to 3GPP RAN3
 - <http://www.ieee802.org/1/files/public/docs2017/liaison-3GPP-RAN3-0717-v01.pdf>
 - In the WG (y/n/a): 29, 0, 0
Proposed: János Farkas Second: David Chen
In EC, mover: Glenn Parsons Second: Pat Thaler
 - (y/n/a): <y>,<n>,<a>
- Approve liaison of the following letter to IEEE 1588
 - <http://www.ieee802.org/1/files/public/docs2017/liaison-1588-0717-v01.pdf>
 - In the WG (y/n/a): 29, 0, 0
Proposed: Geoff Garner Second: János Farkas
In EC, mover: Glenn Parsons Second: Pat Thaler
 - (y/n/a): <y>,<n>,<a>
 - It was agreed to submit P802.1AS-Rev/D5.0 for technical coordination between IEEE 802.1 and 1588.
- The TSN TG will continue to have virtual conferences weekly on Mondays from 8AM (US-Pacific) to 10AM (US-Pacific).
Access information is posted on the <http://www.ieee802.org/1/pages/tsn.html> page and will be updated as necessary.
Agenda will be announced on the 802.1 email reflector by the Friday before.
Proposed: János Farkas
Second: Geoff Garner
 - Approved by Acclamation
- 802.1 resolves to hold pre-meeting(s) on the Monday morning of the November 2017 Plenary session for TSN.
Proposed: János Farkas
Second: Geoff Garner
 - Approved by Acclamation

- DCB motions
 - 802.1 authorizes Paul Bottorff and Yizhou Li, the Editors of P802.1Qcn to prepare drafts for and conduct Working Group balloting.
Moved: Pat Thaler
Second: Paul Bottorff
 - Y 26 N 0 A 0
 - Whereas the PAR designation of P802.1Qcn causes confusion with the acronym for the Quantized Congestion Notification (QCN) protocol in IEEE 802.1Q
Authorize 802.1 chair to request that the NesCom administrator change the PAR number to P802.1Qcy
Moved: Pat Thaler
Second: Paul Bottorff
 - Y 26 N 0 A 0
- OmniRAN motions
 - Approve OmniRAN TG conference calls:
 - July 25th, 09:30 AM ET, 90mins
 - Between the September 2017 interim and the November 2017 plenary with at least 10 days prior notice to the 802.1 mailing list.
 - Agenda and call-in details will be announced at least 10 days prior on the 802.1 mailing list and be made available on <https://mentor.ieee.org/omniran/bp/StartPage>
 - Moved: Max Riegel,
Second: Walter Pienciak
 - Approved by acclamation
- Maintenance motions
 - Authorize Maintenance TG to hold teleconferences on 29th August and 31st October 2017 at 11am EST if necessary. Access information will be posted to the 802.1 reflector in advance.
Proposed: Messenger Second: Rouyer
 - Approved by Acclamation
- Other motions
 - Confirm the CSD for P802.1AS in <http://www.ieee802.org/1/files/public/docs2014/new-802-1AS-rev-draft-csd-0514-v1.pptx>
Proposed: Messenger Second: Garner
 - For: 16 Against: 0 Abstain: 0
 - Move to reconsider forwarding PARs to NesCom for
 - P802.1CBcv
 - P802.1Qcw
 - P802.1Qcx
 - P802.1ABcu
 - Moved: Eric Gray Seconded: Pat Thaler
 - Y 15 N 0 A 1
 - Approve forwarding P802.1CBcv PAR documentation in <http://ieee802.org/1/files/public/docs2017/cv-draft-PAR-0517-v02.pdf> to NesCom
Approve CSD documentation in <http://ieee802.org/1/files/public/docs2017/cv-draft-CSD-0517-v02.pdf>
 - In the WG (y/n/a): 1 , 11 , 0
 - Proposed: János Farkas Second: John Messenger
In EC, mover: Glenn Parsons Second: Pat Thaler
 - (y/n/a): <y>,<n>,<a>

- 802.1 authorizes the September 2017 Interim to further develop PAR and CSD for pre-circulation to the EC for an amendment to IEEE 802.1CB covering YANG and MIB modules.
Proposed: Eric Gray
Second: Jordon Woods
 - Approved (y/n/a): 11, 0, 1
- Approve forwarding P802.1Qcw PAR documentation in <http://ieee802.org/1/files/public/docs2017/cw-draft-PAR-0517-v03.pdf> to NesCom
Approve CSD documentation in <http://ieee802.org/1/files/public/docs2017/cw-draft-CSD-0517-v02.pdf>
 - In the WG (y/n/a): 12, 0, 0
Proposed: János Farkas Second: John Messenger
In EC, mover: Glenn Parsons Second: Pat Thaler
 - (y/n/a): <y>,<n>,<a>
- Approve forwarding P802.1Qcx PAR documentation in <http://ieee802.org/1/files/public/docs2017/cx-draft-PAR-0517-v03.pdf> to NesCom
Approve CSD documentation in <http://ieee802.org/1/files/public/docs2017/cx-draft-CSD-0517-v02.pdf>
 - In the WG (y/n/a): 12, 0, 0
Proposed: János Farkas Second: John Messenger
In EC, mover: Glenn Parsons Second: Pat Thaler
 - (y/n/a): <y>,<n>,<a>
- Approve forwarding P802.1ABcu PAR documentation in <http://www.ieee802.org/1/files/public/docs2017/cu-draft-PAR-0517-v03.pdf> to NesCom
Approve CSD documentation in <http://www.ieee802.org/1/files/public/docs2017/cu-draft-CSD-0517-v02.pdf>
 - In the WG (y/n/a): 12, 0, 0
Proposed: János Farkas Second: John Messenger
In EC, mover: Glenn Parsons Second: Pat Thaler
 - (y/n/a): <y>,<n>,<a>

There was no other business to discuss and the closing plenary meeting was adjourned at 9:21 PM.

6 Next meeting

5-8 September 2017, St. John's, Newfoundland, Canada