IEEE 802.1 Working Group

5-9 March 2018 Plenary Meeting

Rosemont, IL, USA

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

Last Name	*First Name*	*Affiliation*
Adachi	Yoshiaki	Hitachi, Ltd.
Aekins	Rob	Legrand
Anago	Richard	Ministry of development of digital economy and post of Burkina Faso
Andersdotter	Amelia	Article19
Bao	Shenghua	HUAWEI
Bechtel	Gordon	Bechtech
Belliardi	Rudy	Schneider Electric; IEC TC 65
Bierschenk	Jens	Robert Bosch GmbH
Bims	Harry	Bims Laboratories, Inc.
Boiger	Christian	b-plus GmbH
Bottorff	Paul	Hewlett-Packard Development Company, L.P.
Canchi	Radhakrishna	Kyocera International Inc.
Chang	Xin	Huawei Technologies Co. Ltd
Chen	David	Nokia
Chen	Feng	Siemens AG
Chen	Leo	Kyland Corporation
Chen	Lidong	NIST
Cheng	Weiying	Coriant
Congdon	Paul	Tallac Networks; Huawei
Cummings	Rodney	National Instruments Corporation
Dorr	Josef	Siemens AG
Elbakoury	Hesham	Huawei Technologies Co. Ltd
Ellegaard	Lars	Microsemi Corporation
Emmelmann	Marc	Self
Enzinger	Thomas	B&R Industrial Automation
Fan	Xiaojing	Fujitsu Research & Development Center
Fang	Yonggang	ZTE TX Inc
Farkas	Janos	Ericsson
Finn	Norman	Huawei Technologies Co. Ltd

Fischer	Michael	NXP Semiconductors
Fletcher	Paul	Samsung Cambridge Solution Center
Fontaine	Mickael	TransPacket
Garner	Geoffrey	Huawei Technologies Co. Ltd
Godfrey	Tim	Electric Power Research Institute, Inc. (EPRI)
Gravel	Mark	Hewlett Packard Enterprise
Gunther	Craig	HARMAN INTERNATIONAL INDUSTRIES, INCORPORATED
Gutierrez	Marina	TTTech Computertechnik AG
Haddock	Stephen	Stephen Haddock Consulting, LLC
Hamilton	Mark	Ruckus Wireless
Hantel	Mark	Rockwell Automation
Harima	Taro	Mitsubishi Electric Corporation
Harkins	Daniel	Aruba Networks, Inc.
Hasegawa	Akio	Advanced Telecommunications Research Institute International (ATR)
Holness	Marc	Ciena Corporation
Hotta	Yoshifumi	Mitsubishi Electric Corporation
Hung	Soar	Realtek Semiconductor Corp.
Kabra	Lokesh	Synopsys, Inc.
Kalke	Jerome	CBS Corp
Karl	Michael	Marvell Semiconductor, Inc.
Kehrer	Stephan	Hirschmann Automation and Control, Inc.
Kitazawa	Shoichi	Muroran IT
Kivinen	Tero	INSIDE Secure
Kondo	Kenji	Yaskawa Electric Corp
Koto	Hajime	National Institute of Information and Communications Technology (NICT)
Lawlis	James	Ford Motor Company
Levy	Joseph	InterDigital, Inc.
Li	Dong	Shenyang Insititue of Automation, Chinese Academy of Sciences
Lutz	Peter	Sercos International
Malinen	Jouni	Qualcomm Incorporated
Mangin	Christophe	Mitsubishi Electric Corporation
Mansfield	Scott	Telefon AB LM Ericsson
Marks	Roger	EthAirNet Associates; Huawei
Maruhashi	Kenichi	NEC Corporation
Matabishi	Lloyd	Zambia Information and Communications Technology Authority (ZICTA)
Mccann	Stephen	BlackBerry
Mcmillan	Larry	Western Digital Corporation
Messenger	John	ADVA Optical Networking Ltd.
Mustala	Tero	Nokia Networks
Myles	Andrew	Cisco Systems, Inc.

Nomizu	Takuma	Hitachi, Ltd.
Ohori	Fumiko	National Institute of Information and Communications Technology (NICT)
Ohsawa	Tomoki	NICT
Osagawa	Daisuke	Mitsubishi Electric Corporation
Palm	Stephen	INDEPENDENT
Pannell	Donald R	NXP Semiconductors
Parsons	Glenn	Ericsson AB
Pienciak	Walter	IEEE
Potts	Michael	General Motors Company
Qiu	Wei	Huawei Technologies Co., Ltd
Rakanovic	Demir	u-blox
Riegel	Maximilian	Nokia Networks
Rouyer	Jessy	Nokia
Sakata	Ren	TOSHIBA Corporation
Sato	Atsushi	Yokogawa Electric Corporation
Seaman	Michael	Individual
Seewald	Maik	Cisco Systems, Inc.
Shen	Li	Huawei Technologies Co., Ltd
Specht	Johannes	University of Duisburg-Essen and General Motors Company
Steindl	Guenter	Siemens AG
Sun	Liyang	HUAWEI
Sun	Wenhao	Huawei Technologies Co., Ltd
Tabatabaee	Vahid	Broadcom Corporation
Tarui	Isao	Mitsubishi Electric Corporation
Thaler	Patricia	Broadcom Limited
Umutoni	Yvonne	Rwanda Utilities Regulatory Authority
Wamsser	Reiner	IEC SC65C MT9-Member
Wang	Haifei	Huawei Technologies Co. Ltd
Wang	Hao	Fujitsu Research & Development Center
Wang	Xinyuan	Huawei Technologies Co. Ltd
Weis	Brian	Cisco Systems, Inc.
White	Martin	Cavium
Winkel	Ludwig	Siemens AG
Wood	Graeme	British Standards Institution (BSi), Rockwell Corp
Woods	Jordon	Analog Devices Inc.
Yamaura	Takahiro	Toshiba
Yang	Yunsong	Huawei Technologies Co. Ltd
Yano	Kazuto	Advanced Telecommunications Research Institute International (ATR)
Yin	Yue	Huawei Technologies Co., Ltd
Yu	Xiang	Huawei Technologies Co., Ltd
Zein	Nader	NEC Corporation

Zhang	Jianfeng	kyland
Zhang	Yun	Huawei Technologies Co. Ltd
Zuniga	Juan Carlos	SIGFOX

2 802.1 Officers and Management

Glenn Parsons	Working Group Chair
John Messenger	Working Group Vice-chair
Mick Seaman	Chair, Security Task Group
Janos Farkas	Chair, Time Sensitive Networking Task Group
Craig Gunther	Secretary, Time Sensitive Networking Task Group
Pat Thaler	Chair, Data Center Bridging Task Group
Max Riegel	Chair, OmniRAN Task Group
Jessy Rouyer	Working Group Secretary

3 Opening Plenary Meeting

Call to order: 5 March 2018, 10:30 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/2018-03-opening-plenary-slides.pdf.

During this presentation, the Chair:

- Showed the agenda on slide 2. The agenda was approved.
- Showed slides 3 through 7 (including reproduced slides 0 through 3 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:
  - IEEE's patent policy is described in Clause 6 of the IEEE-SA Standards Board Bylaws;
  - Early identification of patent claims which may be essential for the use of standards under development is strongly encouraged;
  - There may be Essential Patent Claims of which IEEE is not aware. Additionally, neither IEEE, the WG, nor the WG Chair can ensure the accuracy or completeness of any assurance or whether any such assurance is, in fact, of a Patent Claim that is essential for the use of the standard under development.
- 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 802.1 TG Chairs of their daily obligations (per slide 7) 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 8);
    - The Chair called for any members of the press (i.e., anyone reporting publicly on this meeting) to announce their presence.
      - There were no responses to the call.
  - Participation in IEEE 802 meetings on an individual basis (slide 9);
  - Hotel and meeting room security (slide 10);
  - General information on 802.1 (slide 11), including information on newcomers orientation available at http://www.ieee802.org/1/files/public/docs2017/tsn-farkas-intro-0317-v01.pdf (after the opening plenary, updated slides were made available as http://www.ieee802.org/1/files/public/docs2018/tsn-farkas-intro-0318-v01.pdf), 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;
  - Meeting logistics (slide 12).
- Introduced 802.1 officers and provided 802.1 website information (slide 13).
- Reviewed the list of 802.1 voters (slide 14), including information about individuals who have lost (slide 15), may lose (slides 16 and 19), may gain (slides 17 and 18) 802.1 voting membership. The Chair reminded individual participants of their obligations and about 802.11 reciprocal credit, which was continued at this meeting (slide 20).
- Introduced phased updates to the new 802.1 website at http://1.ieee802.org indicating that Phase I is now implemented (slide 21).
- Reviewed the schedule for future interim meetings (slide 22), which included:
  - May 21-25, 2018 in Pittsburgh, PA, USA
  - September 10-14, 2018 in Oslo, Norway
  - January 14-18, 2019 in Hiroshima, Japan
    - Hajime Koto presented *IEEE802.1 Interim meeting proposal Hiroshima, Japan January 14.-18.(Mon ―Fri), 2019* http://www.ieee802.org/1/files/public/docs2018/admin-koto-Hiroshima-interim-proposal-0318-v02.pdf
      - The Chair indicated the Midweek Plenary Meeting would have a motion to approve the proposed location and dates.

  - May 20-24, 2019 in North America (exact location to be determined)
  - September 2019
    - Hosts welcome. ADVA Optical Networking is continuing to explore hosting in Edinburgh, UK or York, UK.
  - Jan 2020 potentially in Geneva, Switzerland the week before the ITU-T SG15 plenary meeting the same month.
    - The Chair conducted the following Straw Polls:
      - "Who would attend if the meeting was held in Geneva?": 33
      - "Who would not attend [if the meeting was held in Geneva]?": 0
- Reviewed the schedule for future plenary meetings (slide 23), which included:
  - 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
  - March 2020 in Atlanta, GA, USA (exact dates to be determined)
  - July 2020 in Montreal, QC, Canada (exact dates to be determined)
  - November 2020 in Bangkok, Thailand (exact dates to be determined)
- Proposed that 802.1 either continues its 5-day plenary meetings or reverts to four days. This was to be discussed on Wednesday (slide 24).
- Presented options for the DCB TG going forward following retirement of its Chair (slide 25).
- Reminded that 802 elections take place at this plenary meeting, listed the running candidates and 802 Chair proposed appointments (slide 26).
  - The current 802 Chair, 802.1 Chair and 802.1 Vice Chair were planning to stand for re-election, the last time to announce a run being before the vote at the midweek plenary meeting.
- Reported the following items out of the 802 Executive Committee (EC) executive session (slide 27):
  - 802.20 withdrawal
  - 802 Task Force
    - Tools update
    - Declaration of Affiliation requirements
    - Global Data Protection Regulations
    - IEEE legal update
  - P&P, WG & CG change proposals (EC-18-026)
    - Remove: old PAR requirements, old treasurer requirements
    - New: CSD for "Security and Privacy" implications, ICAID approval process like PAR, dominance remedy
    - Next time: 802 Ombudsman as a new EC position
    - Update Sponsor P&P (and then WG P&P) in 2018
  - Venues (EC-18-028)
    - Face to Face & Verilan contracts expiring this year
  - Treasurer (EC-18-043)
    - 2017 loss: $50k + $110k + $30k = $190k (reserve fallen to $1.5M)
    - 2018 projection
      - Chicago projection $100k loss
      - San Diego forecast $25k
      - Bangkok forecast even
    - 2019 projection is much worse
- Reviewed the list of 802 EC meetings to be held this week (slide 28).
- Provided information about IEEE-SA staff support, recognizing them for their support (slide

29).
- Indicated that the status of myProject is unchanged since the last plenary meeting (slide 30) and provided a brief overview of the IEEE Open Source offering (slide 31).
  - The Chair noted the latter topic would be discussed in the YANGsters group meeting.
- Provided information about public review (slide 32) and about the following email ballot (ePoll) since the last plenary meeting (slide 33):
  - 13-802.1AC-2016-Cor-1 to Sponsor Ballot
    - Approve sending P802.1AC-2016-Cor-1/D2.0 to Sponsor Ballot
      Note: There is no CSD for this maintenance PAR Supporting slides
    - Moved: John Messenger Seconded: Eric Gray
    - Approved - 35/0/1
  - The Chair clarified that voting in ePolls counts towards the 802.1 requirement to vote in Working Group ballots.
- Pointed out PARs and CSDs that are up for vote at this IEEE 802 plenary meeting (slides 34 and 35).
  - The Chair asked the Vice-chair to review P802.15.4x and the Security TG Chair to review the P802.15.4y PAR/CSD.
- Introduced the 802.1 Industry Connections activity (slide 36).
  - The Chair agreed to appoint Roger Marks as the chair of the *IEEE 802 network enhancements for the next decade* ICAID.
- Indicated that since there are no tutorials at this 802 plenary meeting, “802.1 Newcomers”, “YANGsters” and “802.3 NEA – low latency switching” meetings would be held in the evening of March 5 (slide 37).
- 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 38)
- Reviewed the list of liaisons incoming to 802.1 to be handled by the Maintenance and TSN TGs, and by the YANGsters group (slide 39).
- Provided an update on the IEC/IEEE Joint Working Group (slide 40)
- Provided his anticipation of next actions with respect to projects in the current WG’s workload (slide 41) and discussed promotion of the work that the WG is doing (slide 42).
  - The TSN TG Chair thanked contributors to the TSN Feature Topic in IEEE Communications Standards Magazine, June 2018.
- Provided an overview of the various IEEE-SA Awards, encouraging nominations (slide 43).
- Noted that Standards Project Awards are being prepared (slide 44).
- Provided TG Chairs with motion requirements for the midweek plenary (slide 45).
- Showed the 802.1 plenary schedule/agenda for this meeting, which was tacitly approved (slide 46).
- Listed 802.1 management meetings (slide 47).
- Provided, with the assistance of Scott Mansfield, information about the meetings and status of the YANGsters group (slide 48).
- Requested the 802.1 TG Chairs to introduce their TG agenda (slide 49):
  - Mick Seaman presented the Security TG agenda (slide 50).
  - János Farkas presented the TSN TG agenda (slide 51).
  - Maximilian Riegel presented the OmniRAN TG agenda (slides 52-53).
  - John Messenger presented the Maintenance TG agenda for 6 March 2018 (slide 54).
  - Patricia Thaler presented the DCB TG agenda (slide 55).
- Provided an update on the 802 Network Enhancements Industry Connections activity (slide 56).

There was no other business to discuss (slide 57) and the opening plenary meeting was adjourned at 1:05 PM.

4 Task Group Meetings

4.1 Data Center Bridging

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

At the beginning of the meetings on Tuesday and Thursday, Patricia Thaler presented the IEEE-SA PatCom Patent Slides for Standards Development Meetings (https://development.standards.ieee.org/myproject/Public/mytools/mob/slideset.pdf), presented 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 calls prior to the end of the week's session.

Tuesday 06 March 2018

10:30AM (call to order) to 12:00 PM

The agenda for each day was approved as follows:

1. Tuesday AM2 (1030 - 1230)
    a. Responses to JTC1 review comments on 802c - Roger Marks
    b. P802.1Qcy status
2. Wed AM1 and AM2 (800 - 1230)
    a. P802.1Qcz PAR develop responses to comments received on the PAR
    b. Other presentations on P802.1Qcz
3. Wed PM2 (1600-1800) and Thursday (900 - 1800)
    a. P802.1CQ

Roger Marks led a review of, and edited responses (http://www.ieee802.org/1/files/public/docs2018/802c-Marks-title-JTC1-SC6-pdis-0318.docx) to the JTC1 review comments on 802c. **Disposition**: The proposed responses are in http://www.ieee802.org/1/files/public/docs2018/802c-Marks-JTC1-SC6-pdis-0318-r1.docx. These responses were reviewed in the JTC1 SC Tuesday afternoon and further edited in http://www.ieee802.org/1/files/public/docs2018/802c-Marks-JTC1-SC6-pdis-0318-r2.docx.

Paul Bottorff, P802.1Qcy editor, provided an update on the Sponsor ballot for P802.1Qcy on http://www.ieee802.org/1/files/private/cy-drafts/d2/802-1qcy-d2-1.pdf.

- Sponsor ballot was still open and needed four more responses for a valid ballot. It had no disapproves and one comment indicating that editorial coordination is met.
- It was noted that the draft has a reference to the NVO3 draft on Split NVE Control Plane Requirements which is not an RFC yet.

Disposition:

- The project edited a spontaneous liaison to share the draft with IETF NVO3: http://www.ieee802.org/1/files/public/docs2018/dcb-liaison-ietf-nvo3-vdp-1803-v1.pdf.
- The project should wait until NVO3 has had a chance to comment on the draft before doing a recirculation.
- The Chair was to prepare a motion for ballot resolution conference calls.
- Paul Bottorff took an action item to submit comments about the dependency on the IETF draft progressing to RFC and on holding the draft for NVO3 comments.

Wednesday 07 March 2018

Joint meeting with TSN TG: 8:00 AM (call to order) to 9:00 AM

The DCB TG convened jointly with the TSN TG for presentations on the P802.1Qcz PAR.

Janos Farkas, TSN TG Chair, 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 session.

Vahid Tabatabaee presented *Congestion Isolation Proposal Analysis* http://www.ieee802.org/1/files/public/docs2018/cz-tabatabaee-CIAnalysis-0318-v01.pdf.
Disposition: Related to proposed project; more discussion needed

Paul Congdon presented *Lossless Bridges and CI* http://www.ieee802.org/1/files/public/docs2018/cz-congdon-lossless-arch-with-CI-0318-v1.pdf.
Disposition: Related to proposed project; more discussion needed

The joint meeting ended at 9:00 AM and the DCB TG meeting resumed separately.

9:00 AM to 12:00 PM

Patrica Thaler, DCB TG Chair, 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 session.

Paul Congdon led the resolution of comments received on the draft PAR and CSD for proposed P802.1Qcz *Congestion Isolation*.
Disposition: New PAR development

- Comment resolution: http://www.ieee802.org/1/files/public/docs2018/cz-congdon-PAR-CSD-comment-response-0318-v1.pdf
- Updated PAR: http://www.ieee802.org/1/files/public/docs2018/cz-congdon-congestion-isolation-PAR-0318-v1.pdf
- Updated CSD: http://www.ieee802.org/1/files/public/docs2018/cz-congdon-congestion-isolation-CSD-0318-v01.pdf

Kevin Shen presented *Simulation Analysis of Congestion Isolation (CI)* http://www.ieee802.org/1/files/public/docs2018/cz-shen-congestion-isolation-simulation-0318-v01.pdf

- Questions were asked about details of the simulations - details of traffic and the switch model. The simulation is based on an output queued switch. Concerns that that differs from the input queues or virtual input queues that many switches use to determine when to send PFC.

Disposition: Related to proposed project; more discussion needed

Paul Congdon presented *Discussion of a Reference Diagram for CI* http://www.ieee802.org/1/files/public/docs2018/cz-congdon-refdiag-congdon-0318-v1.pdf.

Disposition: Related to proposed project; more discussion needed

4:00 PM to 6:00 PM

The DCB TG discussed what needs to be done to continue the Congestion Isolation (CI) work. The big question is around simulation model and results. A reference was made to a paper entitled *Congestion Control for High-speed Extremely Shallow-Buffer Switches* https://conferences.sigcomm.org/events/apnet2017/papers/bcc-bai.pdf that may use an acceptable model for a switch. This paper was also referenced in initial contributions on Congestion Isolation from 2017.
Key things needed to validate approach:

- Correct Bridge Model: see paper referenced above.
- Include latency of CIP message generation, propagation and processing. CIP messages are sent through the traditional bridge data path but at the highest priority.
- Appropriate Traffic Pattern: RoCEv2 is a good use case. Consider using exactly what the DCQCN paper used. Look at the paper traffic models and use those because they are validated.
- Correct Metric for Evaluation: Number of PFCs is important but may not be of customer interest. Flow completion time is critical. The tail latency or tail FCT is most important. Look at the public papers that are addressing 99% FCT (tail latency). This should address "fairness" because the only real issue with fairness is a long tail latency.
- Show all combinations of use cases for CI with and without PFC, with and without signaling.

The DCB TG reviewed Barak Gafni's *Congestion Isolation Backwards Implicit Notification* http://www.ieee802.org/1/files/public/docs2018/cz-gafni-implicit-CIP-0318-v1.pdf.

- There was some question about how much gain is achieved from signaling. Simulation from other contributions shows that a gain in flow completion times is achieved when PFC is used.

Disposition: Related to proposed project; more discussion needed

Thursday 08 March 2018

1:30 PM (call to order) to 6:00 PM

The DCB TG discussed the outcome of the 802.1 midweek plenary meeting regarding the motion on the draft P802.1Qcz PAR/CSD. While one of the Against voters on the P802.1Qcz PAR was willing to convert his vote, it was not recommended putting up a motion to reconsider. This was because there were so many Abstain votes that showing more understanding of the project was needed.
Disposition: It was decided to have a motion on Friday to further develop the draft P802.1Qcz PAR/CSD.

Yun Zhang presented *An approach for auto-assignment of IP addresses for wired switches* http://www.ieee802.org/1/files/public/docs2018/new-dcb-zhang-ip-assignment-0318-v01.pdf, a proposal for IP assignment via LLDP.

- The DCB TG could not figure out how it works, but the motivation was clear.
- It was suggested that the work would really be appropriate for the IETF since it is just defining an Organizationally Specific TLV.

Disposition: The IETF should be able to do this. There is no real project required in 802.1 for this activity.

4.2 Maintenance

Minutes of the Maintenance Task Group are not available yet.

4.3 OmniRAN

OmniRAN Task Group meeting minutes are incorporated into these minutes by reference and are available at https://mentor.ieee.org/omniran/dcn/18/omniran-18-0028-00-00TG-mar-2018-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.

4.4 Security

Call to order: Monday March 5, 2018 at 4.00 PM.

The Security Task Group met:

- Monday March 5, 2018: 4.00 PM – 6.00 PM.
- Tuesday March 6, 2018: 10.30 AM – 1.00 PM.
- Wednesday March 7, 2018: 9.00 AM – 10.00 AM.
- Thursday March 8, 2018: 2.00 PM – 3.15 PM.

The Security TG Chair, Mick Seaman, presided and wrote the minutes. Security TG participants also participated in the JTC1 SC, see the separate minutes for that meeting.

At the beginning of the meetings on Tuesday, Wednesday and Thursday, Mick Seaman presented the IEEE-SA PatCom Patent Slides for Standards Development Meetings (https://development.standards.ieee.org/myproject/Public/mytools/mob/slideset.pdf) and the IEEE 802 Participation slide (https://mentor.ieee.org/802-ec/dcn/17/ec-17-0093-05-0PNP-ieee-802-participation-slide-ppt.ppt) (these two sets of slides were shown by the 802.1 Chair in the opening plenary meeting on Monday). Mick Seaman made the “Call for Potentially Essential Patents” on each of these occasions. There were no responses to the calls prior to the end of the week’s meetings.

See the TSN TG and the JTC1 SC6 SC minutes for minutes of those sessions.

Participants:

- Amelia Andersdotter, Article 19 [Monday PM, Tuesday AM, Wednesday AM, Thursday PM]
- Lily Chen, NIST [Wednesday AM]
- Yonggang Fang, ZTE TX [Tuesday AM]
- Dan Harkins, Hewlett Packard Enterprise [Tuesday AM]
- Tero Kevinen, Self Employed [Tuesday AM]
- Jouni Malinen, Qualcomm [Tuesday AM]
- Glenn Parsons, Ericsson [Monday PM]
- Mick Seaman, Mick Seaman [Monday PM, Tuesday AM, Wednesday AM, Thursday PM]
- Juan Carlos Zuniga, SigFox [Tuesday AM, Wednesday AM, Thursday PM]
- Brian Weis, Cisco [Monday PM, Tuesday AM, Wednesday AM]

Apologies for absence were received from James McIntosh and Karen Randall.

The draft agenda posted on the 802.1 website at https://1.ieee802.org/security/security-task-group-agenda/ was reviewed by the TG chair during the 802.1 opening plenary meeting on Monday morning, there were no changes at that time and this agenda was approved as follows:

1. P802.1AR-Rev Secure Device Identity
   Request permission to go to RevCom (Sponsor Ballot complete)
2. P802.1Xck Port-Based Network Access Control - YANG Data model
   Request permission to go to Sponsor Ballot (WG Ballot complete)
3. P802.1AE-Rev MAC Security (roll-up and maintenance revision)
   Request permission to go to Sponsor Ballot (WG Ballot completes Tuesday)
4. P802E Privacy (Recommended Practice ... for IEEE 802 ...)
   TG ballot resolution
   Presentations
   Section 8 Recommendations Andersdotter, Zuniga, Cunche
   Threat mitigation strategies Andersdotter, Zuniga, Cunche
5. P802.1X-Rev (Revision PAR proposal)
   ..docs2018/x-rev-seaman-draft-par-0218-v01.pdf
6. Comments on 802.15 SECN (Security Next Generation) PAR and CSD
   //mentor.ieee.org/802.15/dcn/18/15-18-0037-03-secn-draft-par-for-4y.pdf
   //mentor.ieee.org/802.15/dcn/18/15-18-0040-04-secn-draft-csd-for-4y.docx
7. A.O.B.
8. Future meetings/teleconferences

Minutes of the discussions of these agenda items follow.

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

Following discussion in the January 2018 interim meeting, a motion for P802.1AR-Rev draft 2.6 (http://www.ieee802.org/1/files/private/ar-rev-drafts/d2/802-1AR-rev-d2-6.pdf) to proceed to RevCom had been drafted and was considered and approved during the 802.1 midweek plenary meeting.

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

Following discussion in the January 2018 interim meeting, a motion for P802.1Xck draft 2.0 (http://www.ieee802.org/1/files/private/xck-drafts/d2/802-1Xck-d2-0.pdf) to proceed to Sponsor Ballot had been drafted and was considered and approved during the 802.1 midweek plenary meeting.

3. P802.1AE-Rev MAC Security (roll-up and maintenance revision)

Mick Seaman, P802.1AE-Rev editor, presented the outcome of the WG recirculation ballot on http://www.ieee802.org/1/files/private/ae-rev-drafts/d1/802-1AE-rev-d1-1.pdf.

- This ballot closed Tuesday March 6, 2018. No further comments were received. The final vote tally was 100% Approval, 75% Response.
- The disposition of comments (http://www.ieee802.org/1/files/private/ae-rev-drafts/d1/802-1AE-rev-d1-1-dis.pdf) provides details.

The Security TG reviewed the standard motion to proceed to Sponsor Ballot, and this was considered and approved during the 802.1 midweek plenary meeting.

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

Jerome Henry, P802E editor, was unable to attend this meeting but would attend the May 2018 IEEE 802.1 interim meeting and prepared an editor's report: ieee802.org/1/files/private/802-e-drafts/d0/802E-d0-7-editors-report.pdf.

- A full listing of the comments received is in: http://www.ieee802.org/1/files/private/802-e-drafts/d0/802E-d0-7-pdis01.pdf.

These documents are also available on Mentor in the Privecsg area.

Amelia Andersdotter presented *Privacy Recommendations for 802 LMSC Section 8: Recommendations* http://www.ieee802.org/1/files/public/docs2018/e-andersdotter-recommendations-0218-v00.pdf and *Privacy Considerations: Threat mitigation strategies* http://www.ieee802.org/1/files/public/docs2018/e-andersdotter-threat-mitigation-strategies-0218-v01.pdf.

- The idea of phrasing the Recommendations as a list of points to be considered by the developers of an 802 technology/standard (essentially a self-evaluation with the points intended to stimulate that evaluation) was generally well received.
- Discussion points included:
  - The approach was based on a similar approach and questions developed in the IETF. Does this raise a copyright issue? The detailed consideration and text were significantly different, so this issue should not arise.
  - The use of “service” to describe what was being provided by an 802 technology. This had been selected as a general term that was used across 802. The term could, however, invoke a range of interpretations depending on the reader of the recommended practice: for example, service provided by a network to the user of a personal device (with attendant billing, identification requirements, and SLA considerations) vs. the MAC Service (as defined in 802.1AC). Some expansion may be required to avoid different reader groups talking past each other when referring to the recommended practice.
  - The answers to a number of discussion points were answered elsewhere in the document. Much more extensive use of cross-references is required.
  - Some of the definitions were made shorter, to the point. This is in line with IEEE Style recommendations: the definitions should not themselves contain normative provisions or act as a substitute for the rest of the document. Definitions should also not cross-reference main text.
  - Some concern on making "shared service device" less prominent. Needs review.
  - Text should be added on including, in standards subject to this recommended practice, recommendations to users/implementers/network administrators making use of equipment conforming to the standard. Some equipment might be designed to be used in a wide variety of networks with different operation, manageability, and privacy requirements.
  - Recommendations need to take into account what is needed to operate a service and what is needed to manage or debug its operation in the face of potential misbehaving systems.
  - It would be good to test the Recommended Practice by drafting an appropriate clause for an 802 standard other than a wireless standard focused on providing access to personal devices. IEEE Std 802.1AS *Timing and Synchronization for Time-Sensitive Applications in Bridged Local Area Networks* might prove a suitably different example. This idea was raised during the closing 802.1 plenary meeting and met with some enthusiasm.

- It is natural to consider an adversary positioned "on the medium" when considering wireless access from personal devices; however, an adversary might be (logically) positioned at other places in an 802 network, e.g. in an access point or edge bridge where some or all frame data is not protected by local encryption, and this should also be considered. One reason why a station's MAC address is a privacy concern is its use as part of an IPv6 address and consequent visibility far away from the immediate 802 medium.
- Recommendations should also apply where an 802 technology mandates or recommends a specific non-802 technology or technology choice, e.g. the use of an appropriate EAP method in conjunction with 802.1X/802.11.

[An updated version of the input document was made available post-meeting at https://mentor.ieee.org/privecsg/dcn/18/privecsg-18-0002-03-0000-privacy-considerations-threat-mitigation-strategies-selected-revisions-to-sections-3-6-and-8-of-p802e-draft-0-07.docx with a pdf version at http://www.ieee802.org/1/files/public/docs2018/e-andersdotter-threat-mitigation-strategies-0318-v03.pdf.]

5. P802.1X-Rev (Port-Based Network Access Control)

Mick Seaman, P802.1X-Rev editor, led the resolution of comments received from 802.3 and 802.11 on the draft PAR/CSD for P802.1X-Rev

- Resolution: http://www.ieee802.org/1/files/public/docs2018/x-rev-seaman-PAR-CSD-comment-response-0318.txt.
- A motion to forward the PAR was considered and approved during the 802.1 midweek plenary meeting. Subsequently an objection to the PAR was raised by an 802 EC member, on the grounds that the titles of referenced standards were not complete. The sense in which they were to be “complete” had not been previously specified, but the newly stated intention was that that meant including “IEEE Standards for Local and metropolitan area networks—“ in a title. There remains a question as to what the title of some of our standards actually is, particularly when the title that appears on the front page of the published document is not exactly what appeared on the relevant PAR. If the title is what appears on the front page of the standard excluding the usual banner header, then the title of IEEE Std 802 is “802 Standard for Local and Metropolitan Area Networks: Overview and Architecture".
- The proposed PAR was revised a number of times. http://www.ieee802.org/1/files/public/docs2018/x-rev-seaman-draft-par-0318-v05.pdf was considered and approved during the 802.1 midweek plenary meeting, and subsequently approved by the 802 EC.

6. Comments on 802.15 SECN (Security Next Generation) PAR

802.15 had pre-circulated the following draft PAR and CSD:

- https://mentor.ieee.org/802.15/dcn/18/15-18-0037-03-secn-draft-par-for-4y.pdf
- https://mentor.ieee.org/802.15/dcn/18/15-18-0040-04-secn-draft-csd-for-4y.docx

The Security TG reviewed and updated draft comments on Monday in http://www.ieee802.org/1/files/public/docs2018/security-comments-on-802-15-4y-secn-par-0318-v02.txt.

Brian Weis represented these comments during an 802.15 evening meeting called to review the PAR. Subsequent PAR revisions took these into account and appeared satisfactory.

7. A.O.B

No new items arising at this meeting.

8. Future meeting/teleconference planning

The usual motion for teleconferences was approved by the 802.1 closing plenary meeting. The Security TG will next meet at the May 2018 IEEE 802.1 interim meeting in Pittsburgh, PA, USA.

4.5 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 (including the pre-meeting), Tuesday, Wednesday, Thursday and Friday, 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. The agenda for each day was reviewed and approved.

In the remainder of this section, all tracks are TSN TG tracks, except when marked "JWG track", in which case they are tracks used for Joint Working Group discussion not involving the rest of the TSN TG.

Monday 05 March 2018

8:00AM (call to order by János Farkas) to 10:00 AM

János Farkas presented the participation slide https://mentor.ieee.org/802-ec/dcn/17/ec-17-0093-05-0PNP-ieee-802-participation-slide-ppt.ppt, and the agenda for the TSN Task Group meeting week http://www.ieee802.org/1/files/public/docs2018/admin-TSN-agenda-0318-v01.pdf.
Disposition: Administrative

Geoff Garner, P802.1AS-Rev editor, presented *P802.1AS-Rev/D6.0 Editor's Report* http://www.ieee802.org/1/files/public/docs2018/as-garner-802-1AS-Rev-d6-0-wg-ballot-editors-report-01-18-v02.pdf, and led the resolution of the remaining comments received on http://www.ieee802.org/1/files/private/as-rev-drafts/d6/802-1AS-rev-d6-0.pdf.
Disposition: Continued in a later session.

2:00 PM to 6:00 PM

Jessy Rouyer presented *LS - Initiation of approval process for G.8013/Y.1731 (2015) Corrigendum 1, revised G.8021/Y.1341, and new G.8023*: http://www.ieee802.org/1/files/public/docs2018/liaison-SG15-LS108-G.8013_G.8021_G.8023-0318.pdf.
Disposition: Incoming liaison letter, response needed.

János Farkas presented *LS/r Coordination of IM & DM for OAM (reply to IEEE 802.3 – LS61)* http://www.ieee802.org/1/files/public/docs2018/liaison-SG15-LS103-IM+DM_OAM-0318.pdf.
Jessy Rouyer presented *LS/r to MEF Forum liaison on MEF 10.4 work on one-way frame delay (reply to MEF-LS114)* http://www.ieee802.org/1/files/public/docs2018/liaison-SG15-LS102-MEF10.4_OWFD-0318.pdf.
János Farkas presented *NGMN "RAN functional split and x-haul" work item* http://www.ieee802.org/1/files/public/docs2018/liaison-NGMN-RAN_FSX-0318.zip,

and *Liaison letter to ask for review of draft IEC 60802*
http://www.ieee802.org/1/files/public/docs2018/liaison-IEC-65C-MT9_TSN_Liaison-0318.pdf
Disposition: Incoming liaison letters noted for information.

Rodney Cummings, P802.1Qcc editor, led the resolution of comments received on http://www.ieee802.org/1/files/private/cc-drafts/d2/802-1Qcc-d2-1.pdf.
Disposition: Ballot comment resolution recorded in http://ieee802.org/1/files/private/cc-drafts/d2/802-1Qcc-d2-1-dis-v1.pdf.

Marc Holness, P802.1Qcp editor, led the resolution of comments received on http://www.ieee802.org/1/files/private/cp-drafts/d2/802-1Qcp-d2-1.pdf.
Disposition: Ballot comment resolution recorded in http://www.ieee802.org/1/files/private/cp-drafts/d2/802-1Qcp-d2-1-dis-v01.pdf.

Geoff Garner, P802.1AS-Rev editor, continued the resolution of comments received on http://www.ieee802.org/1/files/private/as-rev-drafts/d6/802-1AS-rev-d6-0.pdf.
Disposition: Continued in a later session.

Tuesday 06 March 2018

10:00 AM (call to order by János Farkas) to 10:30 AM

Geoff Garner, P802.1AS-Rev editor, continued the resolution of comments received on http://www.ieee802.org/1/files/private/as-rev-drafts/d6/802-1AS-rev-d6-0.pdf.
Disposition: Continued in a later session.

10:30 AM to 12:30 PM

The minutes of this session are incorporated into these minutes by reference and are available as section 2.1 of http://www.ieee802.org/1/files/public/docs2018/new-JWGprep-Winkel-Chicago-minutes-0318.pdf.

JWG track: 1:30 PM (call to order by Ludwig Winkel) to 6:00 PM

The minutes of this session are incorporated into these minutes by reference and are available as sections 2.2 and 2.3 of http://www.ieee802.org/1/files/public/docs2018/new-JWGprep-Winkel-Chicago-minutes-0318.pdf.

1:30 PM to 6:00 PM

János Farkas, P802.1CM editor, led the resolution of comments received on http://www.ieee802.org/1/files/private/cm-drafts/d2/802-1CM-d2-0.pdf.
Disposition: Continued in a later session.

6:30 PM to 8:30 PM

Geoff Garner, P802.1AS-Rev editor, continued the resolution of comments received on http://www.ieee802.org/1/files/private/as-rev-drafts/d6/802-1AS-rev-d6-0.pdf.
Disposition: Continued in a later session.

Wednesday 07 March 2018

8:00 AM (call to order by János Farkas) to 9:30 AM

Vahid Tabatabaee presented *Congestion Isolation Proposal Analysis*
http://www.ieee802.org/1/files/public/docs2018/cz-tabatabaee-CIAnalysis-0318-v01.pdf
Disposition: Related to proposed project; more discussion needed

Paul Congdon presented *Lossless Bridges and CI*
http://www.ieee802.org/1/files/public/docs2018/cz-congdon-lossless-arch-with-CI-0318-v1.pdf
Disposition: Proposes new project; more discussion needed

JWG track: 9:30 AM (call to order by Ludwig Winkel) to 12:30 AM

The minutes of this session are incorporated into these minutes by reference and are available as sections 2.4 and 2.5 of http://www.ieee802.org/1/files/public/docs2018/new-JWGprep-Winkel-Chicago-minutes-0318.pdf.

9:30 AM to 12:30 AM

Stephan Kehrer used *P802.1CBcv Amendment: Information Model, YANG Data Model and Management Information Base Module Resolution of Comments on Project Authorization Request (PAR) and Criteria for Standards Development (CSD)* http://www.ieee802.org/1/files/public/docs2018/cv-PAR-CSD-comments-0318-v01.pdf to support the resolution of comments received on the draft PAR and CSD for proposed P802.1CBcv *Draft Standard for Local and metropolitan area networks -- Frame Replication and Elimination for Reliability Amendment: Information Model, YANG Data Model and Management Information Base Module*
Disposition: New PAR development

- Updated PAR: http://www.ieee802.org/1/files/public/docs2018/cv-PAR-0318-v01.pdf
- Updated CSD: http://www.ieee802.org/1/files/public/docs2018/cv-CSD-0318-v01.pdf

Christope Mangin used *P802.1CBdb Extended Stream Identification Functions Resolution of Comments on Project Authorization Request (PAR) and Criteria for Standards Development (CSD)* http://www.ieee802.org/1/files/public/docs2018/db-PAR-CSD-comments-0318-v00.pdf to support the resolution of comments received on the draft PAR and CSD for proposed P802.1Cbdb *Draft Standard for Local and metropolitan area networks -- Frame Replication and Elimination for Reliability Amendment: Extended Stream Identification Functions*
Disposition: New PAR development

- Updated responses: http://www.ieee802.org/1/files/public/docs2018/db-PAR-CSD-comments-0318-v01.pdf
- Updated PAR: http://www.ieee802.org/1/files/public/docs2018/db-PAR-0318-v01.pdf
- Updated CSD: http://www.ieee802.org/1/files/public/docs2018/db-CSD-0318-v01.pdf

Norman Finn used *P802.1DC Quality of Service Provision by Network Devices Resolution of Comments on Project Authorization Request (PAR) and Criteria for Standards. Development (CSD)* http://www.ieee802.org/1/files/public/docs2018/dc-PAR-CSD-comments-0318-v01.pdf to support the resolution of comments received on the draft PAR and CSD for proposed P802.1DC *Quality of Service Provision by Network Systems*
Disposition: Continued in a later session

Johannes Specht led the review of draft modifications to the P802.1Qcr *Standard for Local and Metropolitan Area Networks-Bridges and Bridged Networks Asynchronous Traffic Shaping* PAR in http://www.ieee802.org/1/files/public/docs2018/cr-specht-parmodification-0318-v01.pdf
Disposition: PAR modification

- Modified PAR: http://www.ieee802.org/1/files/public/docs2018/cr-specht-parmodification-0318-v02.pdf

János Farkas, P802.1CM editor, continued the resolution of comments received on http://www.ieee802.org/1/files/private/cm-drafts/d2/802-1CM-d2-0.pdf.
Disposition: Continued in a later session.

JWG track: 4:30 PM-6:00 PM

The minutes of this session are incorporated into these minutes by reference and are available as section 2.6 of http://www.ieee802.org/1/files/public/docs2018/new-JWGprep-Winkel-Chicago-minutes-0318.pdf.

4:30 PM-6:00 PM

Marc Holness, P802.1Qcx editor, presented *IEEE 802.1Q YANG Modeling Style* http://www.ieee802.org/1/files/public/docs2018/mholness-YANG-Model-Style-0318-v02.pdf.
Disposition: For information

Marc Holness, P802.1Qcx editor, presented *IEEE 802.1Qcx (CFM) YANG Model Overview* http://www.ieee802.org/1/files/public/docs2018/cx-mholness-YANG-Model-0318-v02.pdf
Disposition: Editor's update on ongoing project

Marina Gutiérrez, P802.1Qcw editor, presented *IEEE 802.1 Qcw: YANG Data Models for TSN Status Report* http://www.ieee802.org/1/files/public/docs2018/cw-gutierrez-status-0318-v01.pdf
Disposition: Editor's update on ongoing project

Scott Mansfield, P802.1ABcu editor, presented *Draft YANG 802.1ABcu* http://www.ieee802.org/1/files/public/docs2018/cu-mansfield-draft-YANG-0318-v01.pdf
Disposition: Editor's update on ongoing project

Thursday 08 March 2018

JWG track: 8:00 AM (call to order by Ludwig Winkel) to 3:00 PM

The minutes of this session are incorporated into these minutes by reference and are available as sections 2.7, 2.8, 2.9 and 3.1 of http://www.ieee802.org/1/files/public/docs2018/new-JWGprep-Winkel-Chicago-minutes-0318.pdf.

8:00 AM (call to order by János Farkas) to 12:00 PM

Stephen Haddock, P802.1AX-Rev editor, presented *802.1AX -- Link Aggregation: Editor's Report: March 2018* http://www.ieee802.org/1/files/public/docs2018/ax-rev-haddock-editors-report-0318-v1.pdf
Disposition: Editor's update on ongoing project

János Farkas, P802.1CM editor, continued the resolution of comments received on http://www.ieee802.org/1/files/private/cm-drafts/d2/802-1CM-d2-0.pdf

Disposition: Ballot comment resolution recorded in http://www.ieee802.org/1/files/private/cm-drafts/d2/802-1CM-d2-0-dis-v01.pdf

Norman Finn, P802.1CS editor, presented *IEEE P802.1CS Link-local Registration Protocol Draft 1.3 introduction* http://www.ieee802.org/1/files/public/docs2018/cs-finn-D1-3-introduction-0318-v01.pdf and reviewed the new draft 1.3 in http://www.ieee802.org/1/files/private/cs-drafts/d1/802-1CS-d1-3.pdf
Disposition: Editor's update on ongoing project

Norman Finn concluded the resolution of comments received on the draft PAR and CSD for proposed P802.1DC *Quality of Service Provision by Network Systems* by modifying the draft PAR.
Disposition: New PAR development

- Updated PAR: http://www.ieee802.org/1/files/public/docs2018/dc-PAR-0318-v02.pdf
- Updated CSD: http://www.ieee802.org/1/files/public/docs2018/dc-CSD-0318-v01.pdf

Feng Chen used *New PAR for Resource Allocation Protocol - an amendment to 802.1Q* new-chen-resource-allocation-protocol-PAR-0318-v01.pdf in support of the development of a new PAR (embedded in this presentation) and CSD (http://www.ieee802.org/1/files/public/docs2018/new-chen-resource-allocation-protocol-CSD-0318-v01.pdf) for a proposed Resource Allocation Protocol
Disposition: New PAR development

- Updated (embedded) PAR: http://ieee802.org/1/files/public/docs2018/new-chen-resource-allocation-protocol-PAR-0318-v02.pdf

1:00 PM-3:00 PM

Jessy Rouyer led the review of a draft of the *Liaison response to Broadband Forum Liaison 121* http://www.ieee802.org/1/files/public/docs2018/liaison-response-BBF-121-0318-v01.pdf in response to the incoming liaison *For Action: YANG model for CFM OAM* http://www.ieee802.org/1/files/public/docs2018/liaison-BBF-121_CFM_YANG-0118.pdf.
Disposition: Liaison response

Jessy Rouyer led the review of a draft of the *Liaison response to ITU-T SG15 LS-80* http://www.ieee802.org/1/files/public/docs2018/liaison-response-ITU-T-SG15-LS80-0318-v01.pdf in response to the incoming *Liaison statement regarding coordination on IM/DM for OAM (reply to IEEE 802.3WG-LS54 (TD141/WP3))* http://www.ieee802.org/1/files/public/docs2017/liaison-ITU-T-SG15-LS80-CFM_OAM-1217.pdf.
Disposition: Liaison response

János Farkas led the review of a draft of the *Liaison letter on IEEE P802.1CM TSN for Fronthaul* http://www.ieee802.org/1/files/public/docs2018/liaison-reponse-3GPP-RAN3-0318-v01.pdf in response to the incoming liaison *Reply to liaison letter from IEEE 802.1* http://www.ieee802.org/1/files/public/docs2017/liaison-3GPP-RAN3-173354-0917.zip.
Disposition: Liaison response

János Farkas led the review of a draft of the *Liaison letter on IEEE P802.1CM TSN for Fronthaul* http://www.ieee802.org/1/files/public/docs2018/liaison-ITU-T-SG15-Q13-0318-v01.pdf.
Disposition: Liaison created

John Messenger led the review of a draft of the *Liaison response to ITU-T LS* http://www.ieee802.org/1/files/public/docs2018/liaison-response-ITU-T-SG15-LS108-0318-v01.pdf in response to the incoming liaison *LS - Initiation of approval process for G.8013/Y.1731 (2015) Corrigendum 1, revised G.8021/Y.1341, and new G.8023* http://www.ieee802.org/1/files/public/docs2018/liaison-SG15-LS108-G.8013_G.8021_G.8023-0318.pdf.
Disposition: Liaison response

3:30 PM-6:00 PM

The minutes of this session are incorporated into these minutes by reference and are available as sections 3.2 to 6 of http://www.ieee802.org/1/files/public/docs2018/new-JWGprep-Winkel-Chicago-minutes-0318.pdf.

Joint meeting with 802.24: 6:00 PM (call to order by János Farkas) to 6:06 PM

The TSN TG Chair, János Farkas, presided this joint meeting. Craig Gunther wrote the minutes.

Tim Godfrey presented *Utility Applications of Time Sensitive Networking White Paper* https://mentor.ieee.org/802.24/dcn/17/24-17-0006-11-sgtg-tsn-utility-applications-white-paper.docx
Disposition: Editor's update on ongoing project. 802.24 will hold a call for review of the white paper on a TSN TG call on June 14th 7:00 AM PDT for one hour. It was also agreed to copy the document on the IEC side and to circulate it to the IEC JWG. Comments were invited by email to the TSN TG Chair.

There was no other business to discuss and this joint meeting was adjourned at 6:06 PM.

6:15 PM-7:30 PM

Geoff Garner, P802.1AS-Rev editor, continued the resolution of comments received on http://www.ieee802.org/1/files/private/as-rev-drafts/d6/802-1AS-rev-d6-0.pdf.
Disposition: Continued in a later session.

Friday 09 March 2018

8:00 AM (call to order by János Farkas) to 10:00 AM

János Farkas presented maintenance item #201 *Qbv Tick granularity* https://www.802-1.org/items/318.
Disposition: Task Group will research and address as needed.

János Farkas presented maintenance item #202 *Qbv ConfigChangeError counter incremented incorrectly* https://www.802-1.org/items/317.
Disposition: Task Group will research and address as needed.

Geoff Garner, P802.1AS-Rev editor, continued the resolution of comments received on http://www.ieee802.org/1/files/private/as-rev-drafts/d6/802-1AS-rev-d6-0.pdf.
Disposition: Ballot comment resolution recorded post-meeting in http://www.ieee802.org/1/files/private/as-rev-drafts/d6/802-1AS-rev-d6-0-dis.pdf.
Editor's report updated post-meeting in http://www.ieee802.org/1/files/public/docs2018/as-

garner-802-1AS-Rev-d6-0-wg-ballot-editors-report-01-18-v03.pdf.

Tongton Wang presented *Applicability of TSN to 5G services*
http://www.ieee802.org/1/files/public/docs2018/new-tsn-wangtt-applicability-of-TSN-for-5G-services-0318-01.pdf
Disposition: Proposes new project; more discussion needed

5 YANGsters

Call to order: 5 March 2017 7:42 PM

Scott Mansfield presided.
Jessy Rouyer wrote the minutes.

Participants:

Last Name	*First Name*	*Affiliation*
Bims	Harry	Bims Laboratories, Inc.
Canchi	Radhakrishna	Kyocera International Inc.
Cheng	Weiying	Coriant
Emmelmann	Marc	Self
Fan	Xiaojing	Fujitsu Research & Development Center
Fang	Yonggang	ZTE TX Inc
Fischer	Michael	NXP Semiconductors
Hamilton	Mark	Ruckus Wireless
Holness	Marc	Ciena Corporation
Kabra	Lokesh	Synopsys, Inc.
Malinen	Jouni	Qualcomm Incorporated
Mansfield	Scott	Telefon AB LM Ericsson
Mcmillan	Larry	Western Digital Corporation
Myles	Andrew	Cisco Systems, Inc.
Palm	Stephen	INDEPENDENT
Parsons	Glenn	Ericsson AB
Qiu	Wei	Huawei Technologies Co., Ltd
Rakanovic	Demir	u-blox
Riegel	Maximilian	Nokia Networks
Rouyer	Jessy	Nokia
Specht	Johannes	University of Duisburg-Essen and General Motors Company
Wang	Xinyuan	Huawei Technologies Co. Ltd
Weis	Brian	Cisco Systems, Inc.
Zein	Nader	NEC Corporation

Scott Mansfield presented http://www.ieee802.org/1/files/public/docs2018/yangsters-smansfield-status-0318-v02.pdf starting by showing slides 1 through 4 (Participants, Patents, and Duty to Inform, Patent Related Links, Call for Potentially Essential Patents, and Other

Guidelines for IEEE WG Meetings) and making the “Call for Potentially Essential Patents”. There were no responses to the call.

- The 802.1 Chair reminded that the YANGsters group is tasked with coordinating the various 802 WGs on YANG issues and suggested that the agenda of slide 5 be reorganized to address non 802.1-specific items first; this reorganized agenda was approved.
- As part of his presentation, Scott Mansfield also presented *Network Management / YANG as a motivation for open source?* (http://www.ieee802.org/1/files/public/docs2017/yang-parsons-open-source-motivation-1217.pdf), and http://www.ieee802.org/1/files/public/docs2018/yangsters-smansfield-pilot-query-0118-v01.docx
    - The 8021 Chair noted that:
        - IEEE 802 has a special arrangement with IEEE legal to allow the public postings of YANG modules with no password on GitHub to have the same licensing as applies to IEEE standards.
        - YANG modules corresponding to draft IEEE 802 standards in the pre-PAR phase could be posted in an “experimental” branch while those corresponding to draft or published IEEE 802 standards in the post-PAR phase could be posted in a “standard” branch on GitHub.
        - The normal IEEE 802 balloting process currently applies to YANG code on GitHub that is embedded into a draft IEEE 802 standard being developed, the editor adding comments, based on contributions to GitHub, to a ballot for processing as part of the regular process.
        - Content committed to GitHub branches is controlled by nominated participants to the regular IEEE 802 process to maintain order.
    - It was observed standards organizations other than IEEE 802 use their own processes to leverage YANG code contributions on GitHub.
    - The 802.1 Chair presented slide 9 and moderated a discussion of its content, clarifying that:
        - This content is specific to IEEE.
        - The IEEE Open Source pilot is investigating how to support open source activities within IEEE.
        - The IEEE Open Source activity, investigating Open Source and the use of source code in a standard, is unrelated to YANG though there might be a fit for YANG work as part of this activity.
        - There is a need to determine whether the benefits of using an Open Source Contribution License Agreement (OSCLA) are worth the costs in terms of complexity vs. using conventional Standards Contribution Copyright & Patent Policies (SCCPP), e.g.: merge vs. select one of several proposed YANG modules contributed to GitHub into a particular draft IEEE 802 standard; who oversees the design of a YANG module; how to align a draft IEEE 802 standard with GitHub development; how to maintain architectural integrity, etc.
        - There is a desire to guide the IEEE Open Source activity so that the resulting guidelines meet the needs of IEEE 802 YANG projects.
        - The OSCLAs considered in the IEEE Open Source activity are Apache (that has a royalty-free patent grant,) and BSD (that has no patent grant), and the YANGsters group can either decide not to use them or propose to use the familiar SCCPP.
        - Using an OSCLA would allow continuous update of YANG code on GitHub outside of the PAR process (e.g., for error correction).

- IEEE 802 asked IEEE SASB ExCom to be grandfathered so that IEEE 802 may continue using the SCCPP if IEEE switches (as it plans) to using an OSCLA. IEEE SASB verbally accepted but is yet to provide written confirmation.
- All comments received must be considered including those from the GitHub community, those from IEEE 802 voting members and those from Public Review.
- All of IEEE 802 has a special dispensation for YANG code to be public when IEEE 802 draft standards are in the process of being developed.

Disposition: Discussion of the presented topics is to continue on YANGsters conference calls. The 802.1 Chair noted the preference for IEEE 802 grandfathering (i.e. 802 continuing to use the SCCPP) to be included as an option in the process that may result from relevant IEEE Open Source activity. He also suggested a chart be developed on how the GitHub community may interact with the IEEE 802 YANG standard community.

There was no other business to discuss and this YANGsters group meeting was adjourned at 9:30 PM.

6 802.1-802.15 joint meeting

Call to order: 6 March 2017 6:30 PM

The 802.1 Chair presided, wrote the minutes, and presented the IEEE-SA PatCom Patent Slides for Standards Development Meetings (https://development.standards.ieee.org/myproject/Public/mytools/mob/slideset.pdf) and 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 calls prior to the end of the week's session.

Participants:

Last Name	*First Name*	*Affiliation*
Belliardi	Rudy	Schneider Electric; IEC TC 65
Canchi	Radhakrishna	Kyocera International Inc.
Chang	Xin	Huawei Technologies Co. Ltd
Finn	Norman	Huawei Technologies Co. Ltd
Kabra	Lokesh	Synopsys, Inc.
Karl	Michael	Marvell Semiconductor, Inc.
Kitazawa	Shoichi	Muroran IT
McMillan	Larry	Western Digital Corporation
Messenger	John	ADVA Optical Networking Ltd.
Parsons	Glenn	Ericsson AB
QIU	WEI	Huawei Technologies Co., Ltd
Thaler	Patricia	Broadcom Limited
wang	haifei	Huawei Technologies Co. Ltd
Wang	Hao	Fujitsu Research & Development Center
Wang	Xinyuan	Huawei Technologies Co. Ltd
Weis	Brian	Cisco Systems, Inc.
Yamaura	Takahiro	Toshiba

YU	XIANG	Huawei Technologies Co., Ltd
Zein	Nader	NEC Corporation

The agenda was agreed as follows:

- 802.15.4y
- 802.1ACct - MAC service for 802.15.3

The 802.1 comments on the P802.15.4y PAR (http://ieee802.org/secmail/msg22227.html) were shown and discussed.

The 802.1AC editor noted that there is no draft yet for P802.1ACct. He indicated he would work offline with James Gilb, P802.1Acct editor (not in attendance), to produce a first draft.

There was no other business to discuss and the joint meeting adjourned at 7:20 PM.

7 Midweek Plenary Meeting

Call to order: 7 March 2018, 1:35 PM.

The 802.1 Chair, Glenn Parsons, presided.
The 802.1 Recording Secretary, Jessy Rouyer, wrote the minutes.

The Chair presented the *Midweek Agenda* slides available at http://www.ieee802.org/1/files/public/minutes/2018-03-midweek-plenary-slides.pdf.

During this presentation, the Chair:

- Showed the agenda on slide 2. The agenda was approved.
- Showed slides 3 through 6 (reproducing slides 0 through 3 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.
- Reminded participants in IEEE 802 meetings that they are participating on an individual basis (slide 7).
- Showed the list of 802.1 voters (slide 8).
- Reviewed the schedule for future interim meetings (slide 9), which remained unchanged from the opening plenary meeting (slide 9).
- Provided his anticipation of next actions with respect to projects in the current WG’s workload asking editors to review for correctness (slide 10).
- Showed an updated 802.1 plenary schedule/agenda for this meeting (slide 11).
- Introduced Stephen McCann, 802.11 TG aq Chair, who presented *P802.11aq Pre-Association Service Discovery Summary* https://mentor.ieee.org/802.11/dcn/17/11-17-1565-03-00aq-pre-association-summary.ppt (slide 12).
  - It was proposed to continue the discussion in the 802.11 TG aq meeting.
- Led a discussion of having 5-day vs 4-day plenary meetings (slide 13) and conducted the following Straw Poll:
  - All voters allowed to vote on:
    - “Raise your hand if you would prefer the 5-day plenary meeting arrangement?”: 20
    - “Going back to 4-day?”: 28.
      - It was agreed to have a motion to return to a 4-day meeting format.

- Provided background for the motions for consent agenda (EC-16-183) requiring EC action (EC-16-170) (slide 14).
- Conducted votes on the following motions (slides 15-40).
  - PARs to NesCom
    - Motion
      - Approve forwarding P60802 PAR documentation in http://ieee802.org/1/files/public/docs2018/60802-PAR-0318-v01.pdf to NesCom
      - Approve CSD documentation in http://ieee802.org/1/files/public/docs2018/60802-CSD-0318-v01.pdf
      - In the WG (y/n/a): 43, 0, 0
      - Proposed: János Farkas Second: Craig Gunther
    - Motion
      - Approve forwarding P802.1CBcv PAR documentation in http://www.ieee802.org/1/files/public/docs2018/cv-PAR-0318-v01.pdf to NesCom
      - Approve CSD documentation in http://ieee802.org/1/files/public/docs2018/cv-CSD-0318-v01.pdf
      - In the WG (y/n/a): 41, 0, 0
      - Proposed: Stephan Kehrer Second: János Farkas
    - Motion
      - Approve forwarding P802.1CBdb PAR documentation in http://ieee802.org/1/files/public/docs2018/db-PAR-0318- v01.pdf to NesCom
      - Approve CSD documentation in http://ieee802.org/1/files/public/docs2018/db-CSD-0318-v01.pdf
      - In the WG (y/n/a): 43, 0, 0
      - Proposed: Christophe Mangin Second: János Farkas
    - Motion
      - Approve forwarding P802.1DC PAR documentation in http://ieee802.org/1/files/public/docs2018/dc-PAR-0318-v01.pdf to NesCom
      - Approve CSD documentation in http://ieee802.org/1/files/public/docs2018/dc-CSD-0318-v01.pdf
      - In the WG (y/n/a): 32, 3, 4
      - Proposed: Norman Finn Second: János Farkas
    - Motion
      - Approve forwarding P802.1Qcz PAR documentation in http://www.ieee802.org/1/files/public/docs2018/cz- congdon-congestion-isolation-PAR-0318-v1.pdf to NesCom
      - Approve CSD documentation in http://www.ieee802.org/1/files/public/docs2018/cz- congdon-congestion-isolation-CSD-0318-v01.pdf
      - In the WG (y/n/a): 11, 4, 23
      - Proposed: Paul Congdon Second: Yolanda YU
    - Motion
      - Approve sending P802.1X-Rev PAR documentation in http://www.ieee802.org/1/files/public/docs2018/x-rev-seaman-draft-par-0318-v03.pdf to NesCom
      - In the WG,
      - mover: Mick Seaman Second: Brian Weis
      - (y/n/a): 41, 0, 0
      - Note: there are no CSD responses for this maintenance PAR.

- DRAFTS TO SPONSOR BALLOT
  - Motion
    - Approve sending P802.1Xck-D2.0 to Sponsor Ballot
    - Confirm the CSD for P802.1Xck in https://mentor.ieee.org/802-ec/dcn/15/ec-15-0070-00-ACSD-802-1xck.docx
    - See http://www.ieee802.org/1/files/private/xck-drafts/d2/802-1Xck-d2-0-dis.pdf for supporting documentation
      - P802.1Xck Port-Based Network Access Control—YANG Data Model
      - Ballot closed 12/12/2017. 100% Approval. 77% Response. No comments.
      - Approve: 17 Disapprove: 0 Abstain: 20
    - In the WG, mover: Mick Seaman Second: Brian Weis
    - (y/n/a): 41, 0, 0
  - Motion
    - Approve sending P802.1AE-Rev-D1.1 to Sponsor Ballot [Maintenance PAR, no CSD]
    - See http://www.ieee802.org/1/files/private/ae-rev-drafts/d1/802-1AE-rev-d1-1-dis.pdf for supporting documentation
      - P802.1AE-Rev Media Access Control (MAC Security)
      - Ballot closed 3/6/2018. 100% Approval. 75% Response
      - Approve: 21 Disapprove: 0 Abstain: 22 Approval: 100%
    - In the WG, mover: Brian Weis Second: John Messenger
    - (y/n/a): 42, 0, 0
  - Motion
    - Approve sending P802.1AC-2016-Cor-1 to Sponsor ballot
    - P802.1AC-2016-Cor-1 had 100% approval at the end of the last working group ballot.
    - Proposed: John Messenger Second: Jessy Rouyer
    - For 42 Against 0 Abstain 0
    - [Maintenance PAR, no CSD]
- DRAFTS TO REVCOM
  - Motion
    - Conditionally approve sending P802.1Qcc to RevCom
    - Approve CSD (5C) documentation in http://www.ieee802.org/1/files/public/docs2013/new-p802-1qcc-draft-5c-0513-v2.pdf
    - P802.1Qcc D2.1 had 98 % approval at the end of the last sponsor recirculation ballot
    - In the WG (y/n/a): 42, 0, 0
    - Proposed: Rodney Cummings Second: János Farkas
  - Motion
    - Conditionally approve sending P802.1Qcp to RevCom
    - Approve CSD documentation in https://mentor.ieee.org/802-ec/dcn/17/ec-17-0157-00-ACSD-802-1qcp.docx
    - P802.1Qcp D2.1 had 100 % approval at the end of the last sponsor recirculation ballot
    - In the WG (y/n/a): 39, 0, 0
    - Proposed: Marc Holness Second: János Farkas

- Motion
  - Approve sending P802.1AR-Rev D2.6 to RevCom
  - Confirm the CSD for P802.1AR-Rev in https://mentor.ieee.org/802-ec/dcn/17/ec-17-0160-00-ACSD-802-1ar-rev.pdf
  - P802.1AR-Rev D2.6 had 98% approval at the end of the last sponsor recirculation ballot.
  - In the WG, mover: Brian Weis Second: John Messenger
  - (y/n/a): 43, 0, 0
- Motion
  - Approve sending P802.1Q-Rev/D2.2 to RevCom
  - P802.1Q-Rev/D2.2 had 100% approval at the end of the last sponsor recirculation ballot.
  - Proposed: John Messenger Second: Jessy Rouyer
  - For 43 Against 0 Abstain 0

- LIAISONS
  - Motion
    - Approve http://ieee802.org/1/files/public/docs2018/dcb-liaison-ietf-nvo3-vdp-1803-v1.pdf as communication from IEEE 802.1 to IETF, granting the IEEE 802.1 chair (or his delegate) editorial license.
    - This approval is under LMSC OM "Procedure for coordination with other standards bodies"
    - In the WG (y/n/a): 36, 0, 0
    - Proposed: Pat Thaler Second: Jessy Rouyer
- JTC1 SC6 PSDO ITEMS
  - Motion
    - Approve liaison of the following comment responses to ISO/IEC JTC1/SC6 under the PSDO agreement:
      - IEEE Std 802c http://www.ieee802.org/1/files/public/docs2018/802c-Marks-JTC1-SC6-pdis-0318-r2.docx
      - IEEE Std 802.1Qci http://ieee802.org/1/files/public/docs2018/admin-messenger-proposed-responses-to-psdo-comments-on-qci-0318-v2.docx
    - Proposed: Pat Thaler Second: Rodney Cummings
    - For 35 Against 0 Abstain 0
  - Motion
    - Approve liaison of the following draft(s) to ISO/IEC JTC1/SC6 for information under the PSDO agreement
      - P802.1Xck
      - P802.1AC-2016-Cor-1
      - P802.1Qcy
      - P802.1AE-REV
    - Proposed: John Messenger Second: Jessy Rouyer
    - For 34 Against 0 Abstain 0
- For WG internal business
  - Motion
    - IEEE 802.1 WG approves to hold plenary meetings over 4 days at future IEEE 802 plenary sessions as follows:
      - Opening plenary – Monday AM2
      - Closing plenary – Thursday PM
    - Proposed: John Messenger Seconded: Mick Seaman
    - Y: 27 N: 9 A: 2

- Motion
  - 802.1 WG approves an interim meeting hosted by FFPA from January 14-18, 2019 as described in: http://www.ieee802.org/1/files/public/docs2018/admin-koto-Hiroshima-interim- proposal-0318-v02.pdf
  - Proposed: Hajime KOTO Second: Jordon Woods
  - Y: 36 N: 0 A: 2
- Motion
  - Authorize Maintenance TG to hold teleconferences on 15th May and 3rd July 2018 at 11am ET if necessary. Access information will be posted to the 802.1 reflector in advance.
  - Proposed: John Messenger Second: Jessy Rouyer
  - Approved by Acclamation
- Motion
  - 802.1 authorizes the Security Task Group to hold teleconferences to progress P802.1X-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 exploder
  - Proposed: Mick Seaman Second: John Messenger
  - Approved by Acclamation
- Motion
  - Authorize DCB teleconference for P802.1Qcy sponsor ballot comment resolution.
  - Tuesday, 19 June 2018, 1530 to 1800 PT
  - Proposed: Pat Thaler Second: Paul Congdon
  - Approved by Acclamation
- Motion
  - 802.1 authorizes the May 2018 Interim to generate a PAR modification and CSD update for pre- circulation to the EC for P802.1Qcr Bridges and Bridged Networks Amendment: Asynchronous Traffic Shaping.
  - Proposed: Johannes Specht Second: János Farkas
  - In the WG (y/n/a): 36, 0, 0
- Motion
  - 802.1 resolves to hold pre-meeting(s) on the Monday morning of the July 2018 Plenary session for TSN.
  - Proposed: János Farkas Second: Craig Gunther
  - Approved by Acclamation
- Motion
  - 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/tsn page and will be updated as necessary.
  - Agenda will be announced on the 802.1 email reflector at least by the Friday before the call.
  - Proposed: János Farkas Second: Craig Gunther
  - Approved by Acclamation

        - Motion
            - 802.1 authorizes the TSN Task Group to hold a bi-weekly teleconference starting March 19, 2018 for the TSN Profile for Industrial Automation work together with IEC 65C/MT9 on Mondays from 6AM (US-Pacific) to 8AM (US-Pacific).
            - Access information is posted on the http://www.ieee802.org/1/tsn page and will be updated as necessary.
            - Agenda will be announced on the 802.1 email reflector at least by the Friday before the call.
            - Proposed: János Farkas Second: Stephan Kehrer
            - Approved by Acclamation
    - 802.1 WG election
        - Nominations are invited at any time until the start of the midweek 802.1 Plenary in March 2018
        - The existing Chair and Vice-Chair are standing for re-election.
        - If there are multiple nominees for a post, then an election will take place in which only 802.1 voters participate and in which each voter casts a single vote for their preferred candidate. To win the election, a majority of voters present in the room is required. If a majority is not achieved, then the candidate with the least number of votes is eliminated and the vote re-taken.
        - A motion to approve the winning candidate (in the case of an election) or the single nominee (in the event that there is only one candidate for the post) will then be made and voted upon by 802.1 voting members.
        - Motion
            - 802.1 approves Glenn Parsons as the chair of the 802.1 working group
            - Proposed: Nader Zein Second: Gordon Bechtel
            - Y: 37 N: 0 A: 1
        - Motion
            - 802.1 approves John Messenger as the vice-chair of the 802.1 working group
            - Proposed: Craig Gunther Second: Don Pannell
            - Y: 37 N: 0 A: 1

There was no other business to discuss (slide 59) and the midweek plenary meeting was adjourned at 4:00 PM.

8 Closing Plenary Meeting

Call to order: 9 March 2018, 10:30 AM.

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/2018-03-closing-plenary-slides.pdf.
During this presentation, the Chair:

- Introduced the agenda on slide 2, which was approved.
- Showed slides 3 through 6 (reproducing slides 0 through 3 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.
- Reminded participants in IEEE 802 meetings that they are participating on an individual basis (slide 7).
- Showed the list of 802.1 Officers (slide 8).
- Reviewed the list of 802.1 voters (slide 9), including information about individuals who have gained (slide 10), may gain (slide 11), may lose (slides 12 and 13) 802.1 voting membership, and about individuals who have requested to move to observer status (slide 14).
- Reviewed the schedule for future 802.1 interim meetings (slide 15), which remained unchanged from the opening and midweek plenary meetings, except for the addition of:
  - July 24-26, 2018 JWG interim meeting in Frankfurt, Germany
- Reviewed the schedule for future 802.1 plenary meetings, which remained unchanged from the opening plenary (slide 16).
- Reviewed the current WG’s work load (slide 17).
- Showed the 802.1 plenary schedule/agenda for this meeting (slide 18).
- Introduced information about the reports on 802 Standing Committees and on the 802 TF (slide 19):
  - Patricia Thaler reported on the IETF SC.
    - Joint coordination meeting continuing https://www.iab.org/activities/joint-activities/iab-ieee-coordination/.
  - The Chair reported on the JTC1 SC.
  - The Chair reported on the ITU SC.
- Reported on the following 802 TF topics: myProject status (slide 20) and IEEE Open Source offering (slide 21).
- Recognized the contributions of Patricia Thaler to 802.1 as well as her 28 years on the EC and 33 years in IEEE 802 (slide 22).
- Announced that the DCB TG is to be retired with a plan to move P802.1Qcy and P802.1Qcz pre-PAR discussions to the TSN TG, and P802.1CQ to the OmniRAN TG (slide 23).
- Requested the 802.1 TG Chairs to provide reports on the activities of their TGs (slide 24; see individual TG minutes above for details):
  - Mick Seaman gave an oral update of Security TG progress (slide 25).
    - The 802.1 Chair indicated privacy may become part of CSD in the future, which was to be discussed by the EC.
  - Patricia Thaler gave an oral update of DCB TG progress (slide 26).
  - János Farkas presented TSN TG progress (slide 27).
  - Maximilian Riegel presented OmniRAN TG progress (slides 28-29).
  - John Messenger gave an oral update of Maintenance TG progress (slides 30).
  - Scott Mansfield gave an oral update of YANGsters progress (slide 31).
  - Roger Marks presented NEND Industry Connection Activity (Nendica) progress (slides 32-33)
- Asked for brief presentations of draft outgoing liaisons yet to be approved (slide 36), some of which were in response to incoming liaisons (slide 35).
  - Jessy Rouyer presented the draft liaison response to BBF liaise121.
  - János Farkas presented the draft liaison to 3GPP RAN3.
  - Jessy Rouyer presented the draft liaison response to ITU-T SG15 LS80.
  - John Messenger presented the draft liaison response to ITU-T SG15 LS108.
  - János Farkas presented the draft liaison to ITU-T SG15 question 13.

- Conducted votes on the following motions (slides 37-65).
  - EC regular motions
    - Motion to reconsider
      - Reconsider motions on PARs to NesCom for
        - P60802
        - P802.1DC
        - P802.1X-REV
      - In the WG (y/n/a): 35, 0, 0
      - Proposed: János Farkas Second: Craig Gunther
  - PARs to NesCom
    - 5.0301 Motion (reconsidered)
      - Approve forwarding P60802 PAR documentation in http://ieee802.org/1/files/public/docs2018/60802-PAR-0318-v02.pdf to NesCom
      - Approve CSD documentation in http://www.ieee802.org/1/files/public/docs2018/60802-CSD-0318-v01.pdf
      - In the WG (y/n/a): 38, 0, 0
      - Proposed: János Farkas Second: Craig Gunther
    - 5.0304 Motion (reconsidered)
      - Approve forwarding P802.1DC PAR documentation in http://ieee802.org/1/files/public/docs2018/dc-PAR-0318-v02.pdf to NesCom
      - Approve CSD documentation in http://www.ieee802.org/1/files/public/docs2018/dc-CSD-0318-v01.pdf
      - In the WG (y/n/a): 34, 1, 2
      - Proposed: Norman Finn Second: János Farkas
    - 5.0305 Motion (reconsidered)
      - Approve sending P802.1X-Rev PAR documentation in http://www.ieee802.org/1/files/public/docs2018/x-rev-seaman-draft-par-0318-v05.pdf to NesCom
      - In the WG,
      - mover: Mick Seaman Second: Brian Weis
      - (y/n/a): 38, 0, 0
      - Note: there are no CSD responses for this maintenance PAR.
  - Drafts to RevCom
    - 5.0211 Motion
      - Conditionally approve sending P802.1CM to RevCom
      - Approve CSD documentation in https://mentor.ieee.org/802-ec/dcn/15/ec-15-0073-00-ACSD-802-1cm.pdf
      - P802.1CM D2.0 had 95 % approval at the end of the last sponsor ballot
      - In the WG (y/n/a): 38, 0, 0
      - Proposed: János Farkas Second: David Chen
    - Motion
      - Approve liaison of the following response (to LIAISE-121) to Broadband Forum
        - http://www.ieee802.org/1/files/public/docs2018/liaison-response-BBF-121-0318-v01.pdf
      - In the WG (y/n/a): 38, 0, 1
      - Proposed: Jessy Rouyer Second: János Farkas
      - In EC for information

- Motion
  - Approve liaison of the following response (to R3-173354) to 3GPP RAN3
    - http://www.ieee802.org/1/files/public/docs2018/liaison-reponse-3GPP-RAN3-0318-v01.pdf
  - In the WG (y/n/a): 39, 0, 0
  - Proposed: János Farkas Second: Norm Finn
- Liaisons (ME)
  - Motion
    - Approve liaison of the following response (to LS 80) to ITU-T SG15
      - http://www.ieee802.org/1/files/public/docs2018/liaison-response-ITU-T-SG15-LS80-0318-v01.pdf
    - In the WG (y/n/a): 38, 0, 0
    - Proposed: Jessy Rouyer Second: János Farkas
  - Motion
    - Approve liaison of the following response (to LS 108) to ITU-T SG15
      - http://www.ieee802.org/1/files/public/docs2018/liaison-response-ITU-T-SG15-LS108-0318-v01.pdf
    - In the WG (y/n/a): 39, 0, 0
    - Proposed: Jessy Rouyer Second: János Farkas
  - Motion
    - Approve liaison of the following letter to ITU-T SG15
      - http://www.ieee802.org/1/files/public/docs2018/liaison-ITU-T-SG15-Q13-0318-v01.pdf
    - In the WG (y/n/a): 39, 0, 0
    - Proposed: Jessy Rouyer Second: János Farkas
- Items to SC6 (ME)
  - Motion
    - Approve liaison of the following comment responses to ISO/IEC JTC1/SC6 under the PSDO agreement:
      - http://ieee802.org/1/files/public/docs2018/liaison-randall-SC6Response1AC-0317.pdf
    - Proposed: Pat Thaler Second: John Messenger
    - For 37 Against 0 Abstain 1
- WG motions
  - Motion
    - 802.1 approves the November 2017 (Plenary) and January 2018 (Interim) minutes:
      - http://ieee802.org/1/files/public/minutes/2017-11-minutes-v2.pdf
      - http://ieee802.org/1/files/public/minutes/2018-01-minutes-v2.pdf
    - Proposed: Jessy Rouyer Seconded: John Messenger
  - Motion
    - 802.1 WG approves an interim meeting to work on IEC/IEEE P60802 TSN Profile for Industrial Automation work together with IEC 65C/MT9. The meeting is hosted by DKE July 24-26, 2018 in Frankfurt.
      - no registration fee
      - location:

        DKE
        Deutsche Kommission
        Elektrotechnik Elektronik Informationstechnik in DIN und VDE
        Stresemannallee 15
        60596 Frankfurt am Main

(room Slaby)

- Proposed: János Farkas Second: Stephan Kehrer
- In the WG (y/n/a): 38, 0, 0

- Motion
  - Approve OmniRAN TG conference calls:
    - March 20th, 09:30 AM ET, 90mins
    - April 3rd, 09:30 AM ET, 90mins
    - April 13th, 09:30 AM ET, 90mins
    - Between the May 2018 interim and the July 2018 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 http://1.ieee802.org/omniran/
  - Moved: Max Riegel Second: Walter Pienciak
  - Approved by Acclamation
- Motion
  - Authorize teleconference(s) for P802.1CQ
    - 28 March 6:00 AM Pacific Time
    - Possible additional calls with 10 day notice.
  - In the WG (y/n/a): <y>,<n>,<a>
  - Proposed: Pat Thaler Second: Paul Congdon
  - Approved by Acclamation
- Motion
  - 802.1 authorizes the May 2018 Interim to further develop PAR and CSD for pre- circulation to the EC for the P802.1Qcz amendment to IEEE 802.1Q covering Congestion Isolation.
  - In the WG (y/n/a): 38, 0, 0
  - Proposed: Pat Thaler Second: Yolanda Yu
- Motion
  - Approve continuing the YANGsters eMeetings monthly
    - Meeting Time
      - Bridge: join.me/ieee802.1
    - Wednesday, March 28, 2018 6:00 AM (US-Pacific) Through and including Wednesday, June 27, 2018 6:00AM (US-Pacific)
  - Moved: Scott Mansfield Second: Jessy Rouyer
  - Approved by Acclamation
- Motion
  - 802.1 authorizes the May 2018 Interim to generate PAR and CSD for pre-circulation to the EC for an amendment to IEEE 802.1Q to specify Resource Allocation Protocol.
  - Proposed: Feng Chen Second: John Messenger
  - In the WG (y/n/a): 37, 0, 0
- Motion
  - 802.1 authorizes the TSN Task Group to hold a teleconference for Sponsor ballot comment resolution for P802.1CM TSN for Fronthaul on April 3, 2018 from 7AM (US-Pacific).
  - Access information is posted on the http://www.ieee802.org/1/tsn page and will be updated as necessary.
  - Proposed: János Farkas Second: Jessy Rouyer
  - Approved by Acclamation

It was also agreed for the Maintenance TG to provide a plan regarding the future of IEEE Std 802.1D that expires December 31st, 2021. There was apparent 802.1 WG preference for withdrawing it and stabilizing it in ISO through JTC SC6.

There was no other business to discuss and the closing plenary meeting was adjourned at 11:58 AM.

9 Next meeting

21-25 May 2018, Pittsburgh, PA, USA