802.1 consent agenda items for LMSC Closing Plenary

July 2020 electronic

(V4 – 802.1 version #)

Agenda

- Drafts to RevCom
  - 5.071 P802.1Qcr to RevCom
  - 5.072 P802E to RevCom

Agenda (contd…)

- External communications (II)
  - 7.061 Approve 802.1 communication to 3GPP SA WG2
  - 7.062 Approve 802.1 communication to IEEE 1722
  - 7.063 Approve sharing P802.1Qdd draft with LNI4.0

- External communications (ME)
  - 7.064 Approve blog post on the IEEE Std 802.1AS-2020
  - 7.065 Approve submission of the IEEE 802.1X-2020, P802.1Qcr, P802.1CS, P802.1Qcz and P802.1AE-2018/Cor-1 to ISO/IEC JTC1/SC6 for information under the PSDO agreement.
  - 7.066 Approve submission of P802.1CMde, IEEE 802.1X-2020 and IEEE 802.1AE-2018/Cor-1 to ISO/IEC JTC1/SC6 for adoption under the PSDO agreement, once approved and published.
  - 7.067 Approve liaison of IEEE 802.1AE-2018 and IEEE 802.1Xck-2018 comment responses to ISO/IEC JTC1/SC6 under the PSDO agreement

802.1 Motions
2020-07

Consent Agenda

Drafts to RevCom

5.071 Motion

- Approve sending P802.1Qcr to RevCom
- Approve CSD documentation in https://mentor.ieee.org/802-ec/dcn/16/ec-16-0056-00-ACSD-802-1qcr.pdf
- P802.1Qcr D2.3 had 98% approval at the end of the third Standards Association recirculation ballot

- In the WG, Proposed: Johannes Specht, Second: János Farkas
  - Sending draft (y/n/a): 44, 2, 5
  - CSD (y/n/a): 43, 0, 2

- In EC, mover: Glenn Parsons, Second:
  - (y/n/a): <y>,<n>,<a>

Supporting information – P802.1Qcr

- Standards Association ballot closed: 29 May 2020
- Ballot results:
  - 1 Disapprove vote with 1 Must Be Satisfied (MBS) comment

- Ballot disposition is available here: http://www.ieee802.org/1/files/private/cr-drafts/d2/802-1Qcr-d2-3-dis-v01.pdf

Ballot Summary

Open Date: 19 May 2020 **Close Date:** 29 May 2020 **Status** Closed

Ballot Group Members: 80 **Ballot Stage:** Recirculation 3
Minimum should be 10

Return Ballots: (74) 92%
Minimum return rate is 75%

Abstentions: (4) 5%
Abstention must be below 30%

Approval Rate: 98%
Approval rate must be at least 75%

Votes counted in approval rate	
Approve	69
Disapprove With MBS Comment(s)	1
Total	70

Votes not counted in approval rate	
Disapprove Without MBS Comment(s)	0
Abstentions	4
Total	4

Total Votes	74
Total Comments	0

The vote tally for "Disapprove With MBS Comment(s)" = current Disapprove votes for which an MBS (Must Be Satisfied) comment existed in any round of balloting.

Supporting information – P802.1Qcr

- Voter with outstanding Disapprove vote with outstanding MBS comment:
  - Rodney Cummings

- The outstanding Must Be Satisfied comment of this voter is shown on the next slide.

Supporting information – P802.1Qcr

IEEE P802.1Qcr-D2.2 Asynchronous Traffic Shaping 2nd Sponsor recirculation ballot comments

Cl 8 SC 8.6.8.4 P29 L47 # R2-1

Cummings, Rodney National Instruments C

Comment Type TR *Comment Status* R

The previous recirculation removed the helpful NOTE on cut-through. That NOTE was intentionally created by the working group during development of IEEE Std 802.1Qbv-2015, not the P802.1Qcr project.

We all know that it is possible for a standard to mandate something that is not practical... something that doesn't make sense in the context of product implementation. There is nothing surprising about that. Murphy's Law applies to standard development, so mistakes are inevitable. The question is, what approach is used in order to address impractical mandates? There are two options:
A: Standard forces implementers to follow the impractical mandate.
B: Implementers explain the impractical mandate to standards group, and the standard is changed to reflect practical realities.

Option A is the wrong approach, but many standard participants still insist on it. First, the approach is wrong because it proposes to oppose practicality, and a standard should always be focused on practical implementation. Second, even when there is a disagreement on practicality, this approach is unrealistic. IEEE provides no mechanism to force conformance. Some people argue that conformance testing entities will force the issue, but those entities typically sell testing as a product to the implementer, and "the customer is always right" rule prevents enforcement of impractical mandates.

Option B is the right approach, and it will always be the right approach. It is unfortunate that some standards participants refuse to accept it, but hopefully that will change over time.

Relative to this comment, it is a well-known fact that many Ethernet switches implement cut-through, and those switches also claim conformance to IEEE Std 802.1Q. Cut-through is a critically important feature for these switches, and the implementers understand the advantages as well as disadvantages. Cut-through is a practical necessity in these switches. Based on the explanations from implementers of cut-through, the 802.1 working group seems to have reached rough consensus that cut-through is a reasonable, practical feature for a bridge (switch).

Nevertheless, 802.1AC imposes an impractical mandate, by prohibiting cut-through using a technicality. Since 802.1AC has the impractical mandate, 802.1Q also carries that impractical mandate. Based on that, some 802.1 members are proposing to remove the helpful text based on an Option A approach to the impractical mandate.

It is a fact that 802.1Q switches exist with cut-through. Based on that fact,the original NOTE included text to assist those implementers. The text of the NOTE is just as applicable now as it was then, so there is no justification to remove it.

Now and in the future, I will vote Disapprove on any IEEE SA project that takes the Option A approach to an impractical mandate. The Option B approach is the only approach that aligns with IEEE SA's goals and charter.

SuggestedRemedy

Restore the deleted text of the NOTE to the original (prior to P802.1Qcr edits).

Response *Response Status* U

REJECT.

IEEE 802.1Q requires conformance to IEEE Std 802.1AC for implementation of the ISS. IEEE Std 802.1AC clearly states that receipt of an error free frame is required for an M_UNITDATA.indication indicating receipt of a frame, and the received FCS is part of that indication if there is any doubt as to the necessity of receiving it before the indication occurs.

A NOTE cannot contain or change the mandatory requirements of the standard in which it occurs and similarly cannot change the mandatory requirements of another standard.

The comment has pointed out that there have been incorrect claims of conformance to IEEE Std 802.1Q. The PICS already provides a way of noting exception items and should be properly completed for any claim of conformance.

The comment claims that the 802.1 working group "seems to have reached rough consensus" on the use of 802.1Q with cut-through. This is not the case. Moreover:

a) The issue of cut-through in conjunction with IEEE Std 802.1AC and IEEE Std 802.3 is also an issue for the 802.3 working group.

b) 'Rough consensus' within a working group responsible for developing a standard does not supersede the provision of a standard that has been approved by the IEEE-SA standards development process, including past agreement through the SA ballot process.

Cl 8 SC 8.6.8.4 P29 L50 # R2-5

Christian Boiger b-plus GmbH

Comment Type T *Comment Status* A

Rogue comment from Christian Boiger:

A prior comment from D2.1 was not implemented properly. The last sentence of the note 2 in D2.2 has been striked out in D2.2, but this sentence shouldn't have been removed. This sentence is as follows: "It is desirable that the schedule for such traffic is designed to accommodate the intended pattern of
transmission without overrunning the next gate-close event for the traffic classes concerned."

SuggestedRemedy

Bring back the last sentence at the end of Note 2 in D2.2.

Response *Response Status* C

ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl 8
SC 8.6.8.4

Page 1 of 2
19.05.2020 13:59:00

5.072 Motion

- Approve sending P802E/D2.0 to RevCom
- Approve CSD documentation in http://www.ieee802.org/1/files/public/docs2015/802e-csd-1715-v00.pdf
- P802E/D2.0 had 95% approval, 91% return rate at the end of the second SA recirculation ballot
  - No further comments or vote changes received on that recirculation
  - 4 Disapprove votes, 11 unresolved Must Be Satisfied Comments
- In the WG, Proposed: Mick Seaman, Second: Karen Randall
  - Sending draft (y/n/a): 45, 0, 7
  - CSD (y/n/a): 41, 0, 5
- In EC, mover: Glenn Parsons Second: Roger Marks
  - (y/n/a): <y>,<n>,<a>

Supporting information P802E

Project Information

PAR/Standard#:	P802E
Project Title:	Recommended Practice for Privacy Considerations for IEEE 802 Technologies
Project Type:	New
Ballot Stage:	Comment Resolution - 2
Ballot Type:	Individual
Invitation Open Date:	15 Jul 2019
Invitation Close Date:	14 Aug 2019

Standards Committee/Working Group

Standards Committee:	IEEE Computer Society/LAN/MAN Standards Committee (C/LM)
Standards Committee Chair:	Paul Nikolich
Standards Representative:	James Gilb
Working Group Type:	Individual
Working Group Chair:	Glenn Parsons
Program Manager:	

Ballot Summary

Open Date: 29 May 2020 **Close Date:** 13 Jun 2020 **Status** Closed

Ballot Group Members: 92 **Ballot Stage:** Recirculation 2

Minimum should be 10

Return Ballots: (84) 91% — Minimum return rate is 75%

Abstentions: (3) 3% — Abstention must be below 30%

Approval Rate: 95% — Approval rate must be at least 75%

Votes counted in approval rate		Votes not counted in approval rate	
Approve	77	Disapprove Without MBS Comment(s)	0
Disapprove With MBS Comment(s)	4	Abstentions	3
Total	81	Total	3
Total Votes	84	Total Comments	0

The vote tally for "Disapprove With MBS Comment(s)" = current Disapprove votes for which an MBS (Must Be Satisfied) comment existed in any round of balloting.

Disapprove voters:

- William Byrd
- R K Rannow
- Janusz Zalewski
- Max Riegel

Supporting information P802E

P802E D1.6 Recom. Practice for Privacy Consi. for IEEE 802 Initial Sponsor ballot comments

Cl 1 SC 1 P 1 L 1 # i-12

Byrd, William PRIVACOM VENTUR

Comment Type GR *Comment Status* R MBS

This does not appear to be a standard to me. It just looks like a Lawyer wrote a lot "don't sue me," junk. It just states the obvious and does nothing to explain how to implement anything.

It's just a complete waste of IEEE time, with zero value

SuggestedRemedy

Drop the entire standard.
Or, show specifically how and where privacy can be obtained on 802 networks. Not just "don't sue me, or blame me," nonsense

Response *Response Status* C

REJECT.
The proposed change in the comment does not contain sufficient detail for the Comment Resolution Group (CRG) to determine specific changes that would satisfy the comment.
This Recommended Practice aims to help IEEE 802 protocol developers mitigate privacy threats. Discussion during its development revealed that the extent of the threat posed by information correlation and fingerprinting techniques was not generally understood (not obvious). The Recommended Practice helps inform developers and users on privacy requirements. Just as for security in general, there can be no expectation of absolute privacy (in the absence of a decision not to communicate at all) but merely a question of raising the effort expended by an adversary to the extent that violating privacy becomes an unprofitable/unattractive option.

Cl 1 SC 1.3 P 21 L 13 # i-13

Rannow, R K IEEE/SELF

Comment Type GR *Comment Status* R MBS

Uncomfortable with the introduction as, "a threat model" is not all encompassing.

One must use various models (HW, SW, architecture, etc.). Furthermore, there are vulnerabilities that might be considered, and this may require various considerations.

SuggestedRemedy

Recommend we also include TVA (threat and vulnerability analysis):

Threat and vulnerability models facilitate the framework and methodical identification of threats, risks or vulnerabilities associated with the identified threats, and possible mitigation or counter-measure solutions.

There are

Response *Response Status* C

REJECT.
The proposed change in the comment does not contain sufficient detail for the Comment Resolution Group (CRG) to determine specific changes that would satisfy the comment.

Cl 1 SC 1.4 P 22 L 7 # i-17

Rannow, R K IEEE/SELF

Comment Type GR *Comment Status* R MBS

Perhaps a missed opportunity, no meaningful boundaries described (where might privacy ownership lie) and developing a comprehensive model as part of a product spec.

SuggestedRemedy

Working on a more comprehensive proposal.

Response *Response Status* C

REJECT.
The proposed change in the comment does not contain sufficient detail for the Comment Resolution Group (CRG) to determine specific changes that would satisfy the comment.

The group did discuss this topic extensively in prior versions of the draft and concluded that the purpose of the recommended practice could not be to define privacy boundaries (as 1.5 makes clear), because such boundary definition could be argued against ad infinitum, and would vary as new standards are developed.

Supporting information P802E

P802E D1.6 Recom. Practice for Privacy Consi. for IEEE 802 Initial Sponsor ballot comments

Cl 1 *SC* 1.4 *P* 22 *L* 15 # i-14

Rannow, R K IEEE/SELF

Comment Type GR *Comment Status* R *MBS*

Replace:

Helping to protect personal information against such less powerful adversaries remains an important goal.

SuggestedRemedy

With:

Helping to protect personal information against unauthorized access and less powerful adversaries remains an important goal.

Response *Response Status* C

REJECT.
The paragraph aims at specifying that this recommended practice aims at providing a framework to protect against adversaries that can use IEEE 802 technologies to perform fingerprinting and obtain PII, directly or indirectly. Unauthorized access seems to be break the balance of the sentence without adding more clarity to the meaning as unauthorized access would be what these adversaries perform.

Cl 1 *SC* 1.5 *P* 22 *L* 25 # i-18

Zalewski, Janusz Florida Gulf Coast Uni

Comment Type GR *Comment Status* R *MBS*

I cannot imagine how a guideline on "privacy" does not have it defined.

SuggestedRemedy

Any definition would be better than none.

Response *Response Status* C

REJECT.
The proposed change in the comment does not contain sufficient detail for the Comment Resolution Group (CRG) to determine specific changes that would satisfy the comment.

The existing text of clause 1.5 already discusses the various shades of meanings of privacy, and the IEEE Standards Dictionary Online (referenced by clause 3. Definitions for the definition of terms not defined in that clause) also provides a definition: "The ability of an individual or group to seclude themselves or information about themselves and thereby reveal themselves selectively."

The recommendations in this Recommended Practice do not depend on the selection of a particular definition of privacy, and would not be enhanced by introducing an additional definition.

Cl 1 *SC* 1.5 *P* 22 *L* 27 # i-15

Rannow, R K IEEE/SELF

Comment Type GR *Comment Status* R *MBS*

Not sure how privacy in "social anthropology" or the study of people conveys helpful insight on a definition.

SuggestedRemedy

Change, "social anthropology" to "societal norms" to perhaps align with IEEE EAD endeavors.

Response *Response Status* C

REJECT.
The meaning of this text is that the term privacy can have different definitions depending on the domain, regulatory is given as an example, social anthropology is given as another example of a domain where specific definitions can be found. The text refers here to a definition of a term in a field, not to the general notion that 'privacy' may have different definition depending on groups of people (which is what social anthropology would study, along with the associated definition of terms).

Cl 3 *SC* 3 *P* 23 *L* 20 # i-16

Rannow, R K IEEE/SELF

Comment Type GR *Comment Status* R *MBS*

vulnerability definition

SuggestedRemedy

Vulnerability:

The characteristics and circumstances of a community, system, device or asset that makes it susceptible to compromise or damaging effects of the vulnerability.

There are many aspects of vulnerability, and may include social, personal, physical, economic, and environmental.

Response *Response Status* C

REJECT.
The term vulnerability is not used in the Recommended Practice.

Supporting information P802E

P802E D1.6 Recom. Practice for Privacy Consi. for IEEE 802 Initial Sponsor ballot comments

Cl 3 *SC* 3 *P* 24 *L* 1 # i-19

Zalewski, Janusz Florida Gulf Coast Uni

Comment Type GR *Comment Status* R *MBS*

I cannot imagine how a guideline on "privacy" does not have it defined.

SuggestedRemedy

Any definition would be better than none.

Response *Response Status* C

REJECT.
The proposed change in the comment does not contain sufficient detail for the Comment Resolution Group (CRG) to determine specific changes that would satisfy the comment.

The recommendations in this Recommended Practice do not depend on the selection of a particular definition of privacy (see clause 1.5 in the draft). The IEEE Standards Dictionary Online (referenced by clause 3. Definitions for the definition of terms not defined in that clause) provides this definition: "The ability of an individual or group to seclude themselves or information about themselves and thereby reveal themselves selectively."

Cl 8 *SC* 8.1 *P* 34 *L* 13 # i-28

Riegel, Maximilian Nokia

Comment Type TR *Comment Status* R *MBS*

In terms of PII exposure, short-lived services are not less vulnerable than longer lasting services. Once an identifier is visible, it's known. You may had in mind, that more frequent services like network probes have higher likelihood of observation when moving around.

SuggestedRemedy

Change sentence to 'Temporary identifiers should not be used or at least permitted whenever possible'.

Response *Response Status* C

REJECT.
The proposed remedy implies that permanent identifiers are preferred. The meaning of the recommendation is that temporary services may be better served if temporary identifiers are used, so as to avoid permanent association with a device.

Supporting information P802E

P802E/D2.0 Recommended Practice for Privacy 1st Sponsor recirculation ballot comments

Cl 6 *SC* 6.3 *P* 22 *L* 32 # R1-3

Riegel, Maximilian Nokia

Comment Type TR *Comment Status* D *MBS*

... or (for a wireless device) characteristics of the radio implementation: it is not well expressed that the characteristics of the radio must allow for fingerprinting, ie. must contain some kind of information that is unique for that single device

SuggestedRemedy

Amend to the end of 'or can be persistent, e.g. using a permanently assigned MAC address or (for a wireless device) characteristics of the radio implementation' unique for a device.

Proposed Response *Response Status* W

REJECT.
It is not necessary that the radio implementation information be unique for that single device. It only need to be correlated with a device, and thus contribute to fingerprinting (as explained in lines 21 through 26 of the page referenced by this comment).

[FYI : The paper at
https://www.ccs-labs.org/bib/bloessl2015scrambler/bloessl2015scrambler.pdf
provides a detail analysis of the use of radio scrambler properties in an attack on location privacy scenario, as well as mentionning other radio properties that can be correlated for long enough to be useful to an adversary.]

Cl 7 *SC* 7.2 *P* 24 *L* 32 # R1-4

Riegel, Maximilian Nokia

Comment Type TR *Comment Status* D *MBS*

Header changed to 'MAC and Physical Layer Operations', however this change misses that IEEE 802 protocols also comprise functions above the MAC layer. As IEEE 802 protocol operations belong to Data Link layer and Physical Layer, it makes no sense to exclude IEEE 802 protocol functions above the MAC layer.

SuggestedRemedy

Change header to 'Data Link and Physical Layer Operations' and also change 'MAC' in line 33 to Data Link'

Proposed Response *Response Status* W

REJECT.
1. Subclause 7.2 is part of this Recommended Practice, and not a definition of its entire Scope. The title of the subclause reflects its contents. Other aspects of IEEE 802 operation (MAC Addresses, Network Discovery etc. are addressed by other subclauses.
2. The functions above the MAC Layer use protocol identifiers (EtherTypes, LLC Addresses). Renaming this particular subclause would be to advocate the replacement of these persistent identifiers with ephemeral values, and thus require a completely new approach to protocol identification. No such proposal has been made, and no such proposal is required as data above the MAC (including protocol identifiers) can be (and often is) cryptographically confidentiality protected and thus privacy protected between communicating 802 end stations (see IEEE Std 802.1X and related standards).

802.1 Motions
2020-07

Consent Agenda

Liaisons and external communications (II)

7.061 Motion

- Approve http://www.ieee802.org/1/files/public/docs2020/liaison-response-3GPP-SA2-survival-time-0720-v01.pdf as communication to 3GPP SA WG2, granting the IEEE 802.1 WG chair (or his delegate) editorial license.

- In the WG (y/n/a): 51, 0, 1
  - Proposed: János Farkas, Second: Jessy Rouyer

- In EC, for information

7.062 Motion

- Approve http://www.ieee802.org/1/files/public/docs2020/liaison-802-1CQ-D0-5-0720-v01.pdf as communication to IEEE 1722, granting the IEEE 802.1 WG chair (or his delegate) editorial license.

- In the WG (y/n/a): 49, 0, 2
  - Proposed: Craig Gunther, Second: Geoffrey Garner

- In EC, for information

7.063 Motion

- Approve sharing the latest revision of the P802.1Qdd draft with LNI4.0

- Proposed: Josef Dorr
- Second: János Farkas

- In the WG (y/n/a): 51, 0, 1

- In EC, for information

802.1 Motions
2020-07

Consent Agenda

Liaisons and external communications (ME)

7.064 Motion

- Approve the blog post on IEEE Std 802.1AS-2020 in http://www.ieee802.org/1/files/public/docs2020/as-draft-blog-post-0720-v01.pdf, to be released with editorial changes as deemed necessary.

- In the WG (y/n/a): 52, 0, 0
  - Proposed: János Farkas, Second: Norman Finn

In EC, mover: Glenn Parsons, Second: Roger Marks
(y/n/a): <y>,<n>,<a>

7.065 Motion

- Approve submission of the following draft(s) to ISO/IEC JTC1/SC6 for information under the PSDO agreement
  - IEEE 802.1X-2020*
  - P802.1Qcr
  - P802.1CS
  - P802.1Qcz
  - P802.1AE-2018/Cor-1*
- In the WG, Proposed: Paul Congdon Second: János Farkas
  - Sending draft (y/n/a): 52, 0, 1
- In EC, mover: Glenn Parsons Second: Roger Marks
  - (y/n/a): <y>,<n>,<a>

NOTE: * sending published standard because SA ballot has completed.

7.066 Motion

- Approve submission of the following draft(s) to ISO/IEC JTC1/SC6 for adoption under the PSDO agreement, once approved and published.
  - P802.1CMde
  - IEEE 802.1X-2020
  - IEEE 802.1AE-2018/Cor-1*
- In the WG, Proposed: Paul Congdon Second: János Farkas
  - Sending draft (y/n/a): 51, 0 ,1
- In EC, mover: Glenn Parsons Second: Roger Marks
  - (y/n/a): <y>,<n>,<a>

NOTE: * sending under corrigendum process.

7.067 Motion

- Approve liaison of the following comment responses to ISO/IEC JTC1/SC6 under the PSDO agreement:
  - IEEE 802.1AE-2018
    - http://www.ieee802.org/1/files/public/docs2020/maint-randall-SC6CommentResponse1AERevFDIS-0720-v02.pdf
  - IEEE 802.1Xck-2018
    - http://www.ieee802.org/1/files/public/docs2020/maint-randall-SC6CommentResponse1XckFDIS-0720-v01.pdf

- In the WG, Proposed: Paul Congdon Second: Mick Seaman
  - Sending draft (y/n/a): 48, 0, 2

- In EC, mover: Glenn Parsons Second: Roger Marks
  - (y/n/a): <y>,<n>,<a>