802.1 consent agenda items for LMSC Closing Plenary

July 2025

(V8 – 802.1 version #)

Agenda

- PARs to NesCom
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- Drafts to SA Ballot
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Agenda

- Liaisons and external communications (ME)
  - 7.021 – Approve sending ballot comment responses to ISO/IEC JTC1 SC6
  - 7.022 – Approve sending draft(s) to ISO/IEC JTC1 SC6 for information under the PSDO agreement, when SA ballot starts
  - 7.023 – Approve sending standard(s) to ISO/IEC JTC1 SC6 for adoption under the PSDO agreement, when published
  - 7.024 – Approve sending communication to ITU-T SG15
  - 7.025 – Approve sending communication to ITU-T SG13
- Liaisons and external communications (II)
  - 7.026 – Approve sending communication to BBF
  - 7.027 – Approve sending communication to UEC
  - 7.028 – Approve P802.1ASed for purchase
  - 7.029 – Approve sharing IEC/IEEE 60802 with OPC Foundation

802.1 Motions

Consent Agenda

PARs to NesCom

5.0201 – Motion

- Approve forwarding P802.1Qee PAR documentation in https://www.ieee802.org/1/files/public/docs2025/ee-PAR-0725-v01.pdf to NesCom
- Approve CSD documentation in https://www.ieee802.org/1/files/public/docs2025/ee-CSD-0725-v01.pdf

- In the WG, Proposed: János Farkas, Second: Mark Hantel
  - PAR (y/n/a): 33, 1, 1
  - CSD (y/n/a): 33, 1, 1

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

5.0202 – Motion

- Approve forwarding P60802 PAR extension documentation in https://www.ieee802.org/1/files/public/docs2025/60802-PAR-extension-0725-v01.pdf to NesCom
- Approve (unmodified) CSD documentation in https://mentor.ieee.org/802-ec/dcn/18/ec-18-0088-01-ACSD-p60802.pdf

- In the WG, Proposed: János Farkas, Second: Dieter Proell
  - PAR (y/n/a): 35, 0, 1
  - CSD (y/n/a): 35, 0, 1

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

5.0203 – Motion

- Approve forwarding P802.1Qdq PAR extension documentation in https://www.ieee802.org/1/files/public/docs2025/dq-PAR-extension-0725-v02.pdf to NesCom
- Approve (unmodified) CSD documentation in https://mentor.ieee.org/802-ec/dcn/21/ec-21-0098-00-ACSD-p802-1qdq.pdf

- In the WG, Proposed: János Farkas, Second: Jessy Rouyer
  - PAR (y/n/a): 28, 4, 4
  - CSD (y/n/a): 28, 3, 5

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

5.0204 – Motion

- Approve forwarding P802.1X-2020/Cor1 PAR documentation in
  https://www.ieee802.org/1/files/public/docs2025/X-Cor1-PAR-0725-v01.pdf
  to NesCom
  Note: there is no CSD statement since this maintenance project is not intended to provide any new functionality

- In the WG, Proposed: Mark Hantel Second: Karen Randall
  - Sending (y/n/a): 33, 1 , 1
- In the EC, mover: Glenn Parsons Second: David Law
  - (y/n/a): <y> , <n> , <a>

5.0205 – Motion

- Approve forwarding IEEE 802.1X-2020 Revision PAR documentation in https://www.ieee802.org/1/files/public/docs2025/x-2020-rev-draft-par-0725-v00.pdf

  to NesCom

  Note: there is no CSD statement since this maintenance project is not intended to provide any new functionality
- In the WG, Proposed: Mick Seaman Second: Karen Randall
  - Sending (y/n/a): 35 , 0 , 2
- In the EC, mover: Glenn Parsons Second: David Law
  - (y/n/a): <y> , <n> , <a>

5.0206 – Motion

- Approve forwarding IEEE 802.1AE-2018 Revision PAR documentation in https://www.ieee802.org/1/files/public/docs2025/ae-2018-rev-draft-par-0725-v02.pdf

  to NesCom

  Note: there is no CSD statement since this maintenance project is not intended to provide any new functionality
- In the WG, Proposed: Mick Seaman Second: Karen Randall
  - Sending (y/n/a): 33, 0 , 2
- In the EC, mover: Glenn Parsons Second: David Law
  - (y/n/a): <y> , <n> , <a>

5.0207 – Motion

- Approve forwarding IEEE 802.1AR-2018 Revision PAR documentation in https://www.ieee802.org/1/files/public/docs2025/ar-2018-rev-draft-par-0725-v00.pdf

  to NesCom

  Note: there is no CSD statement since this maintenance project is not intended to provide any new functionality
- In the WG, Proposed: Mick Seaman Second: Karen Randall
  - Sending (y/n/a): 34 , 0 , 2
- In the EC, mover: Glenn Parsons Second: David Law
  - (y/n/a): <y> , <n> , <a>

802.1 Motions

Consent Agenda

Drafts to SA Ballot

5.0208 – Motion

- Conditionally approve sending P802.1ASed D3.0 to Standards Association ballot
- Confirm the CSD for P802.1ASed in https://mentor.ieee.org/802-ec/dcn/24/ec-24-0191-00-ACSD-p802-1ased.pdf
- P802.1ASed D2.2 had 97% approval at the end of the last WG ballot
  - In the WG, Proposed: János Farkas, Second: Silvana Rodrigues
    - Sending draft (y/n/a): 36, 1, 1
    - CSD (y/n/a): 36, 0, 1
  - In EC, mover: Glenn Parsons, Second: David Law
    - (y/n/a): <y>,<n>,<a>

Supporting Information P802.1ASed

- WG ballot closed: 26 July 2025
- All WG ballot requirements are met
- The ballot resulted in
  - 0 new Disapprove votes
  - 0 new MBS comments
  - 1 Disapprove vote associated with 12 MBS comments maintained from the initial WG ballot
- Ballot dispositions are available here:
  - 2nd WG recirculation ballot against D2.2: https://www.ieee802.org/1/files/private/ased-drafts/d2/802-1ASed-d2-2-dis-v01.pdf
  - Initial WG ballot against D2.0: https://www.ieee802.org/1/files/private/ased-drafts/d2/802-1ASed-d2-0-dis-v02.pdf
- WG recirculation ballot will be conducted during August/September with comment resolution in the regularly scheduled TSN TG meetings. A possible final recirculation in September/October if required with comment resolution in the regularly scheduled TSN TG meetings.

Ballot results:

Category	All respondents	
	Total	Percentage
Yes	29	97%[a] of yes/no
No	1	3% of yes/no
Voting Yes or No	29	58% of responding
Abstain Expertise	14	27% of responding
Abstain Time	2	4% of responding
Abstain Other	0	0% of responding
Respondents	46	79%[b] of eligible voters
Non-voters respond-ing	7	
Eligible Voters	58	
No. of commenters	2	4% of responding
No. of comments	16	
TR & T	14	88% of comments
ER & E	2	12% of comments

a Ballot is valid
b Ballot passed

Supporting Information P802.1ASed

- Voter maintaining Disapprove vote from former ballots:
  - Johannes Specht

- The MBS comment whose resolution the Disapprove voter is not satisfied with are on the following slides.

Supporting Information P802.1ASed

Cl I SC I.3.1 P70 L1 # 161

Specht, Johannes Self

Comment Type TR *Comment Status* A

It is unclear to me what "PPS" is, and how this relates to "PTP" and "gPTP". The title of I.3.1 is "PPS-based implementation". The title of I.3.2 is "PTP-based implementations.". That clause structure may indicate that I.3.1 is something entirely different than PTP/gPTP. The last sentence of I.3.2 "UARTs are commonly used to convey the time-of-day associated with PPS events. This mechanism must also be implemented to be tolerant to Byzantine faults." contributes further to my confusion:
a) It appears that I.3.1 relies on an entirely different communication mechanism that is not part of the IEEE 802 architecture, and not in the scope of the base standard (802.1AS) or the amendment project.
b) Term "must" is used only to describe unavoidable situations. Having the term in an informative annex reads strange to me, and it is unclear why the given statement is true.
c) The statement contradicts with that in line 33 on page 45.

SuggestedRemedy

DISCUSS
Is this the right standard for I.3.1?
Why is the statement in the cited sentence with "must" true?

Response *Response Status* W

ACCEPT IN PRINCIPLE.

Move all content related to time agreement generation and perservation from annex-I and the draft to its own separate annex

Change title of I.3.1 to:
Pulse Per Second (PPS) based example.

Delete lines 7 and 8 on page 71

Cl I SC I.3.2 P71 L9 # 162

Specht, Johannes Self

Comment Type TR *Comment Status* A

Change "Implementations." to "Implementations"

SuggestedRemedy

Per comment.

Response *Response Status* W

ACCEPT IN PRINCIPLE.

Change title of I.3.2 to:

PTP-based example

Cl 20 SC 20.2.2 P45 L24 # 164

Specht, Johannes Self

Comment Type TR *Comment Status* A

Avoid the use of the word safe in a standard unless the condition or practice referenced by the word safe has been tested under all cases as being, in fact, safe. Typically, this is not the case.

SuggestedRemedy

a) Change "a safe bound … use." to "defined time bounds."
b) Change remove term "safely" on P50L33.

Response *Response Status* C

ACCEPT IN PRINCIPLE.

Change L24, 45 to:

For this standard, a trusted time is one that passes a specified criterion that identifies it as being within acceptable
bounds.

Remove term "safely" on P50L33.

Cl 20 SC 20.3.5.1.4 P62 L5 # 169

Specht, Johannes Self

Comment Type TR *Comment Status* A

"ToD" only exists in 802.1AS-2020 in the context of EPON (clause 13).

SuggestedRemedy

DISCUSS
Is the algorithm defined in the draft only applicable to EPON?

Response *Response Status* W

ACCEPT IN PRINCIPLE.

Replace "ToD" in the document with "Time" which is referenced to the value obtained from timeReceiverTimeCallback field of the ClockTargetEventCapture.result premitive

Supporting Information P802.1ASed

Cl 20 SC 20.3 P47 L26 # 172

Specht, Johannes Self

Comment Type TR *Comment Status* A

It is unclear whether "local
oscillator's clock (OSC_CLK)" is a time source other than local clock (base standard) or the same.

SuggestedRemedy

If both are the same, use "local clock" throughout the document. If not, add text for explicitly introducing "local oscillator's clock (OSC_CLK)", and potentially find a better term that avoids ambiguity.

Response *Response Status* W

ACCEPT IN PRINCIPLE.

Change line 26 sentence from:

The FTTM can also use the local oscillator's clock (OSC_CLK) as an input to its selection algorithm

to

A FTT entity can use as an input a free running clock (FTT_CLK) which can be the LocalClock of a PTP Instance.

Change the figure 20-1
Change the title in the top left box from "Local Oscillator" to "Free running clock"
Remove the top left box

Rename the arrow text from "OSC_CLK" to "FTT_CLK"

Replace "OSC_CLK" with "FTT_CLK" throughout the standard.

Replace the word "oscillator" as appropriate.

Cl 7 SC Figure 7-1 P22 L7 # 176

Specht, Johannes Self

Comment Type TR *Comment Status* A

It appears unclear why the bridges need a fault-tolerant timing module in this example per NOTE
a) The architecture defined in 20.3 implies that the FTTM cannot pass its results to ports for transport to other bridges.
b) The only reason I can imagine (as is implied in the draft at other places) could be that there is enhancements for scheduled traffic are present. But this is not stated here.

SuggestedRemedy

a) Either take the FTTM out of the bridges in the example, or give reasoning.
b) Specify clearly at an apporpriate location when (and when not) a bridge in the network requires FTTM and when not (it could also be ok to have it only in some bridges, or just in end stations).

Response *Response Status* W

ACCEPT IN PRINCIPLE.

Add a paragraph at the end of clause 20.3:
FTT entity is used by time-aware systems (end stations and Bridges) if applications and protocols depend on synchronized time.
NOTE - 1: The use of FTT entity on all or some of the Bridges in the network is dependent on the use case.

Add text as appropriate to indicate that FTT entity is not required at every Bridge if there are no applications/protocols that depend on synchronized time.

Supporting Information P802.1ASed

Cl 20 SC 20.3.2 P48 L18 # 178

Specht, Johannes Self

Comment Type TR *Comment Status* A

a) line 18: Per Figure 20-1, OSC_CLK is not an element of which the FTTM "consists" [line 17].
b) Line 22: "PTP End Instances serve as the ClockTimeReceiver entities" does not make sense to me. A ClockTimeReceiver entity (in 802.1AS-2020 called "ClockSlave") is A PART of a PTP Instance (see 7.4 in 802.1AS-2020 and Figure 20-1 in the draft).
c) Line 31: "where each DTSF serves as a ClockTimeReceiver entity and the ITSF serves as a ClockTarget entity" appears incorrect. DTSF and ITSF are part of FTTM which, per the FTTM location specified earlier in 20.3, does not comprise ClockTarget and ClockTimeReceiver (the latter are part of the media-independet PTP Instance pieces).
d) Similar confusing are lines 37 to 39 (e.g., an "output" can not become an entity).

SuggestedRemedy

To be honest, I am not sure what the text on page 48 lines 18 to 41 shall state.
I can just guess that it attempts to describe the "flow of time information" as shown in Figure 20-2. If so, the entire text needs to be revised significantly.

Response *Response Status* W

ACCEPT IN PRINCIPLE.
- Delete line 17
- Change first bullet item to:
If fttmUseFTTClk is TRUE, FTT entity uses a free-running clock that is independent of the times being received by the PTP Instances that are connected to the FTTM. The health and trust of FTT_CLK is outside the scope of this standard.

-Change second bullet item to:
ClockTargetEventCapture interface (see Clause 9.3) provides time information to the FTT entity from PTP Instances. The instanceIndex number associated with each PTP Instance is also passed to the TSF.

- Delete the bullet item on line 30-35

- Change the bullet item on line 36- 41 to:

FTT provides output time via ClockTargetEventCapture interface to ClockTarget entity. The instanceIndex number of the PTP Instance associated with the output ClockTargetEventCapture interface is available via the management object fftmSelInstanceIndex (14.23.16)

Cl 20 SC Figure 20-4 P60 L1 # 183

Specht, Johannes Self

Comment Type TR *Comment Status* A

"Wait for invoke from FTTM" in state "WAIT_INVOKE" is misleading. Either remove the text or use "FTTM state machine" instead of "FTTM".

SuggestedRemedy

Per comment.

Response *Response Status* W

ACCEPT IN PRINCIPLE.

Change text to "Wait for invoke from FTTM state machine"

Cl 20 SC 20.3.2.2 P50 L32 # 193

Specht, Johannes Self

Comment Type TR *Comment Status* A

Avoid the use of the word safe in a standard unless the condition or practice referenced by the word safe has been tested under all cases as being, in fact, safe. Typically, this is not the case.

SuggestedRemedy

Delete the paragraph.

Response *Response Status* W

ACCEPT IN PRINCIPLE.

Delete the word "Safely" on P50, L33

Cl 20 SC 20.3.2.2 P50 L35 # 194

Specht, Johannes Self

Comment Type TR *Comment Status* A

Remove ", without further consideration, ". There is no need to state this explicitly, and such statements may result in contradiction with other statements in the current draft or in future.

SuggestedRemedy

Per comment.

Response *Response Status* W

ACCEPT.

Supporting Information P802.1ASed

CI 6 SC 6.4.3.9 P 19 L 6 # 196

Specht, Johannes Self

Comment Type TR *Comment Status* A

This drafts excessively uses term "trust" (293 matches). In most places, it does not provide a clear technical definition what "trust" means, but rather leaves it a mystery, giving the imression that "trust" is repeatedly used for marketing reasons. However, via the indirection of "specified criteria" and reference to L.5, it turns out that "trust" means that the delta between two synchronized times is within the bounds of tolerances when everything runs within spec. In conjunction with the pair-wise brute force comparison, that appears questionable (e.g., a clique if two outliers can self-attest their correctness). At the end, it appears that "trust" reduces to a RO status variable, but does not really affect the outcoming synchronized time.

SuggestedRemedy

IEEE 802.1AS is a technical standard, not a marketing document. Other locations are more appropriate for marketing messages. Therefore:
Replace the, in rough words, "trust mystery" throughout the document by accurate and explicit technical description and terms.

Response *Response Status* W

ACCEPT IN PRINCIPLE.

Use "trust" throughut the document consistently as defined on line 24-25 of page 45.

CI 20 SC 20.3.3 P 51 L 28 # 197

Specht, Johannes Self

Comment Type TR *Comment Status* A

The draft introduces two state machines:
1. FTTM state mache
2. TSF state machine
However, one state machine would be sufficient, and the given breakdown overcomplifies the operation. That one state machine could be outlined as follows:
1. Wait for invoke from the clock target
2. Issue Invoke for all PTP Instances
3. Wait until all PTP instances responded
4. Compute the response to the clock target
5. go back to 1.
The computation in step 4 does not need to wait for any event. It can therefore be functions used in th state machine diagram, simiar as it seen in other state machines throughout the base standard.

SuggestedRemedy

Consider simplifying the operation along the lines of the comment.
No further specific suggested remedy was possible due to timeout.

Response *Response Status* U

ACCEPT IN PRINCIPLE.

Remove the requirement to use ClockTargetEventCapture application interface between the DTSF and ITSF. Also, update Figure 20-2 to remove the arrows showing the clockTarget interface between DTSF and ITSF. And update the rest of the document as appropriate.

The rest of the suggested changes are not specific enough to implement.

5.0209 – Motion

- Approve sending P802.1AS-2020-Rev D2.0 to Standards Association ballot

  Note: there is no CSD statement since this maintenance project is not intended to provide any new functionality
- P802.1AS-2020-Rev D1.3 had 97.5% approval at the end of the last WG ballot
- In the WG, Proposed: Silvana Rodrigues, Second: Mark Hantel
- Sending draft (y/n/a): 34, 0 , 1
- In EC, mover: Glenn Parsons, Second: David Law
- (y/n/a): <y>,<n>,<a>

Supporting Information P802.1AS-2020-Rev

- WG ballot closed: 11 July 2025
- All WG ballot requirements are met
- The ballot resulted in
  - 0 new Disapprove votes
  - 0 new Required comments
  - 1 Disapprove vote maintained from initial WG ballot associated with 4 outstanding MBS comments
- Comment resolution available here:

  https://www.ieee802.org/1/files/private/as-2020-rev-drafts/d1/802-1AS-2020-Rev-d1-3-dis-v00.pdf

Category (as appears in comment disposition document):	TOTAL (All)	% (ALL)	TOTAL (Voters)	% (Voters)
Yes	40	97.56%	40	97.56%
No	1	2.44%	1	2.44%
Voting Yes or No	41	77.36%	41	82.00%
Abstain Time	1	1.89%	1	2.00%
Abstain Expertise	8	15.09%	8	16.00%
Abstain Other	3	5.66%	0	0.00%
Respondents	53	91.38%	50	86.21%
Responding voting members	50		50	86.21%
Non-voting commenters	0			
No. of commenters	0		0	
No. of comments	0		0	
		Eligible voters	58	
		75% approval?	Yes. Ballot passed.	
		50% response?	Yes. Ballot is valid.	

Supporting Information P802.1AS-2020-Rev

- Voter maintained Disapprove vote from initial WG ballot:
  - Johannes Specht
- MBS comments whose resolution the Disapprove voter is not satisfied with are on the following slides. Four comments are from the recirculation WG ballot on D1.1.

Supporting Information P802.1AS-2020-Rev D1.1

Cl 7 SC 7.4 P51 L9 # 17

Specht, Johannes Self-Funded

Comment Type **TR** *Comment Status* **R**

The issues detailed in comment #64 against D1.0 of this project remain unaltered. Some important questions were pointed out in in the comment, and the commenter believes that an enhancement is necessary.

SuggestedRemedy

DISCUSS
The commenter might be able provide further input subsequently.

Response *Response Status* **U**

REJECT.
No specific remedy was given by the commenter.

Cl 14 SC 14.1.1 P266 L6 # 18

Specht, Johannes Self-Funded

Comment Type **TR** *Comment Status* **A**

The link provided in item 3) of the response to comment #66 against D1.0 does not exist.

SuggestedRemedy

Fix the link/provide the contribution the final comment disposition against D1.0 refers to.

Response *Response Status* **W**

ACCEPT.

Cl 7 SC 7.2.5 P46 L11 # 19

Specht, Johannes Self-Funded

Comment Type **TR** *Comment Status* **R**

Item b) fo the suggested remedy of comment #67 against D1.0 is not satisfied, but the commenter believes that it is necessary.

SuggestedRemedy

DISCUSS
The commenter might be able provide further input subsequently.

Response *Response Status* **U**

REJECT.

No specific remedy was given by the commenter.

Cl 8 SC 8.4.4 P58 L11 # 20

Specht, Johannes Self-Funded

Comment Type **TR** *Comment Status* **A**

The contents of 8.4.4, including its use of "shall", remain an issue as summarized in comment #77 against D1.0.
The rationale provided in the response to comment #77 against D1.0 is insufficient for retaining 8.4.4.

SuggestedRemedy

Delete 8.4.4.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Replace the contents of 8.4.4 as follows:

"IEEE Std 802.1AS messages can be delayed in internal queues depending on their transmission priority relative to other frames. IEEE Std 802.1AS messages are sensitive to delays, and long bursts of other traffic can cause loss of synchronization due to gPTP timeouts. Delays caused by queues on the IEEE Std 802.1AS messages effectively increases residence time, which degrades achievable time accuracy."

5.0210 – Motion

- Approve sending P802.1CB-2017/Cor1 D2.0 to Standards Association ballot

  Note: there is no CSD statement since this maintenance project is not intended to provide any new functionality
- P802.1CB-2017/Cor1 D1.1 had 100% approval at the end of the last WG ballot
- In the WG, Proposed: Christophe Mangin, Second: Mark Hantel
- Sending draft (y/n/a): 33, 0 ,1
- In EC, mover: Glenn Parsons, Second: David Law
- (y/n/a): <y>,<n>,<a>

Supporting Information for P802.1CB-2017/Cor 1

- WG ballot closed: 7 July 2025
- All WG Ballot requirements are met
- The ballot resulted in
  - 0 new Disapprove votes
  - 0 new Required comments
  - 0 maintained Disapprove votes
- Comment resolution available here: https://www.ieee802.org/1/files/private/cb-cor-1-drafts/d1/802-1CB-2017-Cor1-d1-1-dis-v01.pdf

CATEGORY	All respondents		Voters	
	TOTAL	%	TOTAL	%
Yes[a]	28	100	28	100
No	0	0	0	0
Voting Yes or No	28	68.3	28	68.3
Abs. Expertise	9	22.0	9	22.0
Abs. Time	3	7.3	3	7.3
Abs. Other	1	2.4	1	2.4
Respondents[b]	41	74.5	41	74.5
Voters	41		41	74.5
Non-voting commenters	0			
No. of commenters	0		0	
No. of comments	0		0	
Eligible voters	55			
75% approval ?	Yes, ballot passed			
50% response ?	Yes, ballot is valid			

802.1 Motions

Consent Agenda

Drafts to RevCom

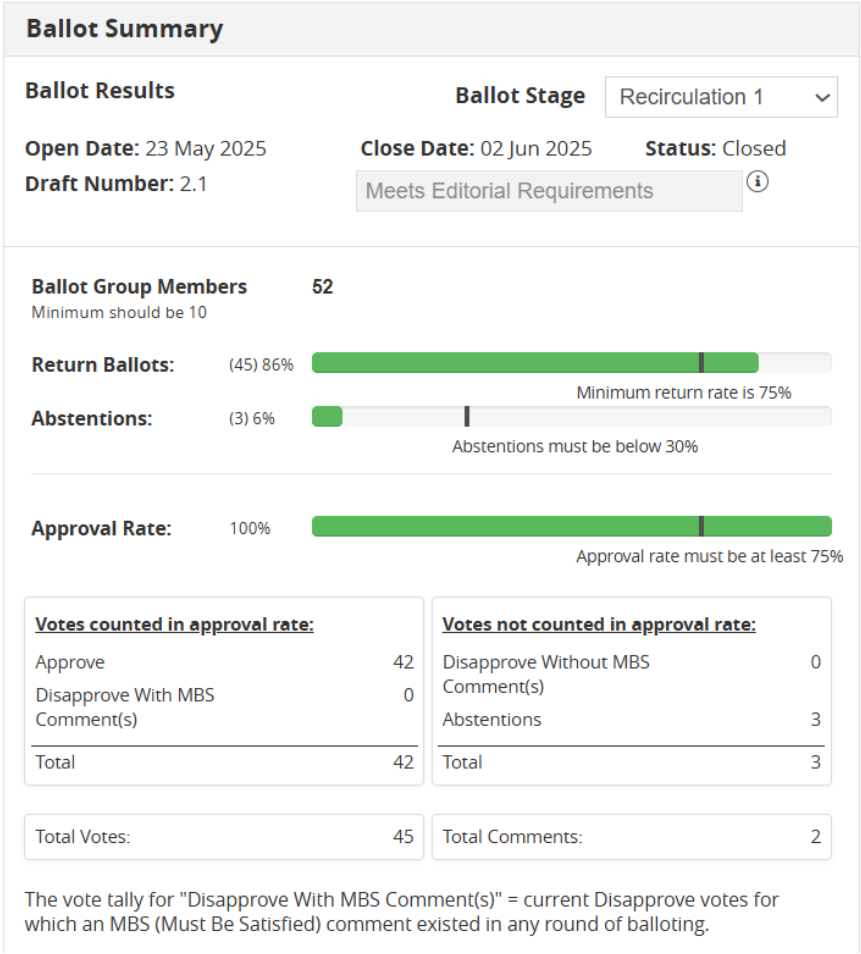
5.0211 – Motion

- Approve sending P802.1AXdz to RevCom
- Approve CSD documentation in https://mentor.ieee.org/802-ec/dcn/23/ec-23-0238-00-ACSD-p802-1axdz.pdf
- P802.1AXdz D2.1 had 100% approval at the end of the last SA recirculation ballot
  - In the WG, Proposed: János Farkas, Second: Johannes Specht
    - forwarding draft to RevCom (y/n/a): 32, 0 ,2
    - CSD (y/n/a): 32, 0, 1
  - In EC, mover: Glenn Parsons, Second: David Law
    - (y/n/a): <y>,<n>,<a>

Supporting Information P802.1AXdz

- SA ballot closed: 02 Jun 2025
- All SA ballot requirements are met
- The ballot resulted in
  - 0 Disapprove votes
  - 0 MBS comments
- Ballot disposition is available here:

https://www.ieee802.org/1/files/private/axdz-drafts/d2/802-1AXdz-d2-1-dis-v01.pdf



Ballot Summary

Ballot Results **Ballot Stage** Recirculation 1

Open Date: 23 May 2025 **Close Date:** 02 Jun 2025 **Status:** Closed

Draft Number: 2.1 Meets Editorial Requirements

Ballot Group Members 52
Minimum should be 10

Return Ballots: (45) 86%
Minimum return rate is 75%

Abstentions: (3) 6%
Abstentions must be below 30%

Approval Rate: 100%
Approval rate must be at least 75%

Votes counted in approval rate:	
Approve	42
Disapprove With MBS Comment(s)	0
Total	42

Votes not counted in approval rate:	
Disapprove Without MBS Comment(s)	0
Abstentions	3
Total	3

Total Votes:	45
Total Comments:	2

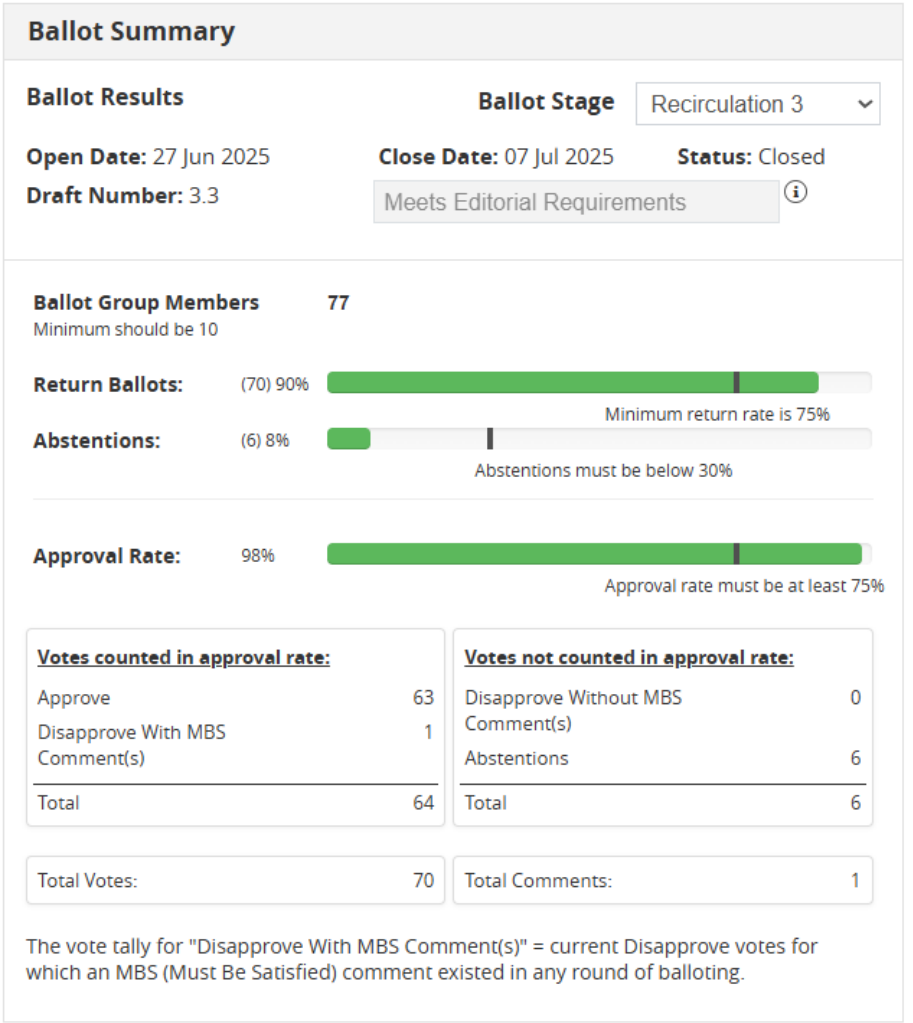
The vote tally for "Disapprove With MBS Comment(s)" = current Disapprove votes for which an MBS (Must Be Satisfied) comment existed in any round of balloting.

5.0212 – Motion

- Approve sending P802.1DP to RevCom
- Approve CSD documentation in https://mentor.ieee.org/802-ec/dcn/21/ec-21-0096-00-ACSD-p802-1dp.pdf
- P802.1DP D3.3 had 98% approval at the end of the last SA recirculation ballot
  - In the WG, Proposed: János Farkas, Second: Stephan Kehrer
    - forwarding draft to RevCom (y/n/a): 33, 0 ,1
    - CSD (y/n/a): 33, 0, 2
  - In EC, mover: Glenn Parsons, Second: David Law
    - (y/n/a): <y>,<n>,<a>

Supporting Information P802.1DP

- SA ballot closed: 07 July 2025
- All SA ballot requirements are met
- The ballot resulted in
  - 0 new Disapprove votes
  - 0 new MBS comments
  - 1 Disapprove vote associated with 4 MBS comments maintained from the initial SA ballot on D3.0
- Ballot dispositions are available here:
  - D3.3: https://www.ieee802.org/1/files/private/dp-drafts/d3/802-1DP-d3-3-dis-v01.pdf
  - D3.0: https://www.ieee802.org/1/files/private/dp-drafts/d3/802-1DP-d3-0-dis-v01.pdf (4 MBS comments, see also on the following slides)



Ballot Summary

Ballot Results — **Ballot Stage**: Recirculation 3

Open Date: 27 Jun 2025 — **Close Date:** 07 Jul 2025 — **Status:** Closed

Draft Number: 3.3 — Meets Editorial Requirements

Ballot Group Members 77
Minimum should be 10

Return Ballots: (70) 90%
Minimum return rate is 75%

Abstentions: (6) 8%
Abstentions must be below 30%

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

Votes counted in approval rate:	
Approve	63
Disapprove With MBS Comment(s)	1
Total	64

Votes not counted in approval rate:	
Disapprove Without MBS Comment(s)	0
Abstentions	6
Total	6

Total Votes:	70
Total Comments:	1

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 P802.1DP

- Voter maintaining Disapprove vote from former ballot:
  - Benjamin Rolfe

- MBS comments associated with the Disapprove vote are on the following slides

Supporting Information P802.1DP

Cl **5** SC **5.2** P **21** L **25** # I-39

Rolfe, Benjamin Blind Creek Associates

Comment Type **TR** *Comment Status* **R**

Incorrect use of "shall" specifying a mandatory behavior outside the scope of the standard (2 times in this paragraph).
The scope of this standard as approved by IEEE-SA is:
This standard specifies profiles of IEEE 802.1 Time-Sensitive Networking (TSN) and IEEE 802.1 Security standards for aerospace onboard bridged IEEE 802.3 Ethernet networks. The profiles select
features, options, configurations, defaults, protocols, and procedures of bridges, end stations, and Local Area Networks
to build deterministic networks for aerospace onboard communications.
"The supplier of an implementation" is not in the scope of this standard.

SuggestedRemedy

Replace paragraph with:
The supplier of an implementation that is claimed to conform to this standard is requested to provide the information
necessary to identify both the supplier and the implementation, and complete a copy of the relevant
PCS proforma provided in Annex A of this standard, together with the Protocol Implementation
Conformance Statements (PICS) for the referenced standards, as identified in the PCS.

Response *Response Status* **W**

REJECT.

Each IEEE 802 standard properly contains (in addition to the mandatory, optional, and recommended requirements for implementations for which conformance to the standard is to be claimed) requirements on the use of the standard and related activities.

The PCS is normative because it specifies the requirement that a supplier of an implementation *shall* complete a PCS to make a claim of conformance to this standard. A normative PICS or PCS is an important and well established part of IEEE 802 standards and their adoption by ISO going back (at least) to IEEE Std 802.1D-1990. The referenced text "The supplier … Implementation that is claimed to conform … shall complete … the PICS proforma" is used in the base standard (802.1AE-2018), in IEEE Stds 802.1Q, 802.1AR, 802.1AS, 802.1AX, 802.1BA, 802.1CB, 802.1CM, and 802.1X. The normative requirement (with "shall") is also stated for all the capabilities standardized in IEEE Std 802.3-2022 with 179 instances of "supplier … shall complete", for IEEE Std 802.11-2020 ("supplier of a protocol implementation that is claimed to comply with IEEE Std 802.11-2020 shall complete the …PICS…"), in the PICS annexes for IEEE Stds 802.15.1-2002, 802.15.3.2003, and 802.15.4-2015, and in 802.21-2009. In all cases it is important have a definitive statement of implemented provisions in a given implementation when a supplier claims conformance.

Supporting Information P802.1DP

Cl **A** *SC* **A** *P* **52** *L* **1** # I-40

Rolfe, Benjamin — Blind Creek Associates

Comment Type **TR** *Comment Status* **R**

According the IEEE-SA Operations Manual, "Normative material is information required to implement the standard and is therefore officially part of the standard. Informative material is provided for information only and is therefore not officially part of the standard." This annex does not define any valid requirements within the scope of this standard. This annex enumerates requirements defined elsewhere within the standard. This is informative material. which supports using the standard. This will also fix the problems with "may" and "should" which appear in this annex describing actions an d events outside the scope of this standard (there's a bunch).

Side note: if you make it informative, it is "not officially part of the standard" and so the the inappropriate use of "shall" throughout this annex (stating requirements out of scope of this standard) are no longer wrong, as the informative annex is not officially part of the standard ;-)

SuggestedRemedy

Change "normative" to "informative"

Response *Response Status* **W**

REJECT.

Each IEEE 802 standard properly contains (in addition to the mandatory, optional, and recommended requirements for implementations for which conformance to the standard is to be claimed) requirements on the use of the standard and related activities.

This Annex is normative because it specifies the requirement that a supplier of an implementation *shall* complete a PCS to make a claim of conformance to this standard. A normative PICS or PCS is an important and well established part of IEEE 802 standards and their adoption by ISO going back (at least) to IEEE Std 802.1D-1990. The referenced text "The supplier … Implementation that is claimed to conform … shall complete … the PICS proforma" is used in the base standard (802.1AE-2018), in IEEE Stds 802.1Q, 802.1AR, 802.1AS, 802.1AX, 802.1BA, 802.1CB, 802.1CM, and 802.1X. The normative requirement (with "shall") is also stated for all the capabilities standardized in IEEE Std 802.3-2022 with 179 instances of "supplier … shall complete", for IEEE Std 802.11-2020 ("supplier of a protocol implementation that is claimed to comply with IEEE Std 802.11-2020 shall complete the …PICS…"), in the PICS annexes for IEEE Stds 802.15.1-2002, 802.15.3.2003, and 802.15.4-2015, and in 802.21-2009. In all cases it is important have a definitive statement of implemented provisions in a given implementation when a supplier claims conformance.

Cl **1** *SC* **1.3** *P* **17** *L* **77** # I-41

Rolfe, Benjamin — Blind Creek Associates

Comment Type **GR** *Comment Status* **A**

The first sentence of this paragraph seems odd (and probably "should" is incorrectly used): "Aerospace OEMs and suppliers at all tiers should be able to use this standard to specify and design the network and network components required to implement the systems and functions required by aerospace platforms."

in particular "should be able to" is a red flag that this is probably incorrect use of normative language. In context the intent appears to be not to recommend, but to state the fact (it is possible to use this standard for the stated purpose), and perhaps even an intent of the standards development group (that this standard be used for the stated purpose).

SuggestedRemedy

Change to:
Consistent with the purpose of this standard, Aerospace OEMs and suppliers at all tiers are able to use this standard to specify and design the
network and network components required to implement the systems and functions required by aerospace
platforms.

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

Change to:

"Consistent with the purpose of this standard, Aerospace OEMs and suppliers at all tiers are able to use this standard to specify and design the
network and network components required to implement the systems and functions on aerospace platforms."

Supporting Information P802.1DP

Cl **2** *SC* **2** *P* **18** *L* **6** # I-42

Rolfe, Benjamin — Blind Creek Associates

Comment Type **TR** *Comment Status* **A**

Most of the listed standards are not cited in this standard. According to the IEEE SA Operations Manual (6.4.6), "Each normative reference shall be cited, and the role and relationship of each normative reference shall be explained in the body of the standard.".
IEEE Std 802 is not cited in normative text. It appears only in clause 3 which per the IEEE SA operations manual shall not contain requirements. Also, you should not be repeating definitions from other standards, as that creates duplication in the IEEE standards dictionary.
IEEE Std 802.1AC is not cited in this standard.
IEEE Std 802.3 is not (properly) cited in this standard: it appears in the front matter and the Purpose clause, but not used in normative context.
IETF RFC 7950 is not cited anywhere in this standard.
IETF RFC 8343 is not cited in this standard.

SuggestedRemedy

Move IEEE Std 802 to the bibliography and consider updating the reference to the current version of the standard.
Remove IEEE Std 802.1AC from clause 2.
Remove IEEE Std 802.3 from clause 2.
Remove IETF RFC 7950 and 8343 from clause 2.

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

Move IEEE Std 802 to the bibliography.

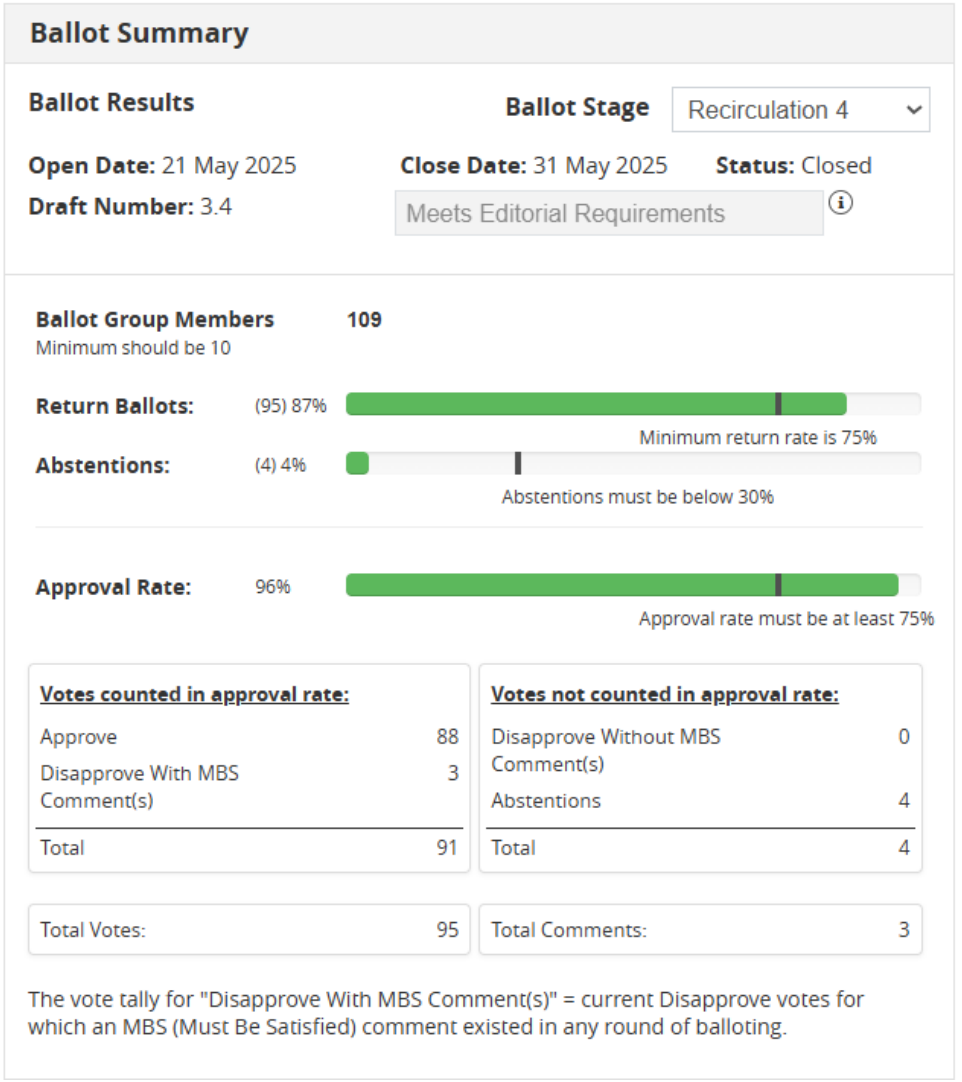
Remove IEEE Std 802.1AC from clause 2.
Remove IEEE Std 802.3 from clause 2.
Remove IETF RFC 7950 and 8343 from clause 2.

5.0213 – Motion

- Approve sending P60802 to RevCom
- Approve CSD documentation in https://mentor.ieee.org/802-ec/dcn/18/ec-18-0088-01-ACSD-p60802.pdf
- P60802 D3.4 had 96% approval at the end of the last SA recirculation ballot
  - In the WG, Proposed: János Farkas, Second: Mark Hantel
    - forwarding draft to RevCom (y/n/a): 32, 1, 4
    - CSD (y/n/a): 33, 1, 3
  - In EC, mover: Glenn Parsons, Second: David Law
    - (y/n/a): <y>,<n>,<a>

Supporting Information P60802

- SA ballot closed: 31 May 2025
- All SA ballot requirements are met
- The ballot resulted in
  - 1 new Disapprove vote associated with 3 MBS comments out of scope
  - 2 Disapprove votes associated with 5 MBS comments maintained from former ballots
- Ballot dispositions are available here:
  - D3.4:https://www.ieee802.org/1/files/private/60802-drafts/d3/60802-d3-4-dis-v01.pdf (3 MBS comments, see also on the following slides)
  - D3.3:https://www.ieee802.org/1/files/private/60802-drafts/d3/60802-d3-3-dis-v01.pdf (2 MBS comments, see also on the following slides)
  - D3.0:https://www.ieee802.org/1/files/private/60802-drafts/d3/60802-d3-0-dis-v01.pdf (3 MBS comments, see also on the following slides)



Ballot Summary

Ballot Results **Ballot Stage** Recirculation 4

Open Date: 21 May 2025 **Close Date:** 31 May 2025 **Status:** Closed

Draft Number: 3.4 Meets Editorial Requirements

Ballot Group Members 109
Minimum should be 10

Return Ballots: (95) 87%
Minimum return rate is 75%

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

Approval Rate: 96%
Approval rate must be at least 75%

Votes counted in approval rate:	
Approve	88
Disapprove With MBS Comment(s)	3
Total	91

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

Total Votes:	95
Total Comments:	3

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 P60802

- Voter with new Disapprove vote:
  - Bo Sun
- Voters maintaining Disapprove vote from former ballots:
  - Sven Meier (from SA recirculation ballot on D3.3 and from initial SA ballot on D3.0)
  - C Huntley (from initial SA ballot on D3.0)
- MBS comments associated with the Disapprove votes are on the following slides

Supporting Information P60802

Cl 4 SC 4.1 P24 L851 # R4-1

Sun, Bo Sanechips Technology Co., Ltd

Comment Type **TR** *Comment Status* **R**

The updated text before the Fig-1 has indicated the fig is an exmaple instead of a general restriction. Therefore the title of Fig-1 should be updated to clearly indicate it's an demonstration of an example of a control loop with the data flow inside.

SuggestedRemedy

Change the title of Fig -1 to "Example of a control loop with internal data flow".

Response *Response Status* **W**

REJECT. This comment is out of scope as it is on an unchanged portion of the draft.

Cl 4 SC 4.2.1 P25 L911 # R4-2

Sun, Bo Sanechips Technology Co., Ltd

Comment Type **TR** *Comment Status* **R**

In the first paragraph of sub-clause 4.2.1, it's stated that the Figure-2 shows an industry application, indicating it's an example instead of a general restriction. Therefore, the title of Figure-2 should be updated to clearly indicate it's a demonstration of an example.

Besides, there's no narrative to describe or explain the Figure-2, even though Figure-2 shows a pretty complex architecuture and organization.

SuggestedRemedy

Modify the title of Figure-2 to indicate it's an example instead of general restriction. And add narrative to explain how the system indicated by Figure-2 works.

Response *Response Status* **W**

REJECT. This comment is out of scope as it is on an unchanged portion of the draft.

Cl 4 SC 4.2.1 P27 L913 # R4-3

Sun, Bo Sanechips Technology Co., Ltd

Comment Type **TR** *Comment Status* **R**

In the first paragraph of sub-clause 4.2.1, it's stated that the Figure-3 shows an industry application, indicating it's an example instead of a general restriction. Therefore, the title of Figure-3 should be updated to clearly indicate it's a demonstration of an example.

Besides, there's no narrative to describe or explain the Figure-3, even though Figure-3 shows a pretty complex architecuture and organization.

SuggestedRemedy

Modify the title of Figure-3 to indicate it's an example instead of general restriction. And add narrative to explain how the system indicated by Figure-3 works.

Response *Response Status* **W**

REJECT. This comment is out of scope as it is on an unchanged portion of the draft.

Supporting Information P60802

Cl **0** *SC* **0** *P* *L* # R3-1

Meier, Sven NetTimeLogic GmbH

Comment Type **GR** *Comment Status* **R**

In my point of view this standard defines unrealistic requirements and in general an overkill way bejond what is required for Industrial communication. The goal was to have a common set of TSN features that must be fullfilled for Industrial communication but as the standard is right now there is basically no existing TSN infrastructure that can satisfy the full standard as such. This will either lead to a scenario where vendors will kind of create a subset of it which is not the idea of Profile, making profiles of profiles or even worse create again incompability since vendors are simply not able to fullfill a lot of the requirements defined.
The strength of this should have been in simplicity taking only the realy essential parts of TSN which are needed for Industrial communication rather than making the blown up thing it is right now.

SuggestedRemedy

Strip the profile down to the realy essential parts and not having all thoses nice to have things in there. Looking at the existing Realtime Ethernet Solutions which shall basically be replaced by TSN it should be clear that this profile is an overkill and must be stripped down to the essentials.

Response *Response Status* **W**

REJECT. As the comment does not provide a proposed change, from a process perspective it is rejected.

Supporting Information P60802

Cl **0** SC **0** P**17** L # I-101

Huntley, C SEL

Comment Type **ER** *Comment Status* **R**

The use of "Grandmaster" when there is no "Master" is not acceptable.
Note that there is no mandate from IEEE to not use "Master"
There is an overwhelming anger in the IEEE WG to this ridiculous change, causing much confusion to those involved in the many challenges of implementing and using 1588.

SuggestedRemedy

Please restore the IEEE 1588 use of the term "Master" and "Slave"

Response *Response Status* **W**

REJECT. IEEE Std 802.1AS have been amended to use inclusive terminology. IEEE Std 1588 has been amended to allow usage of alternative terminology.

Cl **0** SC **0** P L # I-213

Meier, Sven NetTimeLogic GmbH

Comment Type **GR** *Comment Status* **R**

Way to narrowed down standard, chance that any actual implementation will be 100% compliant with all requirements are low.
Especially the time synchronization requirements, a lot of them can not be satisfied by current HW (accuracy and conceptual wise).
The goal should have been to find the real base requirements which need to be satisfied and these requirements are way off from what is typically needed for industrial network.
In my point of view this standard should have been a defacto alternative to other realtime-industrial ethernet networks like Profinet, Powerlink, Ethercat ... and not a whish list which can not be satisfied without throwing all existing (which is still not a lot) HW away and start from scratch. As a profile it shall be a subset and not a superset.

SuggestedRemedy

Response *Response Status* **W**

REJECT. As the comment does not provide a proposed change, from a process perspective it is rejected.

Cl **4** SC **4.5** P**30** L**873** # I-120

Huntley, C SEL

Comment Type **TR** *Comment Status* **R**

"scheduled time slots" are arguably the most important technology for achieving a deterministic latency for critical-latency traffic, but the algorithm to achieve this is missing.

SuggestedRemedy

Add an annex to cover all the issues to support "scheduled time slots", including algorithms and proven use cases.

Response *Response Status* **W**

REJECT. No specific remedy provided. It is not the role of this document to specify specific implementations. Mechanisms for achieving "scheduled time slots" are clearly specified in Clause 5.

Cl **5** SC **5.7.2** P**49** L**1571** # I-121

Huntley, C SEL

Comment Type **ER** *Comment Status* **R**

"transmission selection timing point" is not defined

SuggestedRemedy

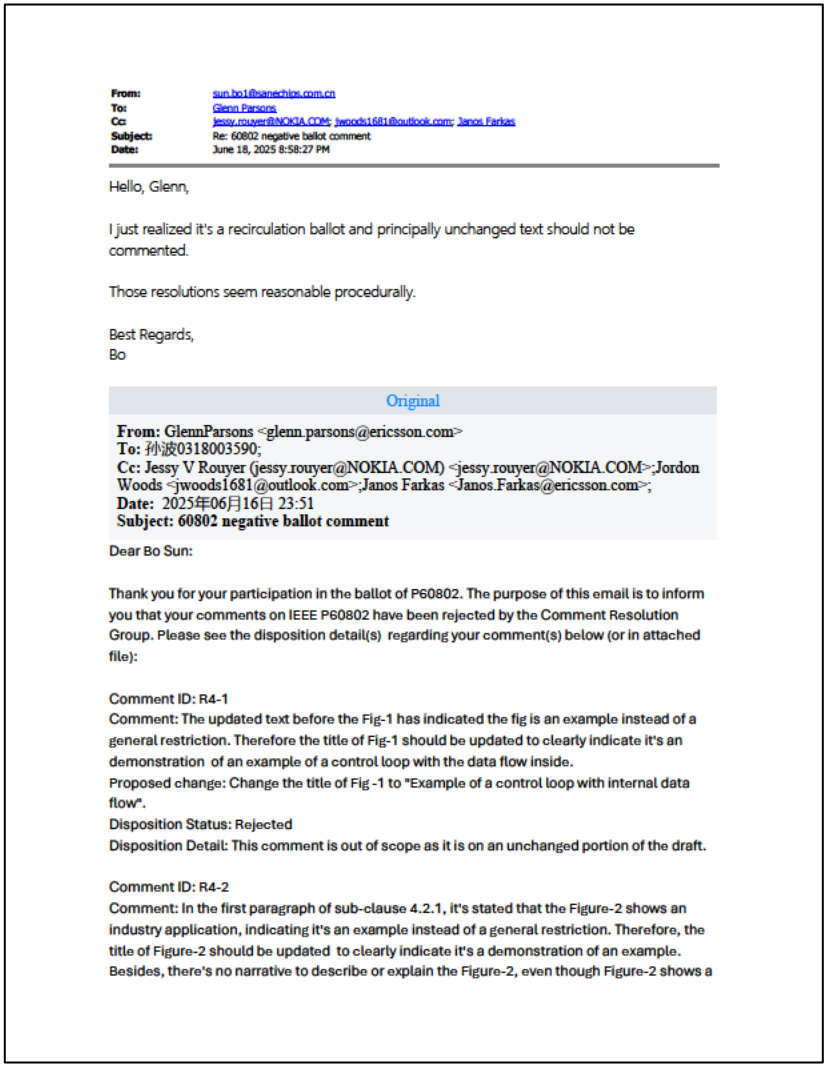
Add definition for "transmission selection timing point"

Response *Response Status* **W**

REJECT. The "transmission selection timing point" is shown in 802.1Q-2022, figure 12-6 which is referenced.

Supporting Information P60802

- Notification to new MBS balloter (Bo Sun) that comments are out of scope



From: sun.bo1@sanechips.com.cn
To: Glenn Parsons
Cc: jessy.rouyer@NOKIA.COM; jwoods1681@outlook.com; Janos Farkas
Subject: Re: 60802 negative ballot comment
Date: June 18, 2025 8:58:27 PM

Hello, Glenn,

I just realized it's a recirculation ballot and principally unchanged text should not be commented.

Those resolutions seem reasonable procedurally.

Best Regards,
Bo

Original

From: GlennParsons <glenn.parsons@ericsson.com>
To: 孙波0318003590;
Cc: Jessy V Rouyer (jessy.rouyer@NOKIA.COM) <jessy.rouyer@NOKIA.COM>;Jordon Woods <jwoods1681@outlook.com>;Janos Farkas <Janos.Farkas@ericsson.com>;
Date: 2025年06月16日 23:51
Subject: 60802 negative ballot comment

Dear Bo Sun:

Thank you for your participation in the ballot of P60802. The purpose of this email is to inform you that your comments on IEEE P60802 have been rejected by the Comment Resolution Group. Please see the disposition detail(s) regarding your comment(s) below (or in attached file):

Comment ID: R4-1
Comment: The updated text before the Fig-1 has indicated the fig is an example instead of a general restriction. Therefore the title of Fig-1 should be updated to clearly indicate it's an demonstration of an example of a control loop with the data flow inside.
Proposed change: Change the title of Fig -1 to "Example of a control loop with internal data flow".
Disposition Status: Rejected
Disposition Detail: This comment is out of scope as it is on an unchanged portion of the draft.

Comment ID: R4-2
Comment: In the first paragraph of sub-clause 4.2.1, it's stated that the Figure-2 shows an industry application, indicating it's an example instead of a general restriction. Therefore, the title of Figure-2 should be updated to clearly indicate it's a demonstration of an example. Besides, there's no narrative to describe or explain the Figure-2, even though Figure-2 shows a

802.1 Motions

Consent Agenda

Liaisons and external communications (ME)

7.021 – Motion

- Approve submission of the comment responses to SC6 for ballot comments received on ISO/IEC JTC1 SC6 on:
  - IEEE Std 802.1Qdy
    https://www.ieee802.org/1/files/public/docs2025/liaison-SC6CommentResponseQdy-0725.pdf
  - IEEE Std 802
    https://www.ieee802.org/1/files/public/docs2025/liaison-SC6CommentResponse802-0725.pdf

- In the WG, Proposed: Mark Hantel Second: Karen Randall
  - Sending (y/n/a): 31, 0, 4
- In EC, mover: Glenn Parsons Second: David Law
  - (y/n/a): <y>,<n>,<a>

7.022 – Motion

- Approve Sending standard(s) to ISO/IEC JTC1 SC6 for information under the PSDO agreement, when SA ballot starts:
  - P802.1AS-2020-Rev, P802.1ASed, P802.1CB-2017/Cor1

- In the WG, Proposed: Mark Hantel Second: Karen Randall
  - Sending draft (y/n/a): 32, 0, 2

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

7.023 – Motion

- Approve Sending standard(s) to ISO/IEC JTC1 SC6 for adoption under the PSDO agreement, when published:
  - IEEE Std 802.1DP, IEEE Std 802.1AXdz

- In the WG, Proposed: Mark Hantel Second: Karen Randall
  - Sending (y/n/a): 32, 0, 2
- In EC, mover: Glenn Parsons Second: David Law
  - (y/n/a): <y>,<n>,<a>

7.024 – Motion

- Approve liaison response to ITU-T SG15 on OTNT Standardization Work Plan Issue 35, https://www.ieee802.org/1/files/public/docs2025/liaison-response-itu-t-SG15-LS26-OTNTStdznWorkPlan35-0725.pdf, granting the IEEE 802.1 WG chair (or his delegate) editorial license.
  - This approval is under LMSC OM "Procedure for public statements to government bodies."

- In the WG, Proposed: Mark Hantel Second: Karen Randall
  - Sending (y/n/a): 33, 0, 3

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

7.025 – Motion

- Approve https://www.ieee802.org/1/files/public/docs2025/liaison-response-itu-t-SG13-LS35-DetermNetwrking-0725-v01.pdf as communication to ITU-T SG13 granting the IEEE 802.1 WG chair (or his delegate) editorial license.
  - This approval is under LMSC OM “Procedure for public statements to government bodies”

- In the WG (y/n/a): 33, 0, 3
  - Proposed: János Farkas, Second: Scott Mansfield

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

802.1 Motions

Consent Agenda

Liaisons and external communications (II)

7.026 – Motion

- Approve sending https://www.ieee802.org/1/files/public/docs2025/liaison-response-BBF705-YANG-0725.pdf to BBF, granting the IEEE 802.1 WG chair (or his delegate) editorial license.

- In the WG, Proposed: Mark Hantel Second: Karen Randall
  - Sending (y/n/a): 31, 0, 4
- In EC for information

7.027 – Motion

- Approve sending https://www.ieee802.org/1/files/public/docs2025/liaison-UEC-coordination-0725.pdf to UEC, granting the IEEE 802.1 WG chair (or his delegate) editorial license.

- In the WG, Proposed: Lily Lyu Second: Paul Bottorff
  - Sending (y/n/a): 29, 0, 5
- In EC for information

7.028 – Motion

- Approve making P802.1ASed Draft 2.3 available for purchase.

- In the WG, Proposed: Janos Farkas Second: Jessy Rouyer
  - Sending (y/n/a): 34, 0, 1
- In EC for information