P802.1DU

Standard for Local and Metropolitan Area Networks – Cut-Through Forwarding Bridges and Bridged Networks

Resolution of Comments on

Project Authorization Request (PAR) and Criteria for Standards Development (CSD)

2023-03-15

WG 802.3 on 2.1 (PAR)

- Comment¹⁾:
- 2.1 Title typically includes "Standard for...".
- Response:

Change 2.1 to "Standard for Local and Metropolitan Area Networks – Cut-Through Forwarding Bridges and Bridged Networks"

WG 802.3 and WG 802.11 on 4.2 and 4.3 (PAR)

Comment:

802.31)

4.2, 4.3 – One month for SA ballot is insufficient. One of the dates needs to be adjusted to provide the NesCom minimum of 6 months.

802.11²⁾

4.2 and 4.3 are only one month apart. Please change one or both dates.

• Response:

- a) Change "Nov 2026" in 4.2 to "Jul 2026".
- b) Change "Dec 2026" in 4.3 to "Jul 2027".

¹⁾ Source: https://www.ieee802.org/secmail/msg28155.html

²⁾ Source: https://mentor.ieee.org/802.11/dcn/23/11-23-0187-02-0PAR-par-review-sc-meeting-agenda-and-comment-slides-march-2023-mixed-mode-plenary.pptx

WG 802.3 on 5.2 (PAR)

• Comment¹⁾:

5.2 – The title contains "Bridged Networks" but this scope statement does not. That is a troubling mismatch.

Response:

Change "This standard also details the usage of CTF bridges." in 5.2 to "This standard also details the usage of CTF bridges in bridged networks."

WG 802.11 on 5.4 (PAR)

• Comment¹⁾:

5.4 "lower latency" may be better expressed as "reduced latency". What is the quantitative metric of the "lower/reduced" that is being identified.

Response:

- a) Change "This standard enables lower latency communication than is achievable in bridged networks without CTF" in 5.4 to "This standard enables lower latency communication compared to what is achievable without CTF and reduces the dependency of end-to-end latency on frame length"
- b) Change "The low latency achievable" in 5.5 to "The lower latency achievable"
- c) Note: Please find details on use-cases and quantities in https://mentor.ieee.org/802.1/dcn/21/1-21-0037-00-ICne-ieee-802-tutorial-cut-through-forwarding-ctf-among-ethernet-networks.pdf.

WG 802.11 on 5.5 (PAR)

• Comment¹⁾:

5.5 please revisit the 5.5 text as it seems to give more of a solution, without identify the problem "i.e. the need".

Response:

Change "This project addresses the unmet needs of these applications for interoperable equipment." in 5.5 to "This project addresses the unmet needs of these applications for interoperable equipment that has lower latency."

WG 802.3 on 1.2.2 (CSD)

• Comment¹⁾:

1.2.2 — The answer to the question should be no. There is no foreseeable way that the existing service interfaces in the reference models can be used. The MA_DATA.request and MA_DATA.indicate primitives are atomic and contain complete frames.

- Because of incompatibility with the reference model, there are potential compatibility issues with existing implementations.
- CTF operation likely will distort management information.

• Response:

MA_DATA.request and MA_DATA.indication definitions are in IEEE Std 802.3, not IEEE Stds 802, 802.1AC or 802.1Q (note that these primitives are referenced in IEEE 802.1AC only in regard to the IEEE 802.3 Ethernet convergence function):

- CTF frame transfers are atomic (i.e., non-interruptible), allowing single service primitive invocations per frame, as described in IEEE Std 802.1AC. No addition temporal constraints apply in general, but may be defined by particular MAC methods (not part of P802.1DU).
- The P802.1DU PAR scope covers interconnection of MAC methods without support for CTF (e.g., IEEE 802.3 per IEEE 802.3 NEA conclusion of 2022-15-07²⁾) and MAC methods with support for CTF.
- Changing IEEE Std 802.3 is not part of the proposed bridging project. IEEE 802.1 TSN intends to maintain the traditional MAC demarcation between IEEE 802.1 and other IEEE 802.xx WGs³⁾.
- 1) Source: https://www.ieee802.org/secmail/msg28155.html
- 2) Source: https://www.ieee802.org/3/minutes/jul22/0722 NEA close report.pdf
- 3) Source: https://www.ieee802.org/1/files/public/docs2022/du-cut-through-summary-1122-v04.pdf