Title: Liaison on Coordination
From: IEEE 802.1 Working Group[1]
For: Action
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Dear Colleagues,

The IEEE 802.1 Working Group (WG) appreciates the public availability of Ultra Ethernet™ Specification v1.0 (UE 1.0) which builds upon the standards developed by IEEE 802.1 and IEEE 802.3 WGs.

We are responsible for the IEEE 802 architecture as well as MAC and VLAN bridging including data center bridging. We develop protocols, above the MAC sublayer, that often include metadata for their operations, e.g., VLAN tags, security tags, etc. We regularly collaborate with the IEEE 802.3 WG to provide Ethernet bridging, and may do so again on topics of common interest which might include UE 1.0-related aspects.

In alignment with the statement of intent expressed in the last paragraph of UE 1.0's clause 1.1.1, we warmly encourage contributions from experts in Ultra Ethernet™ to our ongoing projects (for example, IEEE P802.1Qdt and IEEE P802.1Qdw), our ongoing AI Computing Network (AICN) study item, or toward future IEEE 802.1 work.

We identified several UE 1.0 features—e.g., Link Layer Retry (LLR), Credit-based Flow Control (CBFC) and packet trimming—that may benefit from our interaction and on which we would appreciate your feedback, based on our observations in the Annex to this liaison statement.

We also note with interest the work items listed at the end of your white paper's penultimate paragraph and welcome your additional information on these.

Note that the IEEE 802 work is open and contribution driven. Participation is on an individual basis and technical discussion can be conducted based on individual contributions. We meet at Plenary and Interim sessions and hold electronic meetings between sessions as listed in the WG calendar: https://1.ieee802.org/wg-calendar/.

Respectfully submitted,
Glenn Parsons
Chair, IEEE 802.1 Working Group

[1] This document solely represents the views of the IEEE 802.1 Working Group, and does not necessarily represent a position of IEEE, or the IEEE Standards Association, or IEEE 802.

Annex

1. Interaction between LLR and Priority-based Flow Control (PFC)

We understand that LLR is located between MAC client and MAC control with two additional fields added to the interface from MAC client to LLR and that LLR is supposed to interact with PFC. Ongoing IEEE P802.1Qdt is being developed to enable PFC pause frames to be transmitted via the MAC data path where PFC frames would transparently pass through the LLR layer.

We would appreciate your clarifications of how LLR is expected to interact with PFC in this context and of how LLR is expected to interface with MACsec.

2. Consideration on packet trimming and Source Flow Control (SFC)

IEEE P802.1Qdw is mentioned in UE 1.0 as a back-to-sender (BTS) approach for congestion control.

We would appreciate your rationale for mentioning BTS in UE 1.0.

3. Clarification on the coexistence of CBFC and PFC

We understand that CBFC is an alternative to PFC, but is also designed for possible simultaneous operation with PFC; however, CBFC and PFC differ in several fundamental design aspects. For example, CBFC supports up to 32 virtual channels whereas PFC operates on 8 traffic classes; furthermore, CBFC uses fixed buffers allocated on each port, while PFC allows buffer sharing across ports.

Given such differences, we would appreciate your clarification on how PFC and CBFC could be used together in practice.