

IEEE 802.11 WLAN Working Group Liaison Communication

Source: IEEE 802.11 Working Group¹

To: Wireless Broadband Alliance, E2E Wi-Fi QoS & L4S

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Subject: Liaison communication to Wireless Broadband Alliance, E2E Wi-Fi QoS & L4S

Approval: Approved by the IEEE 802.11 Working Group at IEEE 802.11 interim meeting,
Wiakoloa, Hawai'i, USA, September 19, 2025

Dear WBA E2E Wi-Fi QoS & L4S project group,

Thank you for your Liaison Statement on Implementation Guidelines for Low Latency, Low Loss, and Scalable Throughput (L4S) in Wi-Fi Equipment, and providing opportunity to IEEE 802 LMSC to review and provide feedback on the document.

We note, as also noted in your document, that the integration of Low Latency, Low Loss, Scalable Throughput (L4S) into IEEE 802.11 environments raises some interesting discussion about the architectural and implementation aspects. These discussions naturally span multiple

¹ This document represents the views of the IEEE 802.11 Working Group and does not necessarily represent a position of the IEEE, the IEEE Standards Association, or IEEE 802.

task groups and standing committees within the IEEE802.11 Working Group, including ARCHitecture, REVisionmf, and the ongoing work within the IEEE 802.11bn Task Group.

The IEEE 802.11bn Task Group is actively pursuing enhancements to reduce latency in 802.11 networks. A key objective is to achieve at least a 25% reduction in latency at the 95th percentile compared to current Extremely High Throughput (EHT) MAC/PHY operations [2]. To meet this goal, the Task Group has approved several features aimed at minimizing media access delays [3].

Importantly, the Task Group has also approved the creation of IEEE 802.11bn Draft 1.0 (D1.0) [4], which contains the technical requirements and a mechanism necessary for the integration of L4S within the 802.11bn framework in Section 37.30 (Support for L4S) of D1.0. The Task Group has defined L4S integration for the Access Point where the upper layer on the AP can signal L4S MSDUs to the MAC layer and the MAC layer can notify the upper layer when L4S MSDUs experience congestion in the downlink queues, to facilitate ECN congestion marking of subsequent L4S MSDUs by the upper layer. The Access Point also advertises its L4S capability to the STAs.

We welcome continued dialogue and value your insights and feedback.

Future meeting dates:

See: http://www.ieee802.org/11/Meetings/Meeting_Plan.html for Future meeting dates of the IEEE 802.11 Working Group

References

- [1] <https://mentor.ieee.org/802.11/dcn/24/11-24-1617-00-0arc-overview-of-wba-l4s-implementationguidelines.pptx>
- [2] <https://development.standards.ieee.org/myproject-web/app#viewpar/14476/10639>
- [3] [11-25/209r19](#) Specification Framework for TGbn
- [4] IEEE P802.11bn Draft 1.0

Sincerely,

Robert Stacey

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