Title: Submittal of IEEE 802.1 comments to SC 6N18610
From: IEEE 802.1 Working Group[1]
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Dear Shin-Gak and Sejin,

IEEE 802.1 would like to submit comments on the SC 6N18610 contribution titled "Software-Centric Vehicles and Systems" that was presented at the JTC 1/SC 6 Technical Seminar in Beijing, China, on October 30th, 2025. This contribution proposes to develop a new standard that includes a new time synchronization protocol among vehicles and other systems (V2X).

We think that there is no need for any new time synchronization protocol because it would cause fragmentation in the industry, hence it would not be helpful.

V2X time synchronization is a problem that has been already solved. (One solution has been presented at the ITSF 2023 conference under the title: "System Design Criteria for Time Synchronization in Automotive"). Furthermore, the standards are already in place, as described in the following.

IEEE Std 802.1DG-2025 "Time-Sensitive Networking Profile for Automotive In-Vehicle Ethernet Communications" addresses the use of features from IEEE 802.1 standards to meet the bandwidth, latency, and synchronization needs for communications within automotive vehicles. The most common in-vehicle time synchronization is based on IEEE Std 802.1AS, which specifies the generalized Precision Time Protocol (gPTP). IEEE Std 802.1AS includes a profile of IEEE Std 1588, which specifies the Precision Time Protocol (PTP). Furthermore, a new project is under consideration in IEEE 802.1 to amend IEEE Std 802.1DG with time synchronization refinements. Within ISO/IEC JTC 1, IEEE Std 802.1AS has been published as ISO/IEC/IEEE 8802-1AS:2021 (Ed 2), and the 60-Day Committee Internal Ballot (CIB) for IEEE Std 802.1DG-2025 passed in SC 6 on September 20, 2025 and it is currently waiting for its FDIS ballot to open. Please note that the most recent revision of IEEE Std 802.1AS has been published as IEEE Std 802.1AS-2025 https://standards.ieee.org/ieee/802.1AS/11968/, for which the ISO/IEC JTC 1 CIB closed on March 11, 2026.

Also note that the Global Navigation Satellite System (GNSS) can provide common notion of time for vehicles and connected systems. In addition, (g)PTP can provide common notion of time for vehicles and connected systems.

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[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.

We think that the best interest of the industry is to conduct work in an industry-recognized center of competence, such as in the IEEE 802.1 WG if any extension is needed to gPTP or in the IEEE 1588 WG if any extension is needed to PTP. We would like to highlight that we welcome contributions on time synchronization requirements that are not yet addressed by IEEE Std 802.1AS and its current amendments. New time synchronization requirements may be addressed via a new amendment to IEEE Std 802.1AS.

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. The IEEE 802.1 TSN Task Group meets at Plenary and Interim sessions and holds electronic meetings in-between sessions as listed in the WG calendar: https://1.ieee802.org/wg-calendar.

Respectfully submitted,
Glenn Parsons
Chair, IEEE 802.1 Working Group