

P802.1ASeb****

Submitter Email:

Type of Project: Amendment to IEEE Standard 802.1AS-2020 **Project Request Type:** Initiation / Amendment **PAR Request Date:**

PAR Approval Date:

PAR Expiration Date:

PAR Status: Draft

<<Black text is unmodified text used in 802.1ASds PAR, Red text is changes for this PAR, Blue text is information not to be included in this PAR, Yellow highlights indicate important text.>>

Root Project: 802.1AS-2020

1.1 Project Number: P802.1AS**eb**

1.2 Type of Document: Standard

1.3 Life Cycle: Full Use

2.1 Project Title: IEEE Standard for Local and Metropolitan Area Networks--Timing and Synchronization for Time-Sensitive Applications Amendment: **Support for an option to disable the use of Announce messages.**

<<Nov 2023 Motion: 802.1 authorizes the TSN TG to generate PAR and CSD at the January 2024 interim session for precirculation to the EC for an amendment to IEEE 802.1AS **to relax the requirement to use Announce messages** in use cases identified in TSN profile specifications that refer to IEEE 802.1AS.>>

3.1 Working Group: Higher Layer LAN Protocols Working Group (C/LM/802.1 WG)

3.1.1 Contact Information for Working Group Chair:

Name: Glenn Parsons

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3.1.2 Contact Information for Working Group Vice Chair:

Name: Jessy Rouyer

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3.2 Society and Committee: IEEE Computer Society/LAN/MAN Standards Committee(C/LM) **3.2.1 Contact Information for Standards**

Committee Chair:

Name: Paul Nikolich

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3.2.2 Contact Information for Standards Committee Vice Chair:

Name: James Gilb

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3.2.3 Contact Information for Standards Representative:

Name: James Gilb

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4.1 Type of Ballot: Individual

4.2 Expected Date of submission of draft to the IEEE SA for Initial Standards Committee Ballot:

Mar 2029

4.3 Projected Completion Date for Submittal to RevCom: Oct 2029

5.1 Approximate number of people expected to be actively involved in the development of this project: 30

5.2.a Scope of the complete standard: This standard specifies protocols, procedures, and managed objects used to ensure that the synchronization requirements are met for time-sensitive applications, such as audio, video, and time-sensitive control, across networks, for example, IEEE 802 and similar media. This includes the maintenance of synchronized time during normal operation and following addition, removal, or failure of network components and network reconfiguration. **It specifies the use of IEEE 1588(TM) specifications where applicable** in the context of IEEE Std 802.1Q(TM)-2018. Synchronization to an externally provided timing signal [e.g., a recognized timing standard such as Coordinated Universal Time (UTC) or International Atomic Time (TAI)] is not part of this standard but is not precluded.

5.2.b Scope of the project:

This amendment specifies protocols, procedures, and managed objects that support **relaxing the use of Announce messages, while retaining existing functionality and backward compatibility, and remaining a profile of IEEE Std 1588™-2019 as long as Announce messages are used.**

This amendment addresses errors and omissions in the description of existing functionality.

5.3 Is the completion of this standard contingent upon the completion of another standard? No

5.4 Purpose: This standard enables systems to meet the respective jitter, wander, and time-synchronization requirements for time-sensitive applications, including those that involve multiple streams delivered to multiple end stations. To facilitate the widespread use of packet networks for these applications, synchronization information is one of the components needed at each network element where time-sensitive application data are mapped or demapped or a time-sensitive function is performed. This standard leverages the work of the IEEE 1588 Working Group by developing the additional specifications needed to address these requirements.

Change to Purpose:

There will be no change to the base standard's purpose.

5.5 Need for the Project: Support is needed in applications such as **aerospace**, automotive in-vehicle networks and industrial automation networks **that often use engineered networks that have very high safety requirements. The validation testing time and costs required to pass the safety requirements imposed on these systems necessitates that their implementation of this protocol be as basic and simple as it can be by the removal of features not needed in their applications. IEEE 802.1AS-2020 currently supports the disabling of most features not needed in these networks, with the exception of the Announce message portion of the protocol. This was done because IEEE 802.1AS is a profile of IEEE 1588 which currently requires the use of Announce messages. After this project is done, IEEE 802.1AS will remain a profile of IEEE 1588 as long as the use of Announce messages is enabled (the default).**

5.6 Stakeholders for the Standard: Developers, manufacturers, distributors, or users of time-sensitive applications, components, and equipment.

6.1 Intellectual Property

6.1.1 Is the Standards Committee aware of any copyright permissions needed for this project?

No

6.1.2 Is the Standards Committee aware of possible registration activity related to this project? No

7.1 Are there other standards or projects with a similar scope? No

7.2 Is it the intent to develop this document jointly with another organization? No

8.1 Additional Explanatory

Notes:

#5.2a IEEE Std 802.1Q-2018, IEEE Standard for Local and metropolitan area networks - Bridges and Bridged Networks

5.2b IEEE Std 1588-2019, IEEE Standard for a Precision Clock Synchronization Protocol for Network Measurement and Control Systems