P802.1AS

Type of Project: Revision to IEEE Standard 802.1AS-2020
Project Request Type: Initiation / Revision
PAR Request Date:
PAR Approval Date:
PAR Expiration Date:
PAR Status: Draft
Root Project: 802.1AS-2020

1.1 Project Number: P802.1AS
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use

2.1 Project Title: Standard for Local and Metropolitan Area Networks--Timing and Synchronization for Time-Sensitive Applications

> **Change to Title:** ~~IEEE~~ Standard for Local and Metropolitan Area Networks--Timing and Synchronization for Time-Sensitive Applications

3.1 Working Group: Higher Layer LAN Protocols Working Group(C/LAN/MAN/802.1 WG)
  3.1.1 Contact Information for Working Group Chair:
    Name: Glenn Parsons
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    Name: Jessy Rouyer
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3.2 Society and Committee: IEEE Computer Society/LAN/MAN Standards Committee(C/LAN/MAN)
  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:
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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: Nov 2025
4.3 Projected Completion Date for Submittal to RevCom: Jul 2026

5.1 Approximate number of people expected to be actively involved in the development of this project: 63
5.2 Scope of proposed 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.

5.3 Is the completion of this standard contingent upon the completion of another standard? Yes
Change to Is the completion of this standard contingent upon the completion of another standard? ~~No~~ Yes
Explanation: This is a maintenance roll-up of IEEE Std 802.1AS-2020 with the corrigendum IEEE Std 802.1AS-2020/Cor1 and amendment IEEE Std 802.1ASdr. Depending on their progress to approval, P802.1ASdm, P802.1ASdn, P802.1ASds, or other amendments and corrigenda in progress may also be included.
Change to Explanation: This is a maintenance roll-up of IEEE Std 802.1AS-2020 with the corrigendum IEEE Std 802.1AS-2020/Cor1 and amendment IEEE Std 802.1ASdr. Depending on their progress to

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.

5.5 Need for the Project: This revision project is needed in order to incorporate approved amendments and corrigenda, to incorporate technical and editorial corrections to existing functionality, and to ensure that consistency is maintained in the consolidated text.

Change to Need for the Project: ~~The use of current IEEE 802 technologies for time-sensitive applications, such as high-quality audio/video streaming or industrial control, does not assure that the applications can present data with acceptable jitter, wander, and deviation in time.~~ ~~This~~ includes ~~applications that involve multiple streams delivered to multiple endpoints. To facilitate the widespread use of bridged LANs for these~~ revision ~~applications, synchronization information~~ project is ~~one of the components~~ needed ~~at each network element where time-sensitive application data are mapped or demapped or a time~~ in ~~sensitive function is performed. The synchronization information provided~~ order to ~~each network element will allow the~~ incorporate ~~jitter,~~ approved ~~wander,~~ amendments and ~~time synchronization requirements of demanding applications, such as in a residential environment~~ corrigenda , to ~~be met. Existing time synchronization standards, IEEE~~ incorporate ~~Std 1588-2002~~ technical and ~~IETF~~ editorial ~~Request~~ corrections ~~for~~ to ~~Comments:~~ existing ~~1305 (Network Time Protocol)~~ functionality , ~~because they operate at layer 3, impose unacceptable operational complexity~~ and ~~implementation~~ to ~~costs~~ ensure ~~on~~ that ~~a~~ consistency ~~developer~~ is ~~of~~ maintained ~~time-sensitive applications. This standard will leverage~~ in the ~~work of~~ consolidated ~~the IEEE 1588 WG to develop the additional specifications needed to address these requirements~~ text .

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

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8.1 Additional Explanatory Notes: IEEE Std 802.1AS-2020/Cor1 - Timing and Synchronization for Time-Sensitive Applications Corrigendum 1: Technical and Editorial Corrections
P802.1ASdr - Timing and Synchronization for Time-Sensitive Applications Amendment: Inclusive Terminology
P802.1ASdm - Timing and Synchronization for Time-Sensitive Applications Amendment: Hot Standby
P802.1ASdn - Timing and Synchronization for Time-Sensitive Applications Amendment: YANG Data Model
P802.1ASds - Timing and Synchronization for Time-Sensitive Applications Amendment: Support for the IEEE Std 802.3 Clause 4 Media Access Control (MAC) operating in half-duplex