P802.1ASxy

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Type of Project: Amendment to IEEE Standard 802.1AS-2020
PAR Request Date: 02-Feb-2020
PAR Approval Date:
PAR Expiration Date:
Status: Unapproved PAR, PAR for an Amendment to an existing IEEE Standard

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

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

3.1 Working Group: Higher Layer LAN Protocols Working Group (C/LM/WG802.1)
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3.2 Sponsoring Society and Committee: IEEE Computer Society/LAN/MAN Standards Committee (C/LM)
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4.1 Type of Ballot: Individual
4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 01/2022
4.3 Projected Completion Date for Submittal to RevCom
Note: Usual minimum time between initial sponsor ballot and submission to Revcom is 6 months.: 10/2022

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 the protocol, 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™ specifications where applicable in the context of IEEE Std 802.1Q.1 Synchronization to an externally provided timing signal (e.g., a recognized timing standard such as UTC or 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 for hot standby without use of the Best Master Clock Algorithm (BMCA), for time-aware systems, including:
- A function that transforms the synchronized times of two generalized Precision Time Protocol (gPTP) domains into one synchronized time for use by applications;
- A function that directs the synchronized time of one gPTP domain into a different gPTP domain; and
- Mechanisms that determine whether a gPTP domain has sufficient quality to be used for hot standby.
This amendment also addresses errors and omissions in the description of existing functionality.

5.3 **Is the completion of this standard dependent 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. This includes applications that involve multiple streams delivered to multiple endpoints. 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:** Hot standby is needed in some applications that use time synchronization (e.g., industrial automation and automotive in-vehicle networks).

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

Intellectual Property
6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?: No
6.1.b. Is the Sponsor aware of possible registration activity related to this project?: Yes
If yes please explain:
 The Simple Network Management Protocol (SNMP) MIB will be assigned an Object Identifier (OID) based on the Registration Authority (RA) OID tutorial and IEEE Std 802.

7.1 Are there other standards or projects with a similar scope?: No
7.2 Joint Development
   Is it the intent to develop this document jointly with another organization?: No

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8.1 Additional Explanatory Notes:

#6.1.b RA OID tutorial: http://standards.ieee.org/develop/regauth/tut/oid.pdf
IEEE Std 802 IEEE Standard for Local and Metropolitan Area Networks: Overview and Architecture