

# P802.1ASbt

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**Type of Project:** Amendment to IEEE Standard 802.1AS-2011

**PAR Request Date:** 31-Mar-2011

**PAR Approval Date:**

**PAR Expiration Date:**

**Status:** Unapproved PAR, PAR for an Amendment to an existing IEEE Standard

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**1.1 Project Number:** P802.1ASbt

**1.2 Type of Document:** Standard

**1.3 Life Cycle:** Full Use

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**2.1 Title:** Standard for Local and Metropolitan Area Networks - Timing and Synchronization for Time-Sensitive Applications in Bridged Local Area Networks Amendment: Enhancements and performance improvements

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**3.1 Working Group:** Higher Layer LAN Protocols Working Group (C/LM/WG802.1)

**Contact Information for Working Group Chair**

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**3.2 Sponsoring Society and Committee:** IEEE Computer Society/LAN/MAN Standards Committee (C/LM)

**Contact Information for Sponsor Chair**

**Name:** Paul Nikolich

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None

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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:** 04/2014

**4.3 Projected Completion Date for Submittal to RevCom:** 10/2014

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**5.1 Approximate number of people expected to be actively involved in the development of this project:** 25

**5.2 Scope:** This amendment specifies enhancements to IEEE Std 802.1AS that are backward compatible with the features defined in the 2011 version of the standard, including, if necessary, a means of version discovery.

The enhancements that are to be considered by this project include:

- Support for link aggregation (IEEE 802.1AX, IEEE 802.1AXbk, and 802.1AXbq).
- Support for new media types, with corresponding media-dependent layers, e.g., IEEE Std 1901 and WiFi Direct.
- Interoperability with one-step clocks on receive (but with no requirement to generate one-step Sync messages).
- Support for redundant paths.
- Enhancements to the determination of asCapable (e.g., longer cable lengths, new media types).
- Incorporation of the interfaces specified in IEEE Std 802.3bf into the IEEE 802.3 full-duplex media-dependent layer model.
- Improved performance (e.g., improved grandmaster changeover time, longer chains of time-aware systems).
- Carrying information on alternate time scales (e.g., local time for a respective time zone).

- Management support for automatic measurement of link delay asymmetry.
- Additional parameter sets for non-Audio/Video applications, e.g., industrial control.

**5.3 Is the completion of this standard dependent upon the completion of another standard:** No

**5.4 Purpose:** This amendment allows IEEE 802.1AS to be used:

- With a greater number of network media types and a greater variety of network configurations, and
- More effectively with existing and new media types and network configurations

**5.5 Need for the Project:** When development of IEEE Std 802.1AS:2011 began, the main focus was on audio/video (A/V) applications; also, the initial focus was on full-duplex IEEE 802.3 media, and support for IEEE 802.11, IEEE 802.3 EPON, and Coordinated Shared Network media was added during the course of the project.

While IEEE 802.1AS:2011 allows effective transport of synchronization over gPTP networks that contain the above media, to support A/V applications, the enhancements described in the scope will allow it to be used more effectively for a greater variety of applications (e.g., embedded applications), and with a greater variety of network media and configurations.

**5.6 Stakeholders for the Standard:** Manufacturers, distributors, and users of LAN equipment intended to be used in time-sensitive applications.

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## 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?:** No

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**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 (Item Number and Explanation):