

P802.1ASbr

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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

1.1 Project Number: P802.1ASbr

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 in Bridged Local Area Networks Amendment: Enhancements and performance improvements

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)

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None

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

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.
- Carrying information on alternate time scales (e.g., local time for a respective time zone).
- 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.

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

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

8.1 Additional Explanatory Notes (Item Number and Explanation):