P802.1ASbt

Submitter Email: tony@jeffree.co.uk
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: P802.1ASbt
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

Contact Information for Working Group Chair
   Name: Anthony Jeffree
   Email Address: tony@jeffree.co.uk
   Phone: +44-161-973-4278
Contact Information for Working Group Vice-Chair
   Name: Paul Congdon
   Email Address: paul.congdon@hp.com
   Phone: 916-785-5753

3.2 Sponsoring Society and Committee: IEEE Computer Society/LAN/MAN Standards Committee (C/LM)
Contact Information for Sponsor Chair
   Name: Paul Nikolich
   Email Address: p.nikolich@ieee.org
   Phone: 857.205.0050
Contact Information for Standards Representative
   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 (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.

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):