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 - 802.1AS-Rev Timing and Synchronization for Time-Sensitive Applications (https://1.ieee802.org/tsn/802-1as-rev/)
 - 802.1Qcc Stream Reservation Protocol (SRP) Enhancements and Performance Improvements (https://1.ieee802.org/tsn/802-1qcc/)

- 802.1Qcj Automatic Attachment to Provider Backbone Bridging (PBB) services (https://1.ieee802.org/tsn/802-1qcj/)
- 802.1CM Time-Sensitive Networking for Fronthaul (https://1.ieee802.org/tsn/802-1cm/)
- 802.1Qcp Bridges and Bridged Networks Amendment: YANG Data Model (https://1.ieee802.org/tsn/802-1qcp/)
- 802.1Qcr Bridges and Bridged Networks Amendment: Asynchronous Traffic Shaping (https://1.ieee802.org/tsn/802-1qcr/)
- 802.1ABcu LLDP YANG Data Model (https://1.ieee802.org/tsn/802-1abcu/)
- 802.1Qcw YANG Data Models for Scheduled Traffic, Frame Preemption, and Per-Stream Filtering and Policing (https://1.ieee802.org/tsn/802-1qcw/)
- 802.1Qcx YANG Data Model for Connectivity Fault Management (https://1.ieee802.org/tsn/802-1qcx/)
- OmniRAN Task Group (https://1.ieee802.org/omniran/)
 - 802.1CF Network Reference Model and Functional Description of IEEE 802 Access Network (https://1.ieee802.org/omniran/802-1cf/)
- Addressing and Data Center Bridging (DCB) (https://1.ieee802.org/dcb/)
 - 802.1Qcy VDP Extension to Support NVO3 (https://1.ieee802.org/dcb/802-1qcy/)
- Security Task Group (https://1.ieee802.org/security/)
 - P802.1AR-Rev: Secure Device Identity (Revision) (https://1.ieee802.org/security/802-1ar-rev/)
 - P802.1Xck: Port-Based Network Access Control—Amendment 2: YANG Data Model (https://1.ieee802.org/security/802-1xck/)
 - P802E: Recommended Practice for Privacy Considerations for IEEE 802 Technologies (https://1.ieee802.org/security/802e/)
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 - 802.1AC-2016/Cor-1 LLC Encapsulation EtherType (https://1.ieee802.org/maintenance/802-1ac-2016-cor-1/)
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P802.1AS-Rev – Timing and Synchronization for Time-Sensitive Applications

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The full title of this PAR is "Standard for Local and Metropolitan Area Networks – Timing and Synchronization for Time-Sensitive Applications".

Note: this revision project supersedes and incorporates material developed in the 802.1ASbt amendment (http://www.ieee802.org/1/pages/802.1asbt.html).

This standard specifies the protocol and procedures 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 Std 1588 specifications where applicable in the context of IEEE Std 802.1Q. 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.

This standard enables stations attached to bridged LANs 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 bridged LANs 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.

Current Status

Status	PAR approved Feb 16, 2015, WG ballot
Editor	Geoff Garner (mailto:gmgarner@alum.mit.edu)

Archive

Date	Document
29 Mar 2018	802.1AS-REV, Draft 7.0 (WG #3) (http://www.ieee802.org/1/files/private/as-rev-drafts/d7/802-1AS-rev-d7-0.pdf)

13 Mar 2018	802.1AS-Rev, Draft 6.0 WG comment dispositions (http://www.ieee802.org/1/files/private/as-rev-drafts/d6/802-1AS-rev-d6-0-dis.pdf)
21 Feb 2018	802.1AS-Rev, Draft 6.0 WG proposed comment dispositions (v1) (http://www.ieee802.org/1/files/private/as-rev-drafts/d6/802-1AS-rev-d6-0-pdis-v01.pdf)
19 Jan 2018	802.1AS-Rev, Draft 6.0 WG proposed comment dispositions (v0) (http://www.ieee802.org/1/files/private/as-rev-drafts/d6/802-1AS-rev-d6-0-pdis.pdf)
13 Dec 2017	802.1AS-Rev, Draft 6.0 (http://www.ieee802.org/1/files/private/as-rev-drafts/d6/802-1AS-rev-d6-0.pdf) (WG #2) (http://www.ieee802.org/1/files/private/as-rev-drafts/d7/802-1AS-rev-d7-0.pdf)
29 Oct 2017	802.1AS-Rev, Draft 5.1 (http://www.ieee802.org/1/files/private/as-rev-drafts/d5/802-1AS-rev-d5-1.pdf)
06 Sep 2017	802.1AS-Rev, Draft 5.0 WG comment dispositions (v1) (http://www.ieee802.org/1/files/private/as-rev-drafts/d5/802-1AS-rev-d5-0-dis-v1.pdf)
06 Sep 2017	802.1AS-Rev, Draft 5.0 WG comment dispositions (v0) (http://www.ieee802.org/1/files/private/as-rev-drafts/d5/802-1AS-rev-d5-0-dis.pdf)
28 Aug 2017	802.1AS-Rev, Draft 5.0 WG proposed comment dispositions (v6) (http://www.ieee802.org/1/files/private/as-rev-drafts/d5/802-1AS-rev-d5-0-pdis-v6.pdf)
21 Aug 2017	802.1AS-Rev, Draft 5.0 WG proposed comment dispositions (v5) (http://www.ieee802.org/1/files/private/as-rev-drafts/d5/802-1AS-rev-d5-0-pdis-v5.pdf)
14 Aug 2017	802.1AS-Rev, Draft 5.0 WG proposed comment dispositions (v4) (http://www.ieee802.org/1/files/private/as-rev-drafts/d5/802-1AS-rev-d5-0-pdis-v4.pdf)
07 Aug 2017	802.1AS-Rev, Draft 5.0 WG proposed comment dispositions (v3) (http://www.ieee802.org/1/files/private/as-rev-drafts/d5/802-1AS-rev-d5-0-pdis-v3.pdf)
31 Jul 2017	802.1AS-Rev, Draft 5.0 WG proposed comment dispositions (v2) (http://www.ieee802.org/1/files/private/as-rev-drafts/d5/802-1AS-rev-d5-0-pdis-v2.pdf)
24 Jul 2017	802.1AS-Rev, Draft 5.0 WG proposed comment dispositions (v1) (http://www.ieee802.org/1/files/private/as-rev-drafts/d5/802-1AS-rev-d5-0-pdis-v1.pdf)

24 Jul 2017	802.1AS-Rev, Draft 5.0 WG proposed comment dispositions (v0) (http://www.ieee802.org/1/files/private/as-rev-drafts/d5/802-1AS-rev-d5-0-pdis.pdf)
12 June 2017	802.1AS-Rev, Draft 5.0 (http://www.ieee802.org/1/files/private/as-rev-drafts/d5/802-1AS-rev-d5-0.pdf) (WG #1) (http://www.ieee802.org/1/files/private/as-rev-drafts/d7/802-1AS-rev-d7-0.pdf)
18 May 2017	802.1AS-Rev, Draft 4.5 TG comment dispositions (http://www.ieee802.org/1/files/private/as-rev-drafts/d4/802-1AS-rev-d4-5-dis.pdf)
10 Mar 2017	802.1AS-Rev, Draft 4.5 TG proposed comment dispositions (v1) (http://www.ieee802.org/1/files/private/as-rev-drafts/d4/802-1AS-rev-d4-5-pdis-v1.pdf)
05 Mar 2017	802.1AS-Rev, Draft 4.5 TG proposed comment dispositions (v0) (http://www.ieee802.org/1/files/private/as-rev-drafts/d4/802-1AS-rev-d4-5-pdis.pdf)
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19 Jan 2017	802.1AS-Rev, Draft 4.4 (http://www.ieee802.org/1/files/private/as-rev-drafts/d4/802-1AS-rev-d4-4.pdf)
13 Jan 2017	802.1AS-Rev, Draft 4.3 (http://www.ieee802.org/1/files/private/as-rev-drafts/d4/802-1AS-rev-d4-3.pdf)
21 Nov 2016	802.1AS-Rev, Draft 4.2 TG comment dispositions (http://www.ieee802.org/1/files/private/as-rev-drafts/d4/802-1AS-rev-d4-2-dis.pdf)
20 Nov 2016	802.1AS-Rev, Draft 4.2 TG proposed comment dispositions (v2) (http://www.ieee802.org/1/files/private/as-rev-drafts/d4/802-1AS-rev-d4-2-pdis-v2.pdf)
04 Nov 2016	802.1AS-Rev, Draft 4.2 TG proposed comment dispositions (v1) (http://www.ieee802.org/1/files/private/as-rev-drafts/d4/802-1AS-rev-d4-2-pdis-v1.pdf)
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07 Oct 2016	802.1AS-Rev, Draft 4.2 (http://www.ieee802.org/1/files/private/as-rev-drafts/d4/802-1AS-rev-d4-2.pdf) (TG) (http://www.ieee802.org/1/files/private/as-rev-drafts/d4/802-1AS-rev-d4-5.pdf)
08 Sep 2016	802.1AS-Rev, Draft 4.1 (http://www.ieee802.org/1/files/private/as-rev-drafts/d4/802-1AS-rev-d4-1.pdf)

22 Jul 2016	802.1AS-Rev, Draft 4.0 (http://www.ieee802.org/1/files/private/as-rev-drafts/d4/802-1AS-rev-d4-0.pdf)
13 Jul 2016	802.1AS-Rev, Draft 3.0 TG comment dispositions (http://www.ieee802.org/1/files/private/as-rev-drafts/d3/802-1AS-Rev-d3-0-dis.pdf)
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20 May 2016	802.1AS-Rev, Draft 3.0 TG proposed comment dispositions (v0) (http://www.ieee802.org/1/files/private/as-rev-drafts/d3/802-1AS-Rev-d3-0-pdis.pdf)
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13 Mar 2016	802.1AS-Rev, Draft 2.0 TG comment dispositions (v1) (http://www.ieee802.org/1/files/private/as-rev-drafts/d2/802-1AS-Rev-d2-0-dis-v1.pdf)
29 Feb 2016	802.1AS-Rev, Draft 2.0 TG comment dispositions (v0) (http://www.ieee802.org/1/files/private/as-rev-drafts/d2/802-1AS-Rev-d2-0-dis.pdf)
02 Feb 2016	802.1AS-Rev, Draft 2.0 TG proposed comment dispositions (v1) (http://www.ieee802.org/1/files/private/as-rev-drafts/d2/802-1AS-rev-d2-0-pdis-v1.pdf)
10 Jul 2015	802.1AS-Rev, Draft 2.0 TG proposed comment dispositions (v0) (http://www.ieee802.org/1/files/private/as-rev-drafts/d2/802-1AS-rev-d2-0-pdis.pdf)
09 Oct 2015	802.1AS-Rev, Draft 2.0 (http://www.ieee802.org/1/files/private/as-rev-drafts/d2/802-1AS-rev-d2-0.pdf) (TG) (http://www.ieee802.org/1/files/private/as-rev-drafts/d4/802-1AS-rev-d4-5.pdf)
11 Sep 2015	802.1AS-Rev, Draft 1.0 TG comment dispositions (http://www.ieee802.org/1/files/private/as-rev-drafts/d1/802-1AS-Rev-d1-0-dis.pdf)
03 Sep 2015	802.1AS-Rev, Draft 1.0 TG proposed comment dispositions (v1) (http://www.ieee802.org/1/files/private/as-rev-drafts/d1/802-1AS-Rev-d1-0-pdis-v1.pdf)
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26 Feb 2015	802.1AS-Rev, Draft 0.9 (http://www.ieee802.org/1/files/private/as-rev-drafts/d0/802-1AS-rev-d0-9.pdf)
09 Jan 2015	802.1AS-Rev, Draft 0.8 (http://www.ieee802.org/1/files/private/as-rev-drafts/d0/802-1AS-rev-d0-8.pdf)

Presentations

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Date	Document
2018 documents	
26 Jan 2018	P802.1AS-Rev/D6.0 Editor's Report, Proposed Comment Resolution for WG Ballot Revision1 (v3) (http://www.ieee802.org/1/files/public/docs2018/as-garner-802-1AS-Rev-d6-0-wg-ballot-editors-report-01-18-v03.pdf) — Geoffrey M. Garner
26 Jan 2018	P802.1AS-Rev/D6.0 Editor's Report, Proposed Comment Resolution for WG Ballot Revision1 (v2) (http://www.ieee802.org/1/files/public/docs2018/as-garner-802-1AS-Rev-d6-0-wg-ballot-editors-report-01-18-v02.pdf) — Geoffrey M. Garner
26 Jan 2018	P802.1AS-Rev/D6.0 Editor's Report, Proposed Comment Resolution for WG Ballot Revision1 (v1) (http://www.ieee802.org/1/files/public/docs2018/as-garner-802-1AS-Rev-d6-0-wg-ballot-editors-report-01-18-v01.pdf) — Geoffrey M. Garner (http://www.ieee802.org/1/files/public/docs2018/as-garner-802-1AS-Rev-d6-0-wg-ballot-editors-report-01-18-v01.pdf)
22 Jan 2018	P802.1AS-Rev/D6.0 Editor's Report, Proposed Comment Resolution for WG Ballot (http://www.ieee802.org/1/files/public/docs2018/as-garner-802-1AS-Rev-d6-0-wg-ballot-editors-report-01-18.pdf) — Geoffrey M. Garner
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08 Nov 2017	Status of 802.1AS-Rev/D5.1 and Questions on Several Items Needing Resolution Revision 1 (http://www.ieee802.org/1/files/public/docs2017/as-garner-802-1as-d5-1-status-and-several-items-needing-resolution-1117-v01.pdf) — Geoffrey M. Garner

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10 Jul 2017	IEEE 802.1AS REV D5.0 Review Comments (v1) (http://www.ieee802.org/1/files/public/docs2017/as-rev-venkatesan-use-of-FTM-0717-v01.pdf) — Ganesh Venkatesan
10 Jul 2017	IEEE 802.1AS REV D5.0 Review Comments (http://www.ieee802.org/1/files/public/docs2017/as-venkatesan-Review-Comments-on-the-use-of-FTM-07-17.pdf) — Ganesh Venkatesan
03 Jun 2017	Project Authorization Request (PAR) modification (v1) (http://www.ieee802.org/1/files/public/docs2017/as-rev-PAR-modification-0517-v01.pdf) — Geoffrey M. Garner
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13 Mar 2017	Proposal to Add YANG Model to IEEE 802.1AS-rev (http://www.ieee802.org/1/files/public/docs2017/as-gutierrez-yang-0317-v01.pdf) — Marina Gutiérrez
13 Mar 2017	802.1AS-Rev PAR Revision (http://www.ieee802.org/1/files/public/docs2017/as-garner-802-1AS-Rev-par-revision-0317.pdf) — Geoffrey M. Garner
12 Mar 2017	802.1AS-rev: YANG Roadmap Proposal (http://www.ieee802.org/1/files/public/docs2017/as-cummings-yang-roadmap-proposal-0317-v0.pdf) — Rodney Cummings
27 Feb 2017	Optional 1588 States not used in 802.1AS-Rev (http://www.ieee802.org/1/files/public/docs2017/as-garner-optional-1588-states-not-used-in-as-rev-0217.pdf) — Geoffrey M. Garner
27 Feb 2017	Items Related to Several Managed Objects Pertaining to EPON Transport in 802.1AS-Rev (http://www.ieee802.org/1/files/public/docs2017/as-garner-802-1as-d5-0-comment-epon-managed-objects-0917.pdf) — Geoffrey M. Garner
2016 documents	
07 Nov 2016	Draft Text for Beginning of 802.1ASRev/D4.2, Subclause 7.2.4 (http://www.ieee802.org/1/files/public/docs2016/as-garner-text-for-as-rev-7-2-4-1116-v01.pdf) — Geoffrey M. Garner
03 Nov 2016	802.1AS-Rev: Data Set Enhancements (http://www.ieee802.org/1/files/public/docs2016/as-cummings-data-set-enhancements-1116-v00.pdf) — Rodney Cummings
12 Sep 2016	802.1AS-Rev/D4.1 Editor's Summary (http://www.ieee802.org/1/files/public/docs2016/as-garner-d4-1-intro-0916.pdf) — Geoffrey M. Garner

25 Jul 2016	802.1AS-rev: Assumptions for Profile Gateway (v1) (http://www.ieee802.org/1/files/public/docs2016/as-cummings-profile-gateway-0716-v01.pdf) — Rodney Cummings
22 Jul 2016	802.1AS-rev: Assumptions for Profile Gateway (v0) (http://www.ieee802.org/1/files/public/docs2016/as-cummings-profile-gateway-0716-v00.pdf) — Rodney Cummings
18 Jul 2016	Measuring recovered clock quality (http://www.ieee802.org/1/files/public/docs2016/as-aregev-measuring-recovered-clock-quality.pdf) — Bogdan Tenea
20 May 2016	Resolving 802.1AS-rev (http://www.ieee802.org/1/files/public/docs2016/as-cummings-resolving-0516-v00.pdf) — Rodney Cummings
14 May 2016	Discussion of New State Machines and Specifications for Transport of Time Sync in 802.1AS using 802.11 FTM (http://www.ieee802.org/1/files/public/docs2016/as-garner-state-machines-specs-ftm.pdf) — Geoffrey M. Garner
04 Apr 2016	gPTP switchover time (http://www.ieee802.org/1/files/public/docs2016/astenea-gPTP-bridge-chaining-0416.pdf) — Bogdan Tenea
16 Mar 2016	Interoperable Pdelays in IEEE 802.1AS-Rev (http://www.ieee802.org/1/files/public/docs2016/as-pannell-interoperable-Pdelays-0316-v1.pdf) — Don Pannell
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14 Mar 2016	Contribution to the Precise Networked Clock Synchronization Working Group for the Revision of IEEE 1588-2008 (http://www.ieee802.org/1/files/public/docs2016/as-cummings-1588-common-p2p-0316-v1.pdf) — Rodney Cummings
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18 Jan 2016	FTM Parameters for 802.1AS (http://www.ieee802.org/1/files/public/docs2016/asrev-caldana-FTM-parameters-0116-v01.pdf) — Carlos Aldana
2015 documents	

02 Dec 2015	Notes from Discussion of 802.1AS Security (v2) (http://www.ieee802.org/1/files/public/docs2015/as-cummings-security-notes-1115-v2.pdf) — Rodney Cummings
25 Nov 2015	Notes from Discussion of 802.1AS Security (v1) (http://www.ieee802.org/1/files/public/docs2015/as-cummings-security-notes-1115-v1.pdf) — Rodney Cummings
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