

Section 1

1.1 Amendment letter(s):

1.2 Type of Document: Standard

1.3 Life Cycle: Full Use

Section 2

2.1 Project Title: Standard for Local and metropolitan area networks--Bridges and Bridged Networks

2.2 Amendment title: Asynchronous Traffic Shaping

Section 3

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

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

3.3 Joint Sponsor: None

Section 4

4.1 Sponsor Balloting Information: Individual

4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: Jan 2019

4.3 Projected Completion Date for Submittal to RevCom: Oct 2019

Section 5

5.1 Approximate number of people expected to be actively involved in the development of this project: 40

5.2a Scope of the complete standard:

This standard specifies Bridges that interconnect individual LANs, each supporting the IEEE 802 MAC Service using a different or identical media access control method, to provide Bridged Networks and VLANs.

5.2b Scope of the project:

This project specifies procedures and managed objects for a bridge to perform asynchronous traffic shaping over full-duplex links with constant bit data rates.

Asynchronous traffic shaping provides an additional layer of shaped egress queues to merge flows into the existing queue structure. The required minimum number of independent queues at an egress port is adjustable and is at least the number of ingress ports of the particular bridge that require merging.

The project provides an informative framework for worst case delay analysis in static networks/configurations.

5.3 Is the completion of this standard contingent upon the completion of another standard?: No

5.4 Will the complete document (base + Amendment) contain a Purpose clause?: Yes

If Yes, enter the Purpose as it would appear in the complete document: Bridges, as specified by this standard, allow the compatible interconnection of information technology equipment attached to separate individual LANs.

5.5 Need for the Project:

Current bridging standards do not provide a sufficiently fine grained asynchronous traffic mechanism to provide zero congestion loss with deterministic latency without using network topology information.

This project specifies mechanisms that do not rely on synchronous communication, thereby providing independence from clock synchronization mechanisms and higher link utilization than synchronous mechanisms.

5.6 Stakeholders for the Standard:

Developers, providers, and users of networking services and equipment for streaming of time-sensitive data. This includes software developers, networking IC developers, bridge and NIC vendors, and users.

Section 6

6.1 Intellectual Property

A. Is the Sponsor aware of any copyright permissions needed for this project?: No

B. Is the Sponsor aware of possible registration activity related to this project?: No

Section 7

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

7.3 International Standards Activities

a. Adoptions - Is there potential for this standard to be adopted by another organization?: No

b. Harmonization - Are you aware of another organization that may be interested in portions of this document in their standardization development efforts?: No

7.4 Does the sponsor foresee a longer term need for testing and/or certification services to assure conformity to the standard?: No

Additionally, is it anticipated that testing methodologies will be specified in the standard to assure consistency in evaluating conformance to the criteria specified in the standard?: No

7.5 Indicate if you would like IEEE-SA staff to submit your project to the American National Standards Institute (ANSI) for approval consideration as an American National Standard: No

Section 8

8.1 Additional Explanatory Notes:

The core operation of the intended mechanism on the data plane is described in <http://www.ieee802.org/1/files/public/docs2015/new-tsn-specht-ubs-queues-0521-v0.pdf>.