

P802.1Qee

Type of Project: Amendment to IEEE Standard 802.1Q-2022

Project Request Type: Initiation / Amendment

PAR Request Date:

PAR Approval Date:

PAR Expiration Date:

PAR Status: Draft

Root Project: 802.1Q-2022

1.1 Project Number: P802.1Qee

1.2 Type of Document: Standard

1.3 Life Cycle: Full Use

2.1 Project Title: IEEE Standard for Local and Metropolitan Area Networks--Bridges and Bridged Networks
Amendment: Traffic Engineering for Bridged Networks that include Wireless Technologies

3.1 Working Group: Higher Layer LAN Protocols Working Group(C/LAN/MAN/802.1 WG)

3.1.1 Contact Information for Working Group Chair:

Name: Glenn Parsons

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

3.2.1 Contact Information for Standards Committee Chair:

Name: James Gilb

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3.2.2 Contact Information for Standards Committee Vice Chair:

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3.2.3 Contact Information for Standards Representative:

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4.1 Type of Ballot: Individual

4.2 Expected Date of submission of draft to the IEEE SA for Initial Standards Committee Ballot:
Jul 2028

4.3 Projected Completion Date for Submittal to RevCom: Jul 2029

5.1 Approximate number of people expected to be actively involved in the development of this project: 30

5.2.a 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.

5.2.b Scope of the project: This amendment specifies procedures and YANG data models to extend bridge attributes for traffic engineering for bridged networks that include wireless technologies whose delay variance is beyond that of point-to-point wireline MAC technologies. Additionally, this amendment addresses technical and editorial corrections to existing IEEE Std 802.1Q functionality.

5.3 Is the completion of this standard contingent upon the completion of another standard? Yes

Explanation: This amendment depends on the completion of the ongoing revision of the base standard.

5.4 Purpose: 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: IEEE Std 802.1Q currently does not provide support for traffic engineering to account for the characteristics of bridged networks with more uncertain delays than those of point-to-point full duplex wireline MAC technologies. Wireless systems have significantly different characteristics compared to wireline systems and IEEE Std 802.1Q currently does not provide means to describe such differences for traffic engineering. Extensions to bridge attributes are needed to enable effective traffic engineering for deployments including bridged networks with more uncertain delays than those of point-to-point full duplex

wireline MAC technologies.

5.6 Stakeholders for the Standard: Manufacturers, distributors, vendors, and users of Virtual LAN bridging equipment and components thereof.

6.1 Intellectual Property

6.1.1 Is the Standards Committee aware of any copyright permissions needed for this project?

No

6.1.2 Is the Standards Committee aware of possible registration activity related to this project?

Yes

Explanation: The YANG Data Model is expected to be assigned a Uniform Resource Name (URN) based on the IEEE Registration Authority (RA) URN tutorial and IEEE Std 802.

The amendment is expected to use the IEEE 802.1 Organizationally Unique Identifier (OUI) to create a globally unique application identifier as required.

The amendment may allow an OUI or Company Identifier (CID) to be used to create code points used in managed objects and protocol fields.

7.1 Are there other standards or projects with a similar scope? No

7.2 Is it the intent to develop this document jointly with another organization? No

8.1 Additional Explanatory Notes: #2.1: Wireless technologies can be, for instance: IEEE 802.11 WLAN or 3GPP technologies.

#6.1.2: While 'YANG' (developed by the Internet Engineering Task Force) appears to be an acronym, its expansion is not meaningful. YANG is a data modeling language for the definition of data sent over network management protocols (IETF Request For Comments (RFC) 7950, The YANG 1.1 Data Modeling Language) IEEE Std 802 IEEE Standard for Local and Metropolitan Area Networks: Overview and Architecture link to the IEEE RA URN tutorial: <https://standards.ieee.org/wp-content/uploads/import/documents/tutorials/ieeeeurn.pdf>

link to the IEEE RA Object Identifier (OID) tutorial: <https://standards.ieee.org/wp-content/uploads/import/documents/tutorials/oid.pdf>