

# P802.1Qbu

---

**Submitter Email:** [tony@jeffree.co.uk](mailto:tony@jeffree.co.uk)

**Type of Project:** Amendment to IEEE Standard 802.1Q-2011

**PAR Request Date:** 19-Jan-2012

**PAR Approval Date:**

**PAR Expiration Date:**

**Status:** Unapproved PAR, PAR for an Amendment to an existing IEEE Standard

---

**1.1 Project Number:** P802.1Qbu

**1.2 Type of Document:** Standard

**1.3 Life Cycle:** Full Use

---

**2.1 Title:** Standard for Local and metropolitan area networks--Media Access Control (MAC) Bridges and Virtual Bridged Local Area Networks Amendment: Frame Preemption.

---

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

**Contact Information for Working Group Chair**

**Name:** Anthony Jeffree

**Email Address:** [tony@jeffree.co.uk](mailto: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](mailto: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](mailto: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:** 11/2015

**4.3 Projected Completion Date for Submittal to RevCom:** 10/2016

---

**5.1 Approximate number of people expected to be actively involved in the development of this project:** 25

**5.2 Scope:** This amendment specifies procedures, managed objects, and protocol extensions that:

- Define a class of service for time-critical frames that requests the transmitter in a bridged Local Area Network to suspend the transmission of a non-time-critical frame, and allow for one or more time-critical frames to be transmitted. When the time-critical frames have been transmitted, the transmission of the preempted frame is resumed. A non-time-critical frame could be preempted multiple times.

- Provide for discovery, configuration, and control of preemption service for a bridge port and end station.

- Ensure that preemption is only enabled on a given link if both link partners have that capability.

**5.3 Is the completion of this standard dependent upon the completion of another standard:** Yes

**If yes please explain:** Yes, Corresponding project in 802.3 in support of pre-emptive forwarding in MAC Services is needed, and will be coordinated through 802.3 PAR process. The 802.3 PAR has not been requested yet.

**5.4 Purpose:** The purpose of this amendment is to provide reduced latency transmission for scheduled, time-critical frames in a bridged LAN.

**5.5 Need for the Project:** A large, non-time-critical frame may start ahead of time-critical frame transmission. This condition leads to excessive latency for the time-critical frame.

The lack of transmission preemption severely inhibits the capabilities of an application that uses scheduled frame transmission to implement a real-time control network.

**5.6 Stakeholders for the Standard:** Developers, providers, and users of networking services and equipment for Industrial Automation, In-vehicle networking, and other systems requiring low latency virtual LAN bridges, including networking IC developers, bridge and NIC vendors, and users.

---

**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):**