# P802.1Qcr

**Submitter Email:** glenn.parsons@ericsson.com
**Type of Project:** Amendment to IEEE Standard 802.1Q-2014
**PAR Request Date:** 06-Apr-2016
**PAR Approval Date:** 30-Jun-2016
**PAR Expiration Date:** 31-Dec-2020
**Status:** PAR for an Amendment to an existing IEEE Standard

---

**1.1 Project Number:** P802.1Qcr
**1.2 Type of Document:** Standard
**1.3 Life Cycle:** Full Use

---

**2.1 Title:** Standard for Local and Metropolitan Area Networks-Bridges and Bridged Networks Asynchronous Traffic Shaping

---

**3.1 Working Group:** Higher Layer LAN Protocols Working Group (C/LM/WG802.1)
**Contact Information for Working Group Chair**
**Name:** Glenn Parsons
**Email Address:** glenn.parsons@ericsson.com
**Phone:** 613-963-8141
**Contact Information for Working Group Vice-Chair**
**Name:** John Messenger
**Email Address:** j.l.messenger@ieee.org
**Phone:** +441904699309

---

**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:** 8572050050
**Contact Information for Standards Representative**
**Name:** James Gilb
**Email Address:** gilb@ieee.org
**Phone:** 858-229-4822

---

**4.1 Type of Ballot:** Individual
**4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot:** 01/2020
**4.3 Projected Completion Date for Submittal to RevCom**
**Note: Usual minimum time between initial sponsor ballot and submission to Revcom is 6 months.:** 10/2020

---

**5.1 Approximate number of people expected to be actively involved in the development of this project:** 40
**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 project specifies procedures and managed objects for ~~a~~ bridges and end stations 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 amendment specifies a Unified Modeling Language (UML) based information model for the capabilities of asynchronous traffic shaping. It further specifies a YANG data model and a Management Information Base (MIB) module both based on that UML model to support configuration and status reporting. It further defines the relationship between the models introduced by this amendment, and the models in the base standard.

~~The project~~ Additionally, this amendment provides an informative framework for worst case delay analysis in static networks with static configurations. This amendment also addresses errors and omissions to existing features.



**5.3 Is the completion of this standard dependent upon the completion of another standard:** No

**5.5 Need for the Project:** There is well defined traffic that requires zero congestion loss and deterministic latency. Current bridging standards do not provide a sufficiently fine grained asynchronous traffic mechanism to meet these requirements 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 integrated circuit developers, bridge and network interface controller 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:** 5.2b: 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.