802.1Qxy PAR an amendment for Quality of Service Provision for Non-Bridges

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Introduction

- See new-finn-non-bridge-queuing-0917-v01 for a rationale for this PAR and CSD.
- We will discuss Objectives and non-Objectives.
- Then, we'll look at the PAR.

Non-Objectives

- Restating current normative 802.1Q text in “more understandable” (read, “incorrect”) terms.
- “Fixing” the 802.1Q normative text.
- Recasting the existing 802.1Q text to make normative use of the new clauses.
- Going into details on subjects that are not directly tied to queuing (e.g. the proper use of VLAN tags by an end station).

Objectives

- Target audience: Readers who are familiar with standards, but not necessarily 802.1Q, and certainly not the recent TSN amendments.
- Provide an **non-normative introductory clause** that lists and introduces the sections that contain normative text that is directly relevant to queue implementation. This section:
  - Points out the text and diagrams critical to understanding the “Tao” of 802.1Q (e.g. baggy pants, or the difference between an API and service primitives).
  - Points out the clauses that describe the skeleton of 802.1Q queuing.
  - Points out the clauses that describe the various transmission selection algorithms.
  - Points out the clauses in 802.1Q (and other documents) that may be relevant, but not essential (e.g. the SecY).
  - Provides a minimum of narrative “glue” for this to make sense.

Objectives

- Provide a **normative clause** that:
  - Gives a model for an end system port stack that focuses on 8.6.5-8.6.9 in 802.1Q (and other clauses, e.g. 34).
  - Gives a model for a (VLAN-unaware) relay system that is simply several end system models connected by a generic, unspecified, relay function.
  - Explains how to interpret the few bits (e.g. 8.6.7:c) in the normative clauses of the rest of 802.1Q that are tied tightly to Bridging.
- Add sections to Clause 5 for “relay systems” and for “end systems” that provide access points to other documents, and which reference primarily the new clauses.
- Augment the PICS.

PAR header

- **Type of Project:** Amendment to IEEE Standard 802.1Q-20xx
- **PAR Request Date:** 10-Mar-2018
- **PAR Approval Date:**
- **PAR Expiration Date:** 31-Mar-2022
- **Status:** PAR for an Amendment to an existing IEEE Standard
- **1.1 Project Number:** P802.1Qxy
- **1.2 Type of Document:** Standard
- **1.3 Life Cycle:** Full Use

PAR title

- **2.1 Title:** Standard for Local and Metropolitan Area Networks-Amendment: Quality of Service Provision for Non-Bridges

PAR lifecycle

- **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

PAR scope of complete standard

- **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.

PAR scope of project

- **5.2.b. Scope of the project:** This project specifies procedures and managed objects for a system, which is not a Bridge, to employ the Quality of Service features specified in IEEE Std 802.1Q-2018, sections 8.6.5 through 8.6.9, 34, 36, and 37.

PAR Purpose (of 802.1Q)

- **5.3 Is the completion of this standard dependent upon the completion of another standard:** No
- **5.4 Purpose:** Bridges, as specified by this standard, allow the compatible interconnection of information technology equipment attached to separate individual LANs.

PAR Need (for this amendment)

- **5.5 Need for the Project:** IEEE Std 802.1Q defines, for Bridges, various Quality of Service (QoS) techniques, especially those that support Time-Sensitive Networking (TSN). These QoS techniques are very useful to non-Bridges (e.g., end stations, routers, or firewall appliances) as well as Bridges, but their current specifications are in a form that is applicable only to a Bridge.

PAR Stakeholders

- **5.6 Stakeholders for the Standard:** Software developers, networking integrated circuit developers, and developers and users of networking services and equipment, for streaming of time-sensitive data. Such equipment includes bridges, end stations, hosts, routers, and other packet relay devices.

PAR Other

- **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

Thank you