

# **802.1DC PAR for Quality of Service Provision by Network Systems**

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# Introduction

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- See [new-finn-non-bridge-queuing-0917-v01](#) for a rationale for this PAR and CSD.
- This new document is a stand-alone document that references IEEE 802.1Q extensively.
- We will discuss Objectives and non-Objectives.
- Then, we'll look at the PAR.

# Non-Objectives

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- 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

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- Target audience: Readers who are familiar with standards, but not necessarily 802.1Q, and certainly not the recent TSN amendments.
- Provide a **non-normative introductory clause** that lists and introduces the sections of 802.1Q 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

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- 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 of 802.1Q (e.g. 8.6.7:c) in the normative clauses of 802.1Q that are tied tightly to Bridging.
- Clause 5 of the new document has sections for “relay systems” and for “end systems” that provide access points to other documents, and which reference primarily the new clauses.
- YANG models and MIBs
- “QoS features” are, at present, include IEEE Std 802.1Q-2018 sections 8.6.5 through 8.6.9, 34, 36, and 37.

# PAR header

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- **Type of Project:** New IEEE Standard
- **PAR Request Date:** 10-Mar-2018
- **PAR Approval Date:**
- **PAR Expiration Date:** 31-Dec-2022
- **Status:** PAR for a New IEEE Standard
- **1.1 Project Number:** P802.1DC
- **1.2 Type of Document:** Standard
- **1.3 Life Cycle:** Full Use

# PAR title

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- **2.1 Title:** Standard for Local and Metropolitan Area Networks Quality of Service Provision by Network Systems

# PAR lifecycle

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- **4.1 Type of Ballot:** Individual
- **4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot:** 12/2021
- **4.3 Projected Completion Date for Submittal to RevCom**  
Note: Usual minimum time between initial sponsor ballot and submission to Revcom is 6 months.: 08/2022
- **5.1 Approximate number of people expected to be actively involved in the development of this project:** 20

# PAR scope

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- **5.2 Scope:** This standard specifies procedures and managed objects for Quality of Service (QoS) features specified in IEEE Std 802.1Q, such as per-stream filtering and policing, queuing, transmission selection, flow control and preemption, in a network system which is not a bridge.

# PAR Purpose

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- **5.3 Is the completion of this standard dependent upon the completion of another standard:** Yes: IEEE P802.1Q-Rev.
- **5.4 Purpose:** No Purpose clause.

# PAR Need

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- **5.5 Need for the Project:** IEEE Std 802.1Q specifies Quality of Service (QoS) features for bridges. These features are perfectly applicable to other devices, e.g. end stations, routers, or firewall appliances. In IEEE Std 802.1Q, the specifications of these features are scattered, and coupled tightly to the operation of a bridge. There is a need for simple reference points to these QoS specifications that are usable for non-bridge systems, and for managed objects for these features that are not specific to bridges.

# PAR Stakeholders

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- **5.6 Stakeholders for the Standard:** Software developers, networking integrated circuit developers, and developers and users of networking equipment that handle data with varying requirements for Quality of Service. Such equipment includes end stations, hosts, routers, and other packet relay devices.

# PAR Other

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- **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?:** Yes
- **If yes please explain:** The YANG Data Model will be assigned a URN based on the RA URN tutorial and IEEE Std 802d. The standard may allow an OUI or CID to be used to create globally unique identifiers for narrowly-defined contexts within the YANG data model.
- **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