

Applicability of IEEE P802.1DC to IEC/IEEE 60802

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IEEE P802.1DC Quality of Service Provision by Network Systems

P802.1DC subclause 1.2 Need (from PAR)

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.

Functional support and YANG support for forwarding or end systems in P802.1DC

- Basic GFQoS functionality
 - Strict priority
 - Transmission algorithm selection
 - PVID, default priority
 - Priority Flow Control (PFC)
 - Frame preemption
 - Frame Replication and Elimination for Reliability (in 802.1CB)
 - General flow classification and metering
 - Per-Stream Filtering and Policing (PSFP)
 - Enhanced Transmission Selection (ETS)
 - Scheduled Traffic
 - Forwarding and Queuing enhancements for Time-Sensitive Streams (FQTSS, credit shaper)
 - Cyclic Queuing and Forwarding (CQF)
 - Asynchronous Traffic Shaping
- Functional specification only; no YANG controls yet defined in IEEE Std 802.1Q

P802.1DC could simplify the 60802 specification of a **non-forwarding end station**

- P802.1DC is intended to perform pretty much exactly what is done, currently, in 60802, by making an end station a “one-port bridge”.
 - A one-port bridge may be a perfect solution.
 - A one-port bridge may drag in meaningless managed objects and semantics (e.g. spanning tree state) that confuse the implementer.
 - P802.1DC provides QoS features with a clean separation from bridge functionality.
- P802.1DC has passed first Working Group ballot. It should publish this year. **There is still time to fill any gaps identified by 60802.**
- **This author will work with interested parties in 60802 to further investigate the utility of P802.1DC to 60802.**

Thank you