

IEEE 802 LAN/MAN STANDARDS COMMITTEE (LMSC)

CRITERIA FOR STANDARDS DEVELOPMENT (CSD)

Based on IEEE 802 LMSC Operations Manuals approved 4 August 2020
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P802.1Qdq IEEE Standard for Local and metropolitan area networks--Bridges and Bridged Networks Amendment: Shaper Parameter Settings for Bursty Traffic requiring Bounded Latency

1. IEEE 802 criteria for standards development (CSD)

The CSD documents an agreement between the Working Group and the IEEE 802 LMSC that provides a description of the project and the IEEE 802 LMSC's requirements more detailed than required in the PAR. The CSD consists of the project process requirements, 1.1, and the 5C requirements, 1.2.

1.1 Project process requirements

1.1.1 Managed objects

Describe the plan for developing a definition of managed objects. The plan shall specify one of the following:

- a) The definitions will be part of this project.
- b) The definitions will be part of a different project and provide the plan for that project or anticipated future project.
- c) The definitions will not be developed and explain why such definitions are not needed.

This project will use method c). The definitions will not be developed, since this amendment will only add an informative annex to the base standard.

1.1.2 Coexistence

A Working Group proposing a wireless project shall prepare a Coexistence Assessment (CA) document unless it is not applicable.

- a) Will the Working Group create a CA document as part of the WG balloting process as described in Clause 13? (yes/no)
- b) If not, explain why the CA document is not applicable.

N/A- this is not a wireless project.

1.2 5C requirements

1.2.1 Broad market potential

Each proposed IEEE 802 LMSC standard shall have broad market potential. At a minimum, address the following areas:

- a) Broad sets of applicability.
- b) Multiple vendors and numerous users.

The amendment adds an informative annex that describes the setting of existing traffic shaper parameters and associated traffic specification parameters in the base standard to support bursty traffic with bounded latency requirements. This description enables usage of these technologies from the base standard in applications that require support for such traffic, including (but not limited to) Internet of Things (IoT) applications. IoT devices are deployed in factories, warehouses, hospitals, marketplaces, stadiums, residential areas, etc.

Multiple vendors and users of IoT applications require complete and comprehensive understanding of parameter settings to support bursty traffic with bounded latency requirements.

1.2.2 Compatibility

Each proposed IEEE 802 LMSC standard should be in conformance with IEEE Std 802, IEEE 802.1AC, and IEEE 802.1Q. If any variances in conformance emerge, they shall be thoroughly disclosed and reviewed with IEEE 802.1 WG prior to submitting a PAR to the Sponsor.

- a) Will the proposed standard comply with IEEE Std 802, IEEE Std 802.1AC and IEEE Std 802.1Q?
- b) If the answer to a) is no, supply the response from the IEEE 802.1 WG.

The informative annex in this amendment to IEEE 802.1Q will be in conformance with IEEE Std 802, IEEE Std 802.1AC, and IEEE Std 802.1Q.

1.2.3 Distinct Identity

Each proposed IEEE 802 LMSC standard shall provide evidence of a distinct identity. Identify standards and standards projects with similar scopes and for each one describe why the proposed project is substantially different.

No existing IEEE 802 standard or standard project addresses shaper settings in order to mitigate the impact of a temporarily high network load caused by bursty traffic that needs to be delivered with bounded latency when it shares the same port with other traffic.

1.2.4 Technical Feasibility

Each proposed IEEE 802 LMSC standard shall provide evidence that the project is technically feasible within the time frame of the project. At a minimum, address the following items to demonstrate technical feasibility:

- a) Demonstrated system feasibility.

The informative annex describes the setting of shaper parameters that are currently deployed in existing systems. Shaper parameters are already defined by IEEE Std 802.1Q; therefore, setting these parameters is feasible.

- b) Proven similar technology via testing, modeling, simulation, etc.

The informative annex relies on the proven technology provided by the base standard.

1.2.5 Economic Feasibility

Each proposed IEEE 802 LMSC standard shall provide evidence of economic feasibility. Demonstrate, as far as can reasonably be estimated, the economic feasibility of the proposed project for its intended applications. Among the areas that may be addressed in the cost for performance analysis are the following:

- a) Known cost factors.
- b) Balanced costs.
- c) Consideration of installation costs.
- d) Consideration of operational costs (e.g., energy consumption).
- e) Other areas, as appropriate.

No new functionality is added and this will not impact cost or complexity. The amendment does not imply additional hardware cost as it only adds description and recommendations for shaper parameter settings.