

IEEE 802 LAN/MAN STANDARDS COMMITTEE (LMSC)

CRITERIA FOR STANDARDS DEVELOPMENT (CSD)

Based on IEEE 802 LMSC Operations Manuals approved 4 August 2020
Last edited 31 August 2020

P802.1Qdy Standard for Local and Metropolitan Area Networks – Bridges and Bridged Networks Amendment: YANG for the Multiple Spanning Tree Protocol

1. IEEE 802 criteria for standards development (CSD)

The CSD documents an agreement between the WG and the Sponsor that provides a description of the project and the Sponsor'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 a).

1.1.2 Coexistence

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

- a) Will the WG 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.

This project is not a wireless project; therefore, the CA document is not applicable.

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 proposed amendment will support the use of YANG, which has broad industry support in networks that use IEEE Std 802.1Q. Both IEEE Std 802.1Q and YANG are already supported and used by multiple vendors, network providers, and network users. There is a wide interest in the industry to manage MSTP via YANG. Furthermore, industrial automation networks require parameter value ranges that can differ from those currently supported.

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 review and response is not required if the proposed standard is an amendment or revision to an existing standard for which it has been previously determined that compliance with the above IEEE 802 standards is not possible. In this case, the CSD statement shall state that this is the case.

The amendment will be in conformance with IEEE Std 802, IEEE 802.1AC, and the existing provisions of IEEE 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.

IEEE 802.1Q is already a recognized and established standard. This project enhances IEEE 802.1Q to meet expressed customer needs; it does not duplicate existing capabilities. There is no other IEEE 802 standard or approved project that overlaps with the scope of this project.

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.

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

YANG is in use today in data networks. IEEE and other SDOs (e.g., the IETF) have already defined YANG data models and there is sufficient joint membership and liaison to ensure that IEEE 802 benefits from their prior experience.

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.
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- a) Management using YANG utilizes a balance between end station and infrastructure capabilities; the balance will be similar to that for existing management methods.
 - b) The cost factors will be similar to those of existing management methods.
 - c) This project extends the YANG capabilities of IEEE Std 802.1Q to MSTP as a step towards a complete YANG management solution. This helps to eliminate multiple management platforms, thus reduces installation cost.
 - d) This project extends the YANG capabilities of IEEE Std 802.1Q to manage MSTP as a step towards a complete YANG management solution. This helps to eliminate multiple management platforms, thus reduces operational cost.,