

CSD DRAFT for considerations Ingress Filtering

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IEEE 802.3 Criteria for Standards Development (CSD)

The IEEE 802 Criteria for Standards Development (CSD) are defined in Clause 14 of the IEEE 802 LAN/MAN Standards Committee (LMSC) Operations Manual. The criteria include project process requirements (“Managed Objects”) and 5 Criteria (5C) requirements. The 5C are supplemented by subclause 7.2 ‘Five Criteria’ of the ‘Operating Rules of IEEE Project 802 Working Group 802.3, CSMA/CD LANs’.

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.
- Definition of managed objects in the form of an SNMP MIB is part of IEEE Std 802.1Q. If this amendment to IEEE Std 802.1Q results in changes that need to be accompanied by changes to the definition of managed objects then those changes will be developed as part of this project.

Coexistence

A WG proposing a wireless project shall demonstrate coexistence through the preparation of a Coexistence Assurance (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?
 - b) If not, explain why the CA document is not applicable
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- This is not a wireless project so a Coexistence Assurance (CA) document is not applicable.

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.
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- Stream reservation and/or engineered paths provides no congestion caused frame drops in a given network path, unless there is a malfunction that violates the registered stream reservation. Ingress filtering that detects the violation of the reservation parameters then takes filtering action at ingress of LAN bridges protects the rest of the network that utilizes the stream reservation.
 - Automotive control domain systems and broad industrial network control systems use stream reservation mechanisms defined in IEEE 802.1Q.
 - It is anticipated that there will be sufficient participation to effectively complete the standardization process including representatives from end-users, equipment manufacturers and component suppliers.

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.
- As an amendment to IEEE Std 802.1Q, the proposed project shall comply with IEEE Std 802, IEEE Std 802.1AC and IEEE Std 802.1Q.

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.

- There are no existing standards, or projects developing standards, addressing the specification of ingress filtering mechanism that is sufficiently defined to allow for interoperability and deterministic behavior.

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.
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- The ingress filtering mechanism has been broadly implemented in proprietary means to serve similar needs, thus the proposed project has been demonstrated to be feasible.
 - The proposed project will build on existing IEEE 802.1Q mechanisms and define interoperable specification.

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) Balanced costs (infrastructure versus attached stations).
 - b) Known cost factors.
 - c) Consideration of installation costs.
 - d) Consideration of operational costs (e.g., energy consumption).
 - e) Other areas, as appropriate.
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- The cost factors for 802.1Q Bridging components and systems are well known.
 - Prior experience in the development 802.1Q bridges and its maturity observed, the specifications developed by this project will entail a reasonable cost for the resulting performance.
 - Network design, installation and maintenance costs are minimized by preserving network architecture, management, and software.
 - Network operational cost is expected to be unchanged or lower, by providing the means of detecting reservation faults and taking filtering action.