P802.1Qca Criteria for Standards Development (Five Criteria)

Broad Market Potential
A standards project authorized by IEEE 802 LMSC shall have a broad market potential.
Specifically, it shall have the potential for:

   a) Broad sets of applicability.
         The application of Ethernet services and technology across data centers, metropolitan,
         automotive (vehicle) and industrial networks is large and growing business. TLV
         extensions to IS-IS could provide a unified control base for bridged networks and enable
         even wider spread by means of providing missing control features.

   b) Multiple vendors and numerous users.
         A large body of vendors and users have a requirement for IEEE 802.1Q in data center,
         metro, automotive and industrial networks.

   c) Balanced costs (LAN versus attached stations).
         This project does not materially alter the existing cost structure of bridged networks.
         Attached stations would not be aware of the operations by transit bridges

Compatibility
IEEE 802 LMSC defines a family of standards. All standards should be in conformance : IEEE Std
802, IEEE 802.1D, and IEEE 802.1Q. If any variances in conformance emerge, they shall be
thoroughly disclosed and reviewed with IEEE 802.1 Working Group. In order to demonstrate
compatibility with this criterion, the Five Criteria statement must answer the following questions.

   a) Does the PAR mandate that the standard shall comply with IEEE Std 802, IEEE Std 802.1D
        and IEEE Std 802.1Q?
         No.

   b) If not, how will the Working Group ensure that the resulting draft standard is compliant, or
        if not, receives appropriate review from the IEEE 802.1 Working Group?
         The 802.1 WG will review the draft for appropriate compatibility during the
         development of the standard.

Distinct Identity
Each IEEE 802 LMSC standard shall have a distinct identity. To achieve this, each authorized
project shall be:

   a) Substantially different from other IEEE 802 LMSC standards.
         This is an amendment to 802.1Q the only standard for VLAN aware bridges.

   b) One unique solution per problem (not two solutions to a problem).
         There is no standard using link state control which allows coexistence on the same
         network of shortest path bridging and explicit path selection, and which also supports
         bandwidth reservation, data traffic protection, time synchronization and scheduling for
         bridged networks.

c) Easy for the document reader to select the relevant specification.
> This project will amend only the IEEE 802 standard defining VLAN aware bridges.

Technical Feasibility

For a project to be authorized, it shall be able to show its technical feasibility. At a minimum, the proposed project shall show:

a) Demonstrated system feasibility.
> The function is similar in complexity to existing functions in 802.1Q and 802.1aq, which have been successfully implemented.

b) Proven technology, reasonable testing.
> The main concepts are proven and SPB is a proven technology. Compliance with the project can be tested using straightforward extensions of existing test tools for bridged networks.

c) Confidence in reliability.
> The reliability of the enhancements will be not be measurably worse than that of existing SPB.

Coexistence of IEEE 802 LMSC wireless standards specifying devices for unlicensed operation
- A WG proposing a wireless project is required to demonstrate coexistence through the preparation of a Coexistence Assurance (CA) document unless it is not applicable.
- The WG will create a CA document as part of the WG balloting process.
- If the WG elects not to create a CA document, it will explain to the Sponsor the reason the CA document is not applicable.

Not applicable.

Economic Feasibility

For a project to be authorized, it shall be able to show economic feasibility (so far as can reasonably be estimated) for its intended applications. At a minimum, the proposed project shall show:

a) Known cost factors, reliable data.
> This project introduces no hardware costs beyond the minimal and well-known resources consumed by an additional software protocol whose requirements are firmly bounded.

b) Reasonable cost for performance.
> The cost of upgrading software and configuring the protocol is reasonable, given the improvement in the applicability of bridged networks, e.g. for time aware or mission critical applications.

c) Consideration of installation costs.
> The cost of installing enhanced software, in exchange for improved network performance, is familiar to vendors and users of bridged networks.