Five Criteria

Broad Market Potential

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

- Broad sets of applicability.

  Home entertainment devices are acquiring wired and wireless interfaces. The ability to build a plug-and-play bridged network using arbitrary connections would accelerate the acceptance of Ethernet plus Wi-Fi as the primary means of transmitting video and audio signals. Other networks have similar requirements for arbitrary wired and wireless connectivity.

- Multiple vendors and numerous users.

  A great many vendors offer devices with both wired and wireless capability.

- Balanced costs (LAN versus attached stations).

  This project reduces the cost of ownership of devices with wired and wireless connectivity by reducing the overall network complexity in the absence of a bridging solution.

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?

  This is an amendment to 802.1Q, which defines bridging, and will be internally consistent.

  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?

  Not applicable.

Distinct Identity

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

- Substantially different from other IEEE 802 standards.

  There is no IEEE 802 standard that provides this capability.

- One unique solution per problem (not two solutions to a problem).

  There is no standard outside IEEE 802 that provides this capability.

- Easy for the document reader to select the relevant specification.

  This project will amend the only IEEE 802 standard defining 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:

- Demonstrated system feasibility.

  Multiple vendors have implemented similar proprietary solutions.

- Proven technology, reasonable testing.

  IEEE 802.1Q and IEEE 802.11 are widely implemented and successful in the market.

- Confidence in reliability.

  Bridging will not reduce the well-known and accepted reliability if 802.11 media.

- Coexistence of IEEE 802 LMSC wireless standards specifying devices for unlicensed operation.

  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:

- 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.

- Reasonable cost for performance.

  The cost of upgrading software and configuring the protocol is reasonable, given the improvement in connectivity and forwarding efficiency gained.

- 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.