

5 Criteria for P802.1ah

1 Broad Market Potential

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

- a) Broad sets of applicability.
- b) Multiple vendors and numerous users.
- c) Balanced costs (LAN versus attached stations).

This project is intended to facilitate the scaling of Provider Bridged P802.1ad networks using existing Bridged and Virtual Bridged LAN technologies. Despite user demand and initial deployment of LAN-based backbones for connecting P802.1ad networks, there is currently no interoperability between different vendors, nor a coherent management framework for different techniques.

Most major carriers are currently deploying LAN-based service networks which need to be scaled to meet the demands both of transition from existing leased line service and expansion of multipoint services.

The costs related to this technology should be broadly similar to those of existing Bridging technology based on 802.1D/802.1w/802.1Q/802.1s.

2 Compatibility

IEEE 802 defines a family of standards. All standards shall be in conformance with the IEEE 802.1 Architecture, Management and Interworking documents as follows: 802. Overview and Architecture, 802.1D, 802.1Q, and parts of 802.1f. If any variances in conformance emerge, they shall be thoroughly disclosed and reviewed with 802. Each standard in the IEEE 802 family of standards shall include a definition of managed objects which are compatible with systems management standards.

This standard will be compatible with 802.1Q as amended by P802.1ad and P802.1ag.

This project will be compatible with existing 802.1 Architecture, Management and Interworking standards.

The Backbone Provider Bridge will rely on extensions to 802.3 frame size for additional header space. Work on frame size extension is currently under study at 802.3.

3 Distinct Identity

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

- a) Substantially different from other IEEE 802 standards.
- b) One unique solution per problem (not two solutions to a problem).
- c) Easy for the document reader to select the relevant specification.

There is no other IEEE standard or project that allows scaling of a Provider Bridge network to support large numbers of Service VLANs. No existing solution provides a multipoint LAN backbone for interconnection of Provider Bridges. The document reader will have an easy reference to scaling of Provider Bridge networks.

4 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.
- b) Proven technology, reasonable testing.
- c) Confidence in reliability.

The proposed standard will be based on existing, proven, standardized, Bridged LAN and Virtual Bridged LAN technology. These technologies are widely implemented and highly reliable.

5 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.
- b) Reasonable cost for performance.
- c) Consideration of installation costs.

The technology that will be developed in the proposed standard will not differ significantly from the economic factors associated with existing Bridged LAN and Virtual Bridged LAN technologies. The cost factors for Virtual Bridged LAN technology are favorable when compared to existing provider networks based on MPLS or SONET.