THE 5 CRITERIA (Virtual Bridged Local Area Networks: Source Routing)

- Show that the proposed solution satisfies the “5 Criteria”
- IEEE 802 5 Criteria

1. Broad Market Potential
2. Compatibility
3. Distinct Identity
4. Technical Feasibility
5. Economic Feasibility

1. BROAD MARKET POTENTIAL

REQUIREMENT:

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

- Broad Sets of Applicability

RESPONSE:

Many networks today employ source routing and network managers would like to add VLAN capabilities to these networks. This standard specifically addresses the requirements for supporting source routing in the VLAN marketplace.

FOR: ? AGAINST: ? ABSTAIN: ?

REQUIREMENT

- Multiple vendors, numerous users

RESPONSE:

The Token Ring market today exceeds $2 billion / year. A significant proportion of Token Ring networks employ source routing. The emerging VLAN concepts address significant needs of today's source routing network users, however 802.1Q has limited support for source routing.

This proposed standard specifies extensions to 802.1Q providing the source routing installed base access to these VLAN concepts with a minimal increase in network complexity.

This proposed standard preserves the frame format and management compatibilities of existing source routing applications and will ensure that source routing networks can seamlessly migrate to the VLAN technology.

?? participants representing at least ?? companies indicate that they plan to participate in this standardization.

FOR: ? AGAINST: ? ABSTAIN: ?

REQUIREMENT:

- Balanced costs (LAN versus attached stations)

RESPONSE:

Source route transparent (SRT) bridging is an accepted technology to address the requirements of networks to handle both source routed and transparently bridged traffic.

Networking devices implemented to this proposed standard require source route forwarding to be added to an 802.1Q bridge implementation. The cost will be similar to adding source routing capabilities to a transparent bridge. Therefore the costs associated with implementing this proposed standard are in line with costs associated with SRT technology deployed today.

FOR: ? AGAINST: ? ABSTAIN: ?

2. COMPATIBILITY

REQUIREMENT:

IEEE Project 802 defines a family of standards. All standards shall be in conformance with 802.1 Architecture, Management and Interworking. All LLC and MAC standards shall be compatible with ISO/IEC 10039, MAC Service Definition at the LLC/MAC interface. Within the LLC Working Group there shall be one LLC standard, including one or more LLC protocols, with a common LLC/MAC interface. Within a MAC Working Group there shall be one MAC standard and one or more Physical Layer standards with a common MAC / Physical Layer interface.

Each standard in the IEEE Project 802 family of standards shall include a definition of managed objects which are compatible with OSI systems management standards.

RESPONSE:

The proposed standard will be based upon the VLAN concepts from 802.1Q and the source routing concepts from 802.1p. This will ensure that it will be compatible with the LLC/MAC interfaces and 802.1 interworking. It will be conformant to 802 Functional Requirements. The proposed standard shall include a definition of managed objects which are compatible with OSI systems management standards.

FOR: ? AGAINST: ? ABSTAIN: ?

3. DISTINCT IDENTITY

REQUIREMENT:

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

- Substantially different from other 802 projects

RESPONSE:

802.1Q offers only limited support for source routing. This proposed standard is an extension to 802.1Q, and overcomes those limitations.

FOR: ? AGAINST: ? ABSTAIN: ?

REQUIREMENT:

- One unique solution per problem

RESPONSE:

This proposed standard is unique since it is the only technology that provides source routing capabilities within VLANs.

FOR: ? AGAINST: ? ABSTAIN: ?

REQUIREMENT:

- Easy for document reader to select relevant specification

RESPONSE:

The PICS Proforma of the standard will clearly identify the relevant specifications supported by conformant product.

FOR: ? AGAINST: ? ABSTAIN: ?

4. TECHNICAL FEASIBILITY

REQUIREMENT:

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

RESPONSE:

Source routing and 802.1Q bridges are available today and have a proven track record.

There are no significant technical obstacles to developing a solution from these subsystems to implement this proposed standard.

FOR: ? AGAINST: ? ABSTAIN: ?

REQUIREMENT:

- Proven technology, reasonable testing

RESPONSE:

Source routing and 802.1Q bridges are available today and have a proven track record.

It is expected that no implementation "breakthroughs" will be required to implement this standard.

FOR: ? AGAINST: ? ABSTAIN: ?

REQUIREMENT:

- Confidence in reliability

RESPONSE:

The reliability of existing source routing products provides adequate confirmation that devices conforming to this proposed standard will be reliable.

This proposed standard will be based on technology which has evolved specifically for Local Area Networks.

FOR: ? AGAINST: ? ABSTAIN: ?

5. ECONOMIC FEASIBILITY

REQUIREMENT:

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

RESPONSE:

In practice the costs of adding VLAN support to present SRT bridges will be comparable to adding VLAN support to present transparent bridges.

FOR: ? AGAINST: ? ABSTAIN: ?

REQUIREMENT:

- Reasonable cost for performance

RESPONSE:

This proposed standard will offer similar cost/performance to existing 802.1Q bridges.

FOR: ? AGAINST: ? ABSTAIN: ?

REQUIREMENT:

- Consideration of installation costs

RESPONSE:

Provides a graceful upgrade path for existing source routing networks.

Migration changes will be targeted to the backbone. It is intended that end node implementations will not be impacted.

FOR: ? AGAINST: ? ABSTAIN: ?