5 CRITERIA:

1. Broad Market Potential
   + Broad set(s) of applications
   + Multiple vendors, multiple users

Many applications and environments will benefit from this capability, in particular:

- Different VLANs can use differnet routes through a network of physical connections.
- Disruptions to network operation caused by mis-wiring or misconfiguring network elements are confined to a subset of the spanning trees, and thus affect fewer users.
- The ability to migrate a number of proprietary VLAN technologies, which currently employ multiple spanning trees, is greatly enhanced.
- A VLAN installation can be scaled to a larger number of interconnected bridges and stations by limiting the geographical scope of the separate spanning tree instances.

2. Compatibility with IEEE standards
   + Conformance with bridging 802.1D
   + Conformance with VLANs 802.1Q

The proposed standard will conform to the IEEE standards for bridges and for VLANs.

The proposed standard will conform to the 802 Functional Requirements document.

3. Distinct Identity
   Substantially different from other specs / solutions
   Unique solution for problem (not two alternatives / problem)
   Easy for document reader to select relevant spec

The proposed standard is an upgrade for 802.1Q users. It differs from other 802.1 specifications and solutions in that it provides the benefits mentioned, above, for a relatively small implementation effort.

The proposed standard will be a supplement to the existing 802.1Q standard and will be formatted as a new clause(s), making it easy for the reader to select the relevant specification.

4. Technical Feasibility
   Demonstrated feasibility; reports – working models
   Proven technology, reasonable testing
   Confidence in reliability

The correct operation of multiple 802.1D spanning trees is well established. This work builds directly upon the existing algorithms. A large percentage of the existing VLAN customer base successfully employs several different proprietary VLAN technologies which implement various forms of multiple spanning trees, demonstrating the viability of the concept.

5. Economic Feasibility

Cost factors known, reliable data
Reasonable cost for performance expected
Total installation costs considered

The cost of running multiple spanning trees scales linearly with the number of spanning trees. The cost to the vendors to implement this solution is minimized, as it involves no new technologies, but uses multiple instances of a widely-implemented technology. The cost in training the users is minimized, because of the users' familiarty with the spanning tree protocol.