5 CRITERIA:

1. Broad Market Potential
· Broad set(s) of applications
· Multiple vendors, multiple users
· Balance cost, LAN vs. attached stations

Many applications and environments will benefit from this capability, in particular:
- The ability to incrementally scale the bandwidth and increase the availability of server connections to the network and of switch-to-switch connections within the network.
- Provide a network upgrade path utilizing existing physical layer media and the corresponding supported distances as existing 802.5 technology.

Multiple vendors have brought products to market that aggregate parallel 802.5 links into a single logical link in some manner. ??? participants from ??? companies have indicated their support for creating an interoperable standard.

When link aggregation is used for attaching end-stations to the network, the cost is balanced between the LAN and the attached station by requiring a symmetrical number of MACs and physical layer connections at each end of the aggregated link.

2.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 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 that are compatible with OSI systems management standards.

3. Distinct Identity
· Substantially different from other 802.5 specs / solutions
· Unique solution for problem (not two alternatives / problem)
· Specifically addresses the needs of 802.5, as opposed to 802.3
· Easy for document reader to select relevant spec

The proposed standard is an upgrade for 802.5 users, based upon the 802.5 MAC. It differs from other 802.5 specifications and solutions in that it enables users to operate network connections at bandwidths incremental to those specified in current 802.5 standards.

The proposed standard will be the only solution achieving linearly scaleable bandwidth per network connection, while simultaneously providing high availability and reliability through multiple links. Additionally, the proposed standard will achieve this without requiring

the development of a new physical layer.

The proposed standard will be a supplement to the existing 802.5 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

Technical feasibility has been demonstrated by products deployed from multiple vendors, which provide link aggregation capabilities similar to those proposed for this standard. These capabilities provide a new operating mode layered upon the existing and well-proven 802.5 MAC and Physical Layer technologies. In particular, the proposed standard would not require the development of a new physical layer or a new physical medium.

5. Economic Feasibility
- Cost factors known, reliable data
- Reasonable cost for performance expected
- Total installation costs considered

The cost factors for the existing standard can be extrapolated from the cost of current 802.5 technologies.

The incremental cost of aggregating multiple links is not expected to be a significant increase over the sum of the cost of the individual links. Because the performance increases in proportion to the number of links, the cost will scale linearly with the performance.

Link aggregation is a very cost-effective way of adding bandwidth to a network installation, because it does not require the adoption and installation of new Data Link Layer or Physical Layer technologies.