1TPCE 5 Criteria

Broad Market Potential

A standards project authorized by IEEE 802 LMSC 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).

Broad Sets of Applications:

- → 100 Mbit/s Automotive Ethernet is a rapidly growing market, driven by two factors:
 - New bandwidth-consuming in-car applications (cameras, collision avoidance, infotainment, etc.)
 - Consolidation of legacy in-car networks into the new homogenous Electronic
 Architecture
- → Other applications include
 - Transportation (e.g. trains, busses, airplane cabins, traffic control systems, etc.) and similar applications
 - Industrial automation solutions using Ethernet for factory automation and process automation.

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Multiple vendors and numerous users:

- → At the Call for Interest the shown presentation was supported by 145 individuals (71 affiliated with automotive, 13 affiliated with industrial automation, 37 affiliated with semiconductor industry)
 - In 2014 approximately 95 million cars and light trucks will be produced
 - 13 million premium segment cars and 50 million middle segment cars
 - The prediction for 2019 is 115 million total with 15 million premium and 60 million middle segment.
- Data presented at CFI indicate hundreds of millions ports/year for Ethernet (with significant share for 100 Mbit/s on Single Twisted Pair) in automotive by 2018-22.
- The Industrial Automation solutions currently have about 100 million installed Ethernet nodes on the market, with a growth of about 43% per year. A transition from fieldbus communication networks to Ethernet is on the way and new applications in industrial automation are expected.
- Probably something about IoT

Balanced costs:

The 1 Twisted Pair 100 Mbit/s interface will maintain a favorable cost balance for in-vehicle applications operating over a single twisted pair copper cable.