

Technical Feasibility

The project is technically feasible within its time frame. The following items demonstrate technical feasibility:

- a) **Demonstrated system feasibility.**
 - b) **Proven similar technology via testing, modeling, simulation, etc.**
 - c) **Confidence in reliability [Removed from IEEE 802 CSD Nov 2013]**
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- Full-duplex operation over unshielded twisted pair has been proven both technically and operationally in deployments of 1000BASE-T and 10GBASE-T in excess of 100 Mb/s per pair. Approved on-going work in 40GBASE-T and 1000BASE-T1 is extending the capability.
 - The principle of building a 100 Mb/s single twisted pair PHY that meets automotive environment requirements, including EMC, has been proven both technically and operationally feasible by the deployment of OPEN Alliance BR PHY, operating 100 Mb/s over a single twisted pair, in production vehicles since 2013.
 - Systems and infrastructure supporting Ethernet operation over twisted pair cabling have been deployed by the tens of billions at speeds ranging from 1 Mb/s to 100Gb/s. The proposed project will build on Ethernet component and system design experience and the broad knowledge base of Ethernet network operation.