Objectives
Updated Objectives (July 2014)
Objectives

- Preserve the IEEE 802.3/Ethernet frame format at the MAC client service interface.
- Preserve minimum and maximum frame size of the current IEEE 802.3 standard.
- Support full duplex operation only.
- Support a speed of 1 Gb/s at the MAC/PLS service interface.
- Maintain a bit error ratio (BER) of less than or equal to $10^{-10}$ at the MAC/PLS service interface.
- Support 1 Gb/s operation in automotive & industrial environments (e.g. EMC, temperature).
- Define optional Energy-Efficient Ethernet
Objectives

• Define the performance characteristics of an automotive link segment and a PHY to support point-to-point operation over this link segment with a single twisted pair supporting up to four inline connectors using balanced copper cabling for at least 15m for the automotive link segment.

• Define the performance characteristics of optional link segment(s) for the above PHY for industrial controls and/or automation, transportation (aircraft, railway, bus and heavy trucks) applications with a goal of at least 40m reach.

• Define optional startup procedure which enables the time from power_on=FALSE to valid data to be less than 100ms.

• Support optional single-pair auto-negotiation mechanism.