Objectives

Updated Objectives (May 15, 2014)
New objective in RED text (awaiting 802.3 WG approval 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.