Objectives

- Support full-duplex operation only
- Preserve the 802.3 / Ethernet frame format utilizing the 802.3 MAC
- Preserve minimum and maximum FrameSize of current 802.3 standard
- Support a BER of better than or equal to 10^{-12} at the MAC/PLS service interface
- Define a 4 lane PHY for operation over a printed circuit board backplane with a total channel insertion loss of <= 35 dB at 12.9 GHz**
- Define a 4 lane PHY for operation over a printed circuit board backplane with a total channel insertion loss of <= 33 dB at 7.0 GHz**
- Define a 4-lane 100 Gb/s PHY for operation over links consistent with copper twin-axial cables with lengths up to at least 5m.
- To define optional Energy-Efficient Ethernet operation for 100G Backplane and Twinaxial cable PHYs specified in P802.3bj*
- To define optional Energy-Efficient Ethernet operation for 100GBASE-CR10***
- To define optional Energy-Efficient Ethernet operation for 40GBASE-CR4 and 40GBASE-KR4***

Objectives approved by IEEE 802.3 WG July 2011 IEEE 802 Plenary
* Objective approved by IEEE 802.3 WG Nov 2011 IEEE 802 Plenary
** Objectives approved by IEEE 802.3 WG Mar 2012 IEEE 802 Plenary
*** Objectives approve by IEEE 802.3 WG July 2012 IEEE 802 Plenary