IEEE P802.3bm Next Generation 40 Gb/s and 100 Gb/s Optical Ethernet
Objectives

- ◇ Support full-duplex operation only
- ◇ Preserve the IEEE 802.3 / Ethernet frame format utilizing the IEEE 802.3 MAC
- ◇ Preserve minimum and maximum FrameSize of current IEEE 802.3 standard
- ◇ Support a BER better than or equal to 10^{-12} at the MAC/PLS service interface
- ◇ Provide appropriate support for OTN
- ◇ Define re-timed 4-lane 100G PMA to PMA electrical interfaces for chip to chip and chip to module applications
- ◇ Define a 40 Gb/s PHY for operation over at least 40 km of SMF
- ◇ Define a 100 Gb/s PHY for operation up to at least 100 m of MMF
- ❑ Specify optional Energy Efficient Ethernet (EEE) for 40 Gb/s and 100 Gb/s operation over fiber optic cables.

- ◇ (approved by 802.3 July 2011)
- ❑ (approved by 802.3 November 2012)