



## 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 500 m of SMF~~
  - ✧ Define a 100 Gb/s PHY for operation up to at least 100 m of MMF
  - ✧ ~~Define a 100 Gb/s PHY for operation up to at least 20 m of MMF~~
  - ❑ Specify optional Energy Efficient Ethernet (EEE) for 40 Gb/s and 100 Gb/s operation over fiber optic cables.
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- ✧ (approved by 802.3 July 2011)
  - ❑ (approved by 802.3 November 2012)

