P802.3cs Objectives

• Provide Physical Layer specifications that:
  • Preserve the Ethernet frame format utilizing the Ethernet MAC
  • Support a BER of better than or equal to $10^{-12}$ at the MAC/PLS service interface (or the frame loss ratio equivalent)
  • Support a passive point-to-multipoint ODN with a reach of at least 50 km with at least 1:64 split ratio per wavelength pair
  • Support at least 16 wavelength pairs for point-to-multipoint PON operation
  • Support the MAC data rate of 10Gb/s downstream
  • Support the MAC data rates of 2.5Gb/s and 10Gb/s upstream
  • Leverage existing EPON PCS and PMA to support the above MAC data rates
  • Support tunable transmitters