

IEEE P802.3ah EFM Task Force Objectives
As Approved by IEEE 802.3 CSMA/CD WG
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- Support subscriber access network topologies:
 - Point to multipoint on optical fiber
 - Point to point on optical fiber
 - Point to point on copper

- Provide a family of physical layer specifications:
 - 1000BASE-LX extended temperature range optics
 - 1000BASE-X \geq 10km over single SM fiber
 - 100BASE-X \geq 10km over SM fiber
 - PHY for PON, \geq 10km, 1000Mbps, single SM fiber, \geq 1:16
 - PHY for PON, \geq 20km, 1000Mbps, single SM fiber, \geq 1:16
 - PHY for single pair non-loaded voice grade copper distance \geq 750m and speed \geq 10Mbps full-duplex
 - PHY for single pair non-loaded voice grade copper distance \geq 2700m and speed \geq 2Mbps full-duplex

- Optical EFM PHYs to have a BER better than or equal to 10^{-12} at the PHY service interface

- Include an optional specification for combined operation on multiple copper pairs

- Support far-end OAM for subscriber access networks:
 - Remote Failure Indication
 - Remote Loopback
 - Link Monitoring

- The point-to-point copper PHY shall recognize spectrum management restrictions imposed by operation in public access networks, including:
 - Recommendations from NRIC-V (USA)
 - ANSI T1.417-2001 (for frequencies up to 1.1MHz)
 - Frequency plans approved by ITU-T SG15/Q4, T1E1.4 and ETSI/TM6