Project Objectives

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Extended EPON Study Group
802.3 Plenary meeting, Atlanta, GA, USA – November 2011

Project Objectives

» Support subscriber access networks using point-to-multipoint topologies on optical fiber

» EPON PHY(s) to have a BER better than or equal to 10^{-12} at the PHY service interface

» Provide physical layer specifications:
  > At least one PHY for 1G-EPON operating over single SM fiber-based point-to-multipoint topology, supporting at least 29dB power budget
  > At least one PHY for 10G-EPON operating over single SM fiber-based point-to-multipoint topology, supporting more than XXdB power budget

» Define new power classes for EPON and associated parameters via specification of new PMDs or power budget extender (PBEx) devices. The new power classes are to exceed power budgets supported by IEEE Std 802.3-2008, Clause 60 and IEEE Std 802.3av-2009, Clause 75, i.e. at least 29dB for 1G-EPON and more than 29dB for 10G-EPON.

» Maintain upgrade path from 1G-EPON to 10G-EPON on the same ODN i.e. support the same power budget classes for 1G-EPON and 10G-EPON.

» Support evolutionary upgrade from existing EPON deployments into ExEPON deployments without affecting already fielded ONUs.