Replace Subclause 56.1.2 with the following text

56.1.2 Summary of P2MP sublayers

For P2MP optical fiber topologies, EFM supports currently two systems:

a) PON with a symmetric, nominal bit rate of 1 Gb/s, shared amongst the population of Optical Network Units (ONUs) attached to the P2MP topology. The P2MP PHYs use the 1000BASE–X Physical Coding Sublayer (PCS), the Physical Medium Attachment (PMA) sublayer defined in @@Clause 60@@, and an optional Forward Error Correction (FEC) function defined in Clause 65;

b) PON with a nominal bit rate of 10 Gb/s in downstream and 10 Gb/s upstream (symmetric, 10G–EPON) as well as PON with a nominal bit rate of 10 Gb/s in downstream and 1 Gb/s upstream (asymmetric, 10G–EPON), shared amongst the population of ONUs attached to the P2MP topology. The P2MP PHYs use the 10GBASE–R PCS, the PMA sublayer defined in @@Clause 91@@, and an mandatory FEC function defined in @@Clause 92@@.

56.1.2.1 Multipoint MAC Control Protocol (MPCP)

The Multipoint MAC Control Protocol (MPCP) for 1 Gb/s EPON uses messages, state machines, and timers, as defined in Clause 64, to control access to a P2MP topology, while Clause 93 defines the messages, state machines, and timers required to control access to a P2MP topology in 10G-EPON (10 Gb/s EPON). The issues related with coexistence of EPON and 10G-EPON on the same fibre plant are described in @@Subclause 93.4@@.

Every P2MP topology consists of one Optical Line Terminal (OLT) plus one or more ONUs, as shown in Figure 56–2. One of several instances of the MPCP in the OLT communicates with the instance of the MPCP in the ONU. A pair of MPCPs that communicate between the OLT and ONU are a distinct and associated pair.

56.1.2.2 Reconciliation Sublayer (RS) and media independent interfaces

The Clause 22 Reconciliation Sublayer (RS) and Media Independent Interface (MII), Clause 35 RS and Gigabit Media Independent Interface (GMII) and @@Clause 46@@ RS and 10 Gigabit Media Independent Interface (GMII) are employed for the same purpose in EFM, that being the interconnection between the MAC sublayer and the PHY sublayers. Extensions to the Clause 35 RS for P2MP topologies are described in Clause 65, while extensions to the @@Clause 46@@ RS for P2MP topologies are described in @@Clause 92@@. The combination of MPCP and the extension of the RS for P2P Emulation allows an underlying P2MP network to appear as a collection of point–to–point links to the higher protocol layers (at and above the MAC Client). It achieves this by prepending a Logical Link Identification (LLID) to the beginning of each data frame, replacing two octets of the preamble. This is described in Clause 65 for EPON and in @@Clause 92@@ for 10G–EPON. EFM Copper links use the MII of Clause 22 operating at 100 Mb/s. This is described in 61.1.4.1.2.