

IEEE 802.3ah EPON Framework

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Introduction to 1000Mb/s Passive Optical Networks – New Clause

□ Overview

- Scope
- Objectives
- Summary of EPON sublayers
- Management

□ State diagrams

□ Delay constraints

10Mb/s, 100Mb/s, 1000Mb/s and 10Gb/s Management – Clause 30

- Additions to existing sections

Reconciliation Sublayer (RS) and GMII

– New Clause

- ❑ Overview
- ❑ Functional specification
- ❑ Signal mapping
 - Example: Burst control

Physical Coding Sublayer (PCS) and Physical Medium Attachment (PMA) – New Clause

- ❑ **Overview**
- ❑ **PCS layer**
 - Example: FEC implementation
- ❑ **PMA sublayer**
 - Example: link monitoring, burst synchronization
- ❑ **Compatibility considerations**
- ❑ **Delay constraints**
- ❑ **Environmental specifications**

Multipoint Multiplexing – New Clause

- ❑ **Overview**
- ❑ **Multipoint operation**
 - Principles
 - Architecture
- ❑ **Multipoint control**
 - Manipulation of space-time
- ❑ **Multipoint control protocol (MPCP)**
- ❑ **Configuration capabilities and restrictions**

Management Data Input/output (MDIO)

– Clauses 22, 45

- ❑ Overview
- ❑ MDIO Interface Registers
 - Shim layer 1
 - Shim layer 2
 - Etc

System Considerations for EPONs – New Clause

- ❑ Overview
- ❑ Transmission system model
- ❑ Topology limitations
- ❑ Environmental considerations

Possibly Affected Clauses

- ❑ 28 – Auto negotiation
- ❑ 31 – MAC control
- ❑ 35 – Reconciliation Sublayer (RS) and GMII
- ❑ 36 – Physical Coding Sublayer (PCS) and Physical Medium Attachment (PMA)
- ❑ 37 – Auto negotiation
- ❑ 43 – Link aggregation