

Managed Objects for the Ethernet Passive Optical Networks
<[draft-ietf-hubmib-efm-epon-mib-01.txt](#)>

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Abstract

This document defines a portion of the Management Information Base (MIB) for use with network management protocols in TCP/IP based Internets. In particular, it defines objects for managing devices and interfaces that conform to the Ethernet Passive Optical Networks (EPON) standards as defined in [[802.3ah](#)]. The document contains a list of management entities based on the registers defined in the Institute of Electrical and Electronic Engineers, IEEE Draft 802.3ah-2002 Draft [3.2](#) Annex 30A and mainly partitioned accordingly.

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Terminology

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "NOT RECOMMENDED", "MAY", and "OPTIONAL", when used in the guidelines in this memo, are to be interpreted as described in [RFC 2119](#) [[RFC2119](#)].

1 The Internet-Standard Management Framework

For a detailed overview of the documents that describe the current Internet-Standard Management Framework, please refer to [section 7 of RFC 3410](#) [[RFC3410](#)].

Managed objects are accessed via a virtual information store, termed the Management Information Base or MIB. MIB objects are generally accessed through the Simple Network Management Protocol (SNMP). Objects in the MIB are defined using the mechanisms defined in the Structure of Management Information (SMI). This memo specifies a MIB module that is compliant to the SMIV2, which is described in STD 58, [RFC 2578](#) [[RFC2578](#)], STD 58, [RFC 2579](#) [[RFC2579](#)] and STD 58, [RFC 2580](#) [[RFC2580](#)].

2 Overview

This document defines a portion of the Management Information Base (MIB) for use with network management protocols in TCP/IP based Internets. In particular, it defines objects for managing devices and interfaces that conform to the Ethernet Passive Optical Networks (EPON) standards as defined in [[802.3ah](#)]. The document contains a list of management entities based on the registers defined in the [[802.3ah](#)] Annex 30A and mainly partitioned accordingly.

The document also contains a device group section defining the MIBs for EPON from a device perspective, which are connected directly to the IEEE 802.3ah layer2 specifications.

The document also provides amendments to the 802.3 MAU MIBs documents for the EFM device type addition.

2.1 Relationship of the EFM EPON MIB to the Interfaces MIB, the Ethernet-like Interfaces MIB and the MAU MIB EFM EPON interfaces require implementation of Interfaces MIB [[RFC2863](#)], Ethernet-like Interfaces MIB [[RFC2665](#)] and MAU-MIB [[RFC3636](#)].

The MIBs defined in this document are an extension for these MIBs. For instance defining dot3MpcpRemoteMACAddress only while assuming the local MAC address attribute is already defined in [[RFC 2665](#)].

2.2 Relationship of the EFM EPON MIB to the Generic EFM MIB

EFM EPON interfaces require implementation of Generic EFM MIB [draft-ietf-hubmib-efm-mib]. This document defines general EFM attributes and managed objects that are referred in the document.

2.3 Relationship of the EPON Device MIB to EFM EPON MIB

EPON devices require implementation of the EFM EPON MIBs which are

specified in this document. The opposite is not required as it possible to implement the EFM interfaces by itself.

2.4 Relationship of the EPON Device MIB to Optical interface MIB

EPON devices may implement the Optical interface MIB [[RFC3591](#)]. This document defines optical interface attributes and managed objects that are assumed to be used by an EPON device.

2.5 Relationship of the EPON Device MIB to bridge MIB

EPON OLT devices may implement the bridge MIBs [[RFC1493](#)], [[RFC1525](#)], where the LLIDs of the PON are referred as the bridge ports. This document defines managed objects for a bridge that are assumed to be used by an EPON OLT device which bridges the data between the LLIDs of the PON.

3 MIB structure

This document includes two MIBs the first is the EFM EPON MIBs and the second is the EPON device MIBs.

The EFM EPON MIBs defines the objects used for configuration and description of the [[802.3ah](#)] P2MP section.

These MIB objects are included of three MIB groups.

The MPCP MIBs definition ù MIBs related to [[802.3ah](#)] clause 64 Multi Point Control Protocol attributes. In this MIB group:

The dot3MpcpTable defines the objects used for the configuration and description of the status of MPCP compliant interfaces.

The dot3MpcpStatTable defines the statistics group for MPCP compliant interfaces.

The OMPEmulation MIBs definitions ù MIBs related to [[802.3ah](#)] clause **65 point to point emulation attributes. In this MIB group:**

The dot3OmpEmulationTable defines the objects used for the configuration and description of the status of OMPEmulation compliant interfaces.

The dot3OmpEmulationStatTable defines the statistics group for OMPEmulation compliant interfaces.

The MAU MIBs definition including MAU type definitions and EPON MAU managed object related to [[802.3ah](#)] clause 60 and clause 65.

The dot3EponMauTable defines the objects used for the configuration and description of the status of MAU EPON compliant interfaces.

The dot3EponMauType defines the Type group for [802.3] EPON MAUs.

Editor note - The MAU Type object should probably be with other 802.3 MAU type objects [[RFC 3636](#)].

The EPON Device MIBs defines the objects used for configuration and description of management objects for EPON compliant Devices.

The eponDeviceTable defines the objects used for the configuration and description of the EPON compliant devices.

4 Definitions of The EFM EPON MIB (See [section 30.2.5](#) in 802.3ah draft for details):

DOT3-EFM-EPON-MIB DEFINITIONS ::= BEGIN

IMPORTS

MODULE-IDENTITY, mib-2, OBJECT-TYPE, Counter32,
Integer32, OBJECT-IDENTITY
FROM SNMPv2-SMI
TruthValue, MacAddress
FROM SNMPv2-TC
ifIndex
FROM IF-MIB
MODULE-COMPLIANCE, OBJECT-GROUP
FROM SNMPv2-CONF
;

dot3EfmeponMIB MODULE-IDENTITY

LAST-UPDATED "200404290000Z" -- April 29, 2004

ORGANIZATION "IETF Ethernet Interfaces and Hub MIB
Working Group"

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DESCRIPTION

"The objects in this MIB module are used to manage

the Ethernet in the First Mile (EFM) Multi Point Control Protocol (MPCP) Interfaces as defined in IEEE Draft P802.3ah/D3.0 clause 64,65.

The following reference is used throughout this MIB module:

[802.3ah] refers to:

IEEE Draft P802.3ah/D3.3: 'Draft amendment to - Information technology - Telecommunications and information exchange between systems - Local and metropolitan area networks - Specific requirements - Part 3: Carrier sense multiple access with collision detection (CSMA/CD) access method and physical layer specifications - Media Access Control Parameters, Physical Layers and Management Parameters for subscriber access networks', 22 April 2004.

Of particular interest are Clause 64(MPCP) 65(P2mP RS) and 60 (PON PMDs). Clause 30, 'Management', and Clause 45, 'Management Data Input/Output (MDIO) Interface'.

Copyright (C) The Internet Society (2003). This version of this MIB module is part of XXXX see the RFC itself for full legal notices."

-- Editor's Note: Replace XXXX with the actual RFC number
-- assigned by RFC Editor and remove this note

REVISION "200404290000Z" -- April 29, 2004
DESCRIPTION "Initial version, published as RFC XXXX."

::= { mib-2 XXX }

-- Editor's Note: Replace XXX with a real OID once it is
-- assigned by IANA and remove this note.

-- Editor's note: MPCP MIBs definitions ([[802.3ah](#)] clause 30.3.5)
-- Editor's note: Description in attributes with References should be
-- minimized in later versions

dot3MpcpMIB OBJECT IDENTIFIER ::= { dot3EfmeponMIB 1}

dot3MpcpObjects OBJECT IDENTIFIER ::= { dot3MpcpMIB 1}

dot3MpcpConformance OBJECT IDENTIFIER ::= { dot3MpcpMIB 2}

dot3MpcpTable OBJECT-TYPE
SYNTAX SEQUENCE OF Dot3MpcpEntry

```

MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
    "Table for dot3 MPCP MIBs."
 ::= { dot3MpcpObjects 1 }

```

```

dot3MpcpEntry OBJECT-TYPE
    SYNTAX Dot3MpcpEntry
    MAX-ACCESS not-accessible

```

```

STATUS current
DESCRIPTION
    "An entry in the dot3 MPCP MIBs table."
INDEX { ifIndex }
 ::= { dot3MpcpTable 1 }

```

```

Dot3MpcpEntry ::=
    SEQUENCE {

```

dot3MpcpID	Integer32,
dot3MpcpAdminState	TruthValue,
dot3MpcpMode	INTEGER,
dot3MpcpLinkID	Integer32,
dot3MpcpRemoteMACAddress	MacAddress,
dot3MpcpRegistrationState	INTEGER,
dot3MpcpTransmitElapsed	Integer32,
dot3MpcpReceiveElapsed	Integer32,
dot3MpcpRoundTripTime	Integer32,
dot3MpcpMaximumPendingGrants	Integer32,
dot3MPCPAdminControl	TruthValue,
dot3MpcpOnTime	Integer32,
dot3MpcpOffTime	Integer32,
dot3MpcpSyncTime	Integer32

}

```

dot3MpcpID OBJECT-TYPE

```

```

SYNTAX Integer32

```

```

    MAX-ACCESS read-only

```

```

    STATUS current

```

```

    DESCRIPTION

```

"This variable is assigned so as to uniquely identify the Multi-Point MAC Control (MPCP) entity, as defined in [\[802.3ah\]](#) clause 64, among the subordinate managed objects of the containing object."

```

REFERENCE    "[802.3ah], 30.3.5.1.1."

```

```

 ::= { dot3MpcpEntry 1 }

```

```

dot3MpcpAdminState OBJECT-TYPE

```

```

SYNTAX TruthValue

```

```

    MAX-ACCESS read-only

```


STATUS current

DESCRIPTION

"This variable can be used to define the operational state of the Multi-Point MAC Control sublayer as defined in [802.3ah] clause 64. Selecting admin for an interface with Multi-Point MAC Control sublayer"

REFERENCE "[802.3ah], 30.3.5.1.2."
::= { dot3MpcpEntry 2 }

dot3MpcpMode OBJECT-TYPE

SYNTAX INTEGER {
 olt(1),
 onu(2)
}

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This variable can be used to identify the operational state of the Multi-Point MAC Control sublayer as defined in [802.3ah] clause 64. Selecting olt for an OLT (server) mode and onu for an ONU (client) mode."

REFERENCE "[802.3ah], 30.3.5.1.3."
::= { dot3MpcpEntry 3 }

dot3MpcpLinkID OBJECT-TYPE

SYNTAX Integer32
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"A read-only value that identifies the Logical Link identity (LLID) associated with the MAC port as specified in [802.3ah] clause 65.1.3.2.2."

REFERENCE "[802.3ah], 30.3.5.1.4."
::= { dot3MpcpEntry 4 }

dot3MpcpRemoteMACAddress OBJECT-TYPE

SYNTAX MacAddress
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"A read-only value that identifies the source_address parameter of the last MPCPDUs passed to the MAC Control. This value is updated on reception of a valid frame with (1) a destination Field equal to the reserved multicast address for MAC Control specified in [802.3ah] Annex 31A, (2) lengthOrType field value equal to the reserved Type for MAC Control as specified in [802.3ah] Annex 31A. (3) an MPCP subtype value equal to the subtype reserved for MPCP as specified in [802.3ah] Annex 31A."

REFERENCE "[802.3ah], 30.3.5.1.5."
::= { dot3MpcpEntry 5 }

dot3MpcpRegistrationState OBJECT-TYPE

SYNTAX INTEGER {
 unregistered(1),
 registering(2),
 registered(3)
}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A read-only value that identifies the operational state of the Multi-Point MAC Control sublayer as defined in [802.3ah] clause 64. When this attribute has the enumeration 'unregistered' the interface may be used for registering a link partner. When this attribute has the enumeration 'registering' the interface is in the process of registering a link-partner. When this attribute has the enumeration 'registered' the interface has an established link-partner."

REFERENCE "[802.3ah], 30.3.5.1.6."
::= { dot3MpcpEntry 6 }

dot3MpcpTransmitElapsed OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A read-only value that reports the interval from last MPCP frame transmission in increments of 16ns. The value returned shall be (interval from last MPCP frame transmission in ns)/16, where this value exceeds (2³²-1) the value (2³²-1) shall be returned."

REFERENCE "[802.3ah], 30.3.5.1.19."
::= { dot3MpcpEntry 7 }

dot3MpcpReceiveElapsed OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A read-only value that reports the interval from last MPCP frame reception in increments of 16ns. The value returned shall be (interval from last MPCP last MPCP frame reception in ns)/16, where this value exceeds (2³²-1) the value (2³²-1) shall be returned."

REFERENCE "[802.3ah], 30.3.5.1.20."
::= { dot3MpcpEntry 8 }

dot3MpcpRoundTripTime OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A read-only value that reports the MPCP round trip time in increments of 16ns. The value returned shall be (round trip time in ns)/16, where this value exceeds (2¹⁶-1) the value (2¹⁶-1) shall be returned."

REFERENCE "[[802.3ah](#)], 30.3.5.1.21."

::= { dot3MpcpEntry 9 }

dot3MpcpMaximumPendingGrants OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A read-only value that indicates the maximum number of grants an ONU can store. The maximum number of grants an ONU can store has a range of 0 to 255."

REFERENCE "[[802.3ah](#)], 30.3.5.1.24."

::= { dot3MpcpEntry 10 }

dot3MPCPAdminControl OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This variable can be used to define the operational state of the Multi-Point MAC Control sublayer as defined in [[802.3ah](#)] clause 64. Selecting admin for an interface with Multi-Point MAC Control sublayer."

REFERENCE "[[802.3ah](#)], 30.3.5.2.1."

::= { dot3MpcpEntry 11 }

dot3MpcpOnTime OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A read-only value that reports the on time for a grant burst in increments of 16ns as defined in [[802.3ah](#)] 60,64. The value returned shall be (on time ns)/16, where this value exceeds (2³²-1) the value (2³²-1) shall be returned."

REFERENCE "[[802.3ah](#)], 64.3.5.1."

::= { dot3MpcpEntry 12 }

dot3MpcpOffTime OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A read-only value that reports the off time for a grant burst in increments of 16ns as defined in [802.3ah] 60,64. The value returned shall be $(\text{off time ns})/16$, where this value exceeds $(2^{32}-1)$ the value $(2^{32}-1)$ shall be returned."

REFERENCE "[802.3ah], 64.3.5.1."

::= { dot3MpcpEntry 13 }

dot3MpcpSyncTime OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A read-only value that reports the sync lock time for an OLT receiver in increments of 16ns as defined in [802.3ah] 60,64,65. The value returned shall be $(\text{sync lock time ns})/16$, where this value exceeds $(2^{32}-1)$ the value $(2^{32}-1)$ shall be returned."

REFERENCE "[802.3ah], 64.3.3.2."

::= { dot3MpcpEntry 14 }

dot3MpcpStatTable OBJECT-TYPE

SYNTAX SEQUENCE OF Dot3MpcpStatEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This table defines the list of statistics counters of [802.3ah] clause 64 MPCP interface."

::= { dot3MpcpObjects 2 }

dot3MpcpStatEntry OBJECT-TYPE

SYNTAX Dot3MpcpStatEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Table entries for Table of statistics counters of [802.3ah] clause 64

MPCP interface."

INDEX { ifIndex }

::= { dot3MpcpStatTable 1 }

Dot3MpcpStatEntry ::=

SEQUENCE {

dot3MpcpMACCtrlFramesTransmitted	Counter32,
dot3MpcpMACCtrlFramesReceived	Counter32,
dot3MpcpDiscoveryWindowsSent	Counter32,
dot3MpcpDiscoveryTimeout	Counter32,
dot3MpcpTxRegRequest	Counter32,
dot3MpcpRxRegRequest	Counter32,
dot3MpcpTxRegAck	Counter32,
dot3MpcpRxRegAck	Counter32,
dot3MpcpTxReport	Counter32,
dot3MpcpRxReport	Counter32,
dot3MpcpTxGate	Counter32,
dot3MpcpRxGate	Counter32,
dot3MpcpTxRegister	Counter32,
dot3MpcpRxRegister	Counter32,
dot3MpcpRxNotSupportedMPCP	Counter32
}	

dot3MpcpMACCtrlFramesTransmitted OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A count of MPCP frames passed to the MAC sublayer for transmission. This counter is incremented when a MA_CONTROL.request service primitive is generated within the MAC control sublayer with an opcode indicating a MPCP frame."

REFERENCE "[[802.3ah](#)], 30.3.5.1.7."

::= { dot3MpcpStatEntry 1 }

dot3MpcpMACCtrlFramesReceived OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A count of MPCP frames passed by the MAC sublayer to the MAC Control sublayer. This counter is incremented when a ReceiveFrame function call returns a valid frame with: (1) a lengthOrType field value equal to the reserved Type for 802.3_MAC_Control as specified in 31.4.1.3, and (2) an opcode indicating a MPCP frame."

REFERENCE "[[802.3ah](#)], 30.3.5.1.8."

::= { dot3MpcpStatEntry 2 }

dot3MpcpDiscoveryWindowsSent OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A count of discovery windows generated. The counter is incremented by one for each generated discovery window."

REFERENCE "[[802.3ah](#)], 30.3.5.1.22."
::= { dot3MpcpStatEntry 3}

dot3MpcpDiscoveryTimeout OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A count of the number of times a discovery timeout occurs. Increment the counter by one for each discovery processing state-machine reset resulting from timeout waiting for message arrival."

REFERENCE "[[802.3ah](#)], 30.3.5.1.23."
::= { dot3MpcpStatEntry 4}

dot3MpcpTxRegRequest OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A count of the number of times a REGISTER_REQ MPCP frames transmission occurs. Increment the counter by one for each REGISTER_REQ MPCP frame transmitted as defined in [[802.3ah](#)] clause 64. This counter is mandatory for an ONU"

REFERENCE "[[802.3ah](#)], 30.3.5.1.12."
::= { dot3MpcpStatEntry 5}

dot3MpcpRxRegRequest OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A count of the number of times a REGISTER_REQ MPCP frames reception occurs. A single counter at the ONU and a set of counters, one for each LLID, at the OLT. Increment the counter by one for each REGISTER_REQ MPCP frame received for each LLID as defined in [[802.3ah](#)] clause 64. This counter is mandatory for an ONU and for an OLT"

REFERENCE "[[802.3ah](#)], 30.3.5.1.17."
::= { dot3MpcpStatEntry 6}

dot3MpcpTxRegAck OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a REGISTER_ACK MPCP frames transmission occurs. Increment the counter by one for each REGISTER_ACK MPCP frame transmitted as defined in [802.3ah] clause 64. This counter is mandatory for an ONU"

REFERENCE "[802.3ah], 30.3.5.1.10."

::= { dot3MpcpStatEntry 7}

dot3MpcpRxRegAck OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a REGISTER_ACK MPCP frames reception occurs. A single counter at the ONU and a set of counters, one for each LLID, at the OLT. Increment the counter by one for each REGISTER_ACK MPCP frame received for each LLID, as defined in [802.3ah] clause 64. This counter is mandatory for an ONU and for an OLT"

REFERENCE "[802.3ah], 30.3.5.1.15."

::= { dot3MpcpStatEntry 8}

dot3MpcpTxReport OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a REPORT MPCP frames transmission occurs. Increment the counter by one for each REPORT MPCP frame transmitted as defined in [802.3ah] clause 64. This counter is mandatory for an ONU."

REFERENCE "[802.3ah], 30.3.5.1.13."

::= { dot3MpcpStatEntry 9}

dot3MpcpRxReport OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a REPORT MPCP frames reception occurs. A single counter at the ONU and a set of counters, one for each LLID, at the OLT. Increment the counter by one for each REPORT MPCP frame received for each LLID, as defined in [802.3ah] clause 64. This counter is mandatory for an ONU and for an OLT."

REFERENCE "[802.3ah], 30.3.5.1.18."

::= { dot3MpcpStatEntry 10}

dot3MpcpTxGate OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A count of the number of times a GATE MPCP frames transmission occurs. A set of counters, one for each LLID, at the OLT. Increment the counter by one for each GATE MPCP frame transmitted, for each LLID, as defined in [802.3ah] clause 64. This counter is mandatory for an OLT."

REFERENCE "[802.3ah], 30.3.5.1.9."
::= { dot3MpcpStatEntry 11}

dot3MpcpRxGate OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A count of the number of times a GATE MPCP frames reception occurs. A single counter at the ONU and a set of counters, one for each LLID, at the OLT. Increment the counter by one for each GATE MPCP frame received, for each LLID, as defined in [802.3ah] clause 64. This counter is mandatory for an ONU and for an OLT."

REFERENCE "[802.3ah], 30.3.5.1.14."
::= { dot3MpcpStatEntry 12}

dot3MpcpTxRegister OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A count of the number of times a REGISTER MPCP frames transmission occurs. A set of counters, one for each LLID, at the OLT. Increment the counter by one for each REGISTER MPCP frame transmitted, for each LLID, as defined in [802.3ah] clause 64. This counter is mandatory for an OLT."

REFERENCE "[802.3ah], 30.3.5.1.11."
::= { dot3MpcpStatEntry 13}

dot3MpcpRxRegister OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A count of the number of times a REGISTER MPCP frames reception occurs. A single counter at the ONU and a set of counters, one for each LLID, at the OLT. Increment the counter by one for each REGISTER

MPCP frame received, for each LLID, as defined in [[802.3ah](#)] clause 64.
This counter

is mandatory for an ONU and for an OLT."

REFERENCE "[[802.3ah](#)], 30.3.5.1.16."

::= { dot3MpcpStatEntry 14}

dot3MpcpRxNotSupportedMPCP OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a non-supported MPCP frames reception occurs. A single counter at the ONU and a set of counters, one for each LLID, at the OLT. Increment the counter by one for each non-supported MPCP frame received, for each LLID, as defined in [[802.3ah](#)] clause 64. This counter is mandatory for an ONU and for an OLT."

::= { dot3MpcpStatEntry 15}

-- Conformance Statements

-- Conformance Groups

dot3MpcpGroups OBJECT IDENTIFIER ::= { dot3MpcpConformance 1 }

dot3MpcpGroupBase OBJECT-GROUP

OBJECTS {

dot3MpcpID,
dot3MpcpAdminState,
dot3MpcpMode,
dot3MpcpLinkID,
dot3MpcpRemoteMACAddress,
dot3MpcpRegistrationState,
dot3MpcpMaximumPendingGrants,
dot3MPCPAdminControl

}

STATUS current

DESCRIPTION

"A collection of objects of dot3 Mpcp Basic entity state

```
definition."
    ::= { dot3MpcpGroups 1 }

dot3MpcpGroupParam OBJECT-GROUP
    OBJECTS {
        dot3MpcpTransmitElapsed,
        dot3MpcpReceiveElapsed,
        dot3MpcpRoundTripTime,
        dot3MpcpOnTime,
        dot3MpcpOffTime,
        dot3MpcpSyncTime
    }

    STATUS current
    DESCRIPTION
        "A collection of objects of dot3 Mpcp for P2MP
parameters."
    ::= { dot3MpcpGroups 2 }

dot3MpcpGroupStat OBJECT-GROUP
    OBJECTS {
        dot3MpcpMACCtrlFramesTransmitted,
        dot3MpcpMACCtrlFramesReceived,
        dot3MpcpDiscoveryWindowsSent,
        dot3MpcpDiscoveryTimeout ,
        dot3MpcpTxRegRequest,
        dot3MpcpRxRegRequest,
        dot3MpcpTxRegAck,
        dot3MpcpRxRegAck,
        dot3MpcpTxReport,
        dot3MpcpRxReport,
        dot3MpcpTxGate,
        dot3MpcpRxGate,
        dot3MpcpTxRegister,
        dot3MpcpRxRegister,
        dot3MpcpRxNotSupportedMPCP
    }

    STATUS current
    DESCRIPTION
        "A collection of objects of dot3 Mpcp Statistics"
    ::= { dot3MpcpGroups 3 }
```


-- Compliance

dot3MpcpCompliances OBJECT IDENTIFIER ::= { dot3MpcpConformance 2 }

dot3MPCPCompliance MODULE-COMPLIANCE

STATUS current

DESCRIPTION "The compliance statement for Multi-point
control protocol interfaces."

MODULE -- this module

MANDATORY-GROUPS { dot3MpcpGroupBase }

GROUP dot3MpcpGroupParam

DESCRIPTION "This group is mandatory for all
MPCP supporting interfaces
for configuration of the Multipoint
Parameters."

GROUP dot3MpcpGroupStat

DESCRIPTION " This group is mandatory for all
MPCP supporting interfaces
for Statistics collection."

::= { dot3MpcpCompliances 1 }

-- Editor's note: OMPEmulation managed object definitions

dot30mpEmulationMIB OBJECT IDENTIFIER ::= { dot3EfmeponMIB 2 }

dot30mpEmulationObjects OBJECT IDENTIFIER ::= { dot30mpEmulationMIB 1 }

dot30mpeConformance OBJECT IDENTIFIER ::= { dot30mpEmulationMIB 2 }

dot30mpEmulationTable OBJECT-TYPE

SYNTAX SEQUENCE OF Dot30mpEmulationEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Table for dot3 0mpEmulation MIBs."

::= { dot30mpEmulationObjects 1 }

dot30mpEmulationEntry OBJECT-TYPE


```
SYNTAX Dot3OmpEmulationEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
    "An entry in the dot3 OmpEmulation MIBs table."
INDEX { ifIndex }
 ::= { dot3OmpEmulationTable 1 }
```

```
Dot3OmpEmulationEntry ::=
    SEQUENCE {
        dot3OmpEmulationID          Integer32,
        dot3OmpEmulationType        INTEGER
    }
```

dot3OmpEmulationID OBJECT-TYPE

```
SYNTAX Integer32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    " The value of aOAMID is assigned so as to uniquely identify a
    OMPEmulation entity among the subordinate managed objects of the
    containing object."
REFERENCE    "[802.3ah], 30.3.7.1.1."
 ::= { dot3OmpEmulationEntry 1 }
```

dot3OmpEmulationType OBJECT-TYPE

```
SYNTAX INTEGER {
    unknown(1),
    olt(2),
    onu(3)
}
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    " A read-only value that indicates that mode of operation of the
    Reconciliation Sublayer for Point to Point Emulation (see [802.3ah]
    clause 65.1). æunknownÆ value is assigned in initializing, true state
    or type not yet known. æoltÆ value is assigned when Sublayer operating
    in OLT mode. æonuÆ value is assigned when Sublayer operating in ONU
    mode."
REFERENCE    "[802.3ah], 30.3.7.1.2."
 ::= { dot3OmpEmulationEntry 2 }
```

dot3OmpEmulationStatTable OBJECT-TYPE

```
SYNTAX SEQUENCE OF Dot3OmpEmulationStatEntry
```


MAX-ACCESS not-accessible
STATUS current

DESCRIPTION

"This table defines the list of statistics counters of [[802.3ah](#)]
clause 65 OMP interface."

::= { dot3OmpEmulationObjects 2 }

dot3OmpEmulationStatEntry OBJECT-TYPE

SYNTAX Dot3OmpEmulationStatEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Table entries for Table of statistics counters of [[802.3ah](#)] clause
65 OMP interface."

INDEX { ifIndex }

::= { dot3OmpEmulationStatTable 1 }

Dot3OmpEmulationStatEntry::=

SEQUENCE {

dot3OmpEmulationSLDErrors	Counter32,
dot3OmpEmulationCRC8Errors	Counter32,
dot3OmpEmulationBadLLID	Counter32,
dot3OmpEmulationGoodLLID	Counter32,
dot3OmpEmulationOnuPonCastLLID	Counter32,
dot3OmpEmulationOltPonCastLLID	Counter32,
dot3OmpEmulationBroadcastLLIDNotOnuID	Counter32,
dot3OmpEmulationOnuLLIDNotBroadcast	Counter32,
dot3OmpEmulationBroadcastLLIDPlusOnuId	Counter32,
dot3OmpEmulationNotBroadcastLLIDNotOnuId	Counter32

}

dot3OmpEmulationSLDErrors OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A count of frames received that do not contain a valid SLD field as
defined in [[802.3ah](#)] clause 65.1.3.3.1. This attribute is mandatory
for a OLT and optional for a ONU."

REFERENCE "[[802.3ah](#)], 30.3.7.1.3."

::= { dot3OmpEmulationStatEntry 1 }

dot3OmpEmulationCRC8Errors OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A count of frames received that contain a valid SLD field, as defined in [802.3ah] clause 65.1.3.3.1, but do not pass the CRC-8 check as defined in [802.3ah] clause 65.1.3.3.3. This attribute is mandatory for a OLT and optional for a ONU."

REFERENCE "[802.3ah], 30.3.7.1.4."
::= { dot30mpEmulationStatEntry 2}

dot30mpEmulationBadLLID OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of frames received that contain a valid SLD field in a OLT, as defined in [802.3ah] clause 65.1.3.3.1, and pass the CRC-8 check, as defined in [802.3ah] clause 65.1.3.3.3, but are discarded due to the LLID check as defined in [802.3ah] clause 65.1.3.3.2."

REFERENCE "[802.3ah], 30.3.7.1.8."
::= { dot30mpEmulationStatEntry 3}

dot30mpEmulationGoodLLID OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of frames received that contain a valid SLD field in a OLT, as defined in [802.3ah] clause 65.1.3.3.1, and pass the CRC-8 check, as defined in [802.3ah] clause 65.1.3.3.3"

REFERENCE "[802.3ah], 30.3.7.1.5."
::= { dot30mpEmulationStatEntry 4}

dot30mpEmulationOnuPonCastLLID OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A count of frames received that contain a valid SLD field in an ONU, as defined in [802.3ah] 65.1.3.3.1, passes the CRC-8 check, as defined in [802.3ah] 65.1.3.3.3, and the frame meets the rule for acceptance defined in [802.3ah] 65.1.3.3.2."

REFERENCE "[802.3ah], 30.3.7.1.6."
::= { dot30mpEmulationStatEntry 5}

dot30mpEmulationOltPonCastLLID OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A count of frames received that contain a valid SLD field in an OLT, as defined in [802.3ah] 65.1.3.3.1, passes the CRC-8 check, as defined in [802.3ah] 65.1.3.3.3, and the frame meets the rule for acceptance defined in [802.3ah] 65.1.3.3.2."

REFERENCE "[802.3ah], 30.3.7.1.7."

::= { dot30mpEmulationStatEntry 6}

dot30mpEmulationBroadcastLLIDNotOnuID OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A count of frames received that contain a valid SLD field in a OLT, as defined in [802.3ah] clause 65.1.3.3.1, and pass the CRC-8 check, as defined in [802.3ah] clause 65.1.3.3.3, and contain broadcast LLID as defined in [802.3ah] clause 65. This attribute is mandatory for a OLT and for a ONU."

::= { dot30mpEmulationStatEntry 7}

dot30mpEmulationOnuLLIDNotBroadcast OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A count of frames received that contain a valid SLD field in a OLT, as defined in [802.3ah] clause 65.1.3.3.1, and pass the CRC-8 check, as defined in [802.3ah] clause 65.1.3.3.3, and contain the ONU's LLID as defined in [802.3ah] clause 65. This attribute is mandatory for an ONU and mandatory for a OLT (a counter per LLID)."

::= { dot30mpEmulationStatEntry 8}

dot30mpEmulationBroadcastLLIDPlusOnuId OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A count of frames received that contain a valid SLD field in a OLT, as defined in [802.3ah] clause 65.1.3.3.1, and pass the CRC-8 check, as defined in [802.3ah] clause 65.1.3.3.3, and contain the broadcast LLID plus ONU's LLID (frame reflected) as defined in [802.3ah] clause 65. This attribute is mandatory for an ONU and mandatory for a OLT (a counter per LLID)."

::= { dot30mpEmulationStatEntry 9}

dot3OmpEmulationNotBroadcastLLIDNotOnuId OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of frames received that contain a valid SLD field in a OLT, as defined in [802.3ah] clause 65.1.3.3.1, and pass the CRC-8 check, as defined in [802.3ah] clause 65.1.3.3.3, and does not contain the ONU's LLID as defined in [802.3ah] clause 65. This attribute is mandatory for an ONU"

::= { dot3OmpEmulationStatEntry 10}

-- Conformance Statements

-- Conformance Groups

dot3OmpGroups OBJECT IDENTIFIER ::= { dot3OmpConformance 1}

dot3OmpGroupID OBJECT-GROUP

OBJECTS {

dot3OmpEmulationID,
dot3OmpEmulationType

}

STATUS current

DESCRIPTION

"A collection of objects of dot3 OMP emulation ID entity state definition."

::= { dot3OmpGroups 1 }

dot3OmpGroupStat OBJECT-GROUP

OBJECTS {

dot3OmpEmulationSLDErrors,
dot3OmpEmulationCRC8Errors,
dot3OmpEmulationBadLLID,
dot3OmpEmulationGoodLLID,
dot3OmpEmulationOnuPonCastLLID,
dot3OmpEmulationOltPonCastLLID,
dot3OmpEmulationBroadcastLLIDNotOnuID,
dot3OmpEmulationOnuLLIDNotBroadcast,

```
        dot3OmpEmulationBroadcastLLIDPlusOnuId,
        dot3OmpEmulationNotBroadcastLLIDNotOnuId
    }

    STATUS    current
    DESCRIPTION
        "A collection of objects of dot3 OMP emulation
Statistics"
        ::= { dot3OmpGroups 2 }

-- Compliance

dot3OmpCompliances OBJECT IDENTIFIER ::= { dot3OmpConformance 2 }

dot3OmpCompliance MODULE-COMPLIANCE
    STATUS    current
    DESCRIPTION "The compliance statement for OMPEmulation
interfaces."

    MODULE -- this module
        MANDATORY-GROUPS { dot3OmpGroupID}

        GROUP    dot3OmpGroupStat
        DESCRIPTION " This group is mandatory for all
                    OMPemulation supporting interfaces
                    for Statistics collection."

        ::= { dot3OmpCompliances 1}


-- Editor's note:  MAU managed object definitions (30.5.1)

dot3EponMauMIB OBJECT IDENTIFIER ::= { dot3EfmeponMIB 3}

dot3EponMauObjects OBJECT IDENTIFIER ::= { dot3EponMauMIB 1}

dot3EponMauConformance OBJECT IDENTIFIER ::= { dot3EponMauMIB 2 }

dot3EponMauTable OBJECT-TYPE
    SYNTAX  SEQUENCE OF Dot3EponMauEntry
    MAX-ACCESS  not-accessible
    STATUS    current
    DESCRIPTION
        "Table for dot3 MAU EPON MIBs."
        ::= { dot3EponMauObjects 1 }
```



```

dot3EponMauEntry OBJECT-TYPE
    SYNTAX Dot3EponMauEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "An entry in the dot3 MAU EPON MIBs table."
    INDEX { ifIndex }
    ::= { dot3EponMauTable 1 }

```

```

Dot3EponMauEntry ::=
    SEQUENCE {
        dot3EponMauPCSCodingViolation      Counter32,
        dot3EponMauFecAbility              INTEGER,
        dot3EponMauFecMode                 INTEGER,
        dot3EponMauFECCorrectedBlocks      Counter32,
        dot3EponMauFECUncorrectableBlocks  Counter32,
        dot3EponMauBufferHeadCodingViolation Counter32
    }

```

```

dot3EponMauPCSCodingViolation OBJECT-TYPE
SYNTAX Counter32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        " For 100 Mb/ s operation it is a count of the number of times an
        invalid code-group is received, other than the /H/ code-group. For
        1000 Mb/ s operation it is a count of the number of times an invalid
        codegroup is received, other than the /V/ code-group."
        REFERENCE "[802.3ah], 30.5.1.1.12."
    ::= { dot3EponMauEntry 1}

```

```

dot3EponMauFecAbility OBJECT-TYPE
SYNTAX INTEGER {
    unknown (1),
    nonsupported (2),
    supported (3)
}
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "A read-only value that indicates the support of operation of the
        1000BASE-PX PHY optional FEC Sublayer for Forward error correction see
        [802.3ah] clause 65.2).
        æunknownÆ value is assigned in initializing, for non FEC support state

```


or type not yet known. ænonsupportedÆ value is assigned when Sublayer is not support. æsupportedÆ value is assigned when Sublayer is supported."

REFERENCE "[802.3ah], 30.5.1.1.13."
::= { dot3EponMauEntry 2}

dot3EponMauFecMode OBJECT-TYPE

SYNTAX INTEGER {
 unknown (1),
 disabled (2),
 enabled (3)
}

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"A read-write value that indicates the mode of operation of the 1000BASE-PX PHY optional FEC Sublayer for Forward error correction see [802.3ah] clause 65.2).

A GET operation returns the current mode of operation the PHY. A SET operation changes the mode of operation of the PHY to the indicated value.

æunknownÆ value is assigned in initializing, for non FEC support state or type not yet known. ædisabledÆ value is assigned when Sublayer operating in disabled mode. æenabledÆ value is assigned when Sublayer operating in FEC mode."

REFERENCE "[802.3ah], 30.5.1.1.14."
::= { dot3EponMauEntry 3}

dot3EponMauFECCorrectedBlocks OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" For 10PASS-TS, 2BASE-TL and 1000BASE-PX PHYs, a count of corrected FEC

blocks. This counter will not increment for other PHY Types. Increment the counter by one for each received block that is corrected by the FEC function in the PHY."

REFERENCE "[802.3ah], 30.5.1.1.15."
::= { dot3EponMauEntry 4}

dot3EponMauFECUncorrectableBlocks OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" For 10PASS-TS, 2BASE-TL and 1000BASE-PX PHYs, a count of uncorrectable FEC blocks. This counter will not increment for other

PHY Types.

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Increment the counter by one for each FEC block that is determined to be uncorrectable by the FEC function in the PHY."

REFERENCE "[[802.3ah](#)], 30.5.1.1.16."
::= { dot3EponMauEntry 5 }

dot3EponMauBufferHeadCodingViolation OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" For 1000 Mbps operation it is a counts of the number of invalid code-group received directly from the link."

::= { dot3EponMauEntry 6 }

-- Defining EPON MAU types

--This section should be added to 802.3 MAU MIB RFC.

dot3EponMauType OBJECT IDENTIFIER ::= { dot3EponMauMIB 3 }

eponMauType1000BasePX0LT OBJECT-IDENTITY

STATUS current

DESCRIPTION "Multipoint MAC Control (per 802.3 [section 64](#), 65) OLT (master), unknown PMD"

REFERENCE "[[802.3ah](#)], 30.5.1.1.2."
::= { dot3EponMauType 1 }

eponMauType1000BasePX0NU OBJECT-IDENTITY

STATUS current

DESCRIPTION "Multipoint MAC Control (per 802.3 [section 64](#), 65), ONU (slave), unknown PMD"

REFERENCE "[[802.3ah](#)], 30.5.1.1.2."
::= { dot3EponMauType 2 }

eponMauType1000BasePX10DOLT OBJECT-IDENTITY

STATUS current

DESCRIPTION "EPON over 10K link, downlink (per 802.3 [section 60](#)), OLT side"

REFERENCE "[[802.3ah](#)], 30.5.1.1.2."
::= { dot3EponMauType 3 }

eponMauType1000BasePX10DONU OBJECT-IDENTITY

STATUS current

DESCRIPTION "EPON over 10K link, downlink (per 802.3 [section 60](#)), ONU side"


```
REFERENCE      "[802.3ah], 30.5.1.1.2."  
::= { dot3EponMauType 4 }
```

```
eponMauType1000BasePX10UOLT OBJECT-IDENTITY  
    STATUS      current  
    DESCRIPTION "EPON over 10K link, uplink (per 802.3 section  
60), OLT side"  
    REFERENCE   "[802.3ah], 30.5.1.1.2."  
    ::= { dot3EponMauType 5 }
```

```
eponMauType1000BasePX10UONU OBJECT-IDENTITY  
    STATUS      current  
    DESCRIPTION "EPON over 10K link, uplink (per 802.3 section  
60), ONU side"  
    REFERENCE   "[802.3ah], 30.5.1.1.2."  
    ::= { dot3EponMauType 6 }
```

```
eponMauType1000BasePX20DOLT OBJECT-IDENTITY  
    STATUS      current  
    DESCRIPTION "EPON over 20K link, downlink (per 802.3 section  
60), OLT side"  
    REFERENCE   "[802.3ah], 30.5.1.1.2."  
    ::= { dot3EponMauType 7 }
```

```
eponMauType1000BasePX20DONU OBJECT-IDENTITY  
    STATUS      current  
    DESCRIPTION "EPON over 20K link, downlink (per 802.3 section  
60), ONU side"  
    REFERENCE   "[802.3ah], 30.5.1.1.2."  
    ::= { dot3EponMauType 8 }
```

```
eponMauType1000BasePX20UOLT OBJECT-IDENTITY  
    STATUS      current  
    DESCRIPTION "EPON over 20K link, uplink (per 802.3 section  
60), OLT side"  
    REFERENCE   "[802.3ah], 30.5.1.1.2."  
    ::= { dot3EponMauType 9 }
```

```
eponMauType1000BasePX20UONU OBJECT-IDENTITY  
    STATUS      current  
    DESCRIPTION "EPON over 20K link, uplink (per 802.3 section  
60), ONU side"
```

```
REFERENCE    "[802.3ah], 30.5.1.1.2."  
::= { dot3EponMauType 10 }
```

```
-- Conformance Statements
```

```
-- Conformance Groups
```

```
dot3EponMauGroups OBJECT IDENTIFIER ::= { dot3EponMauConformance 1 }
```

```
dot3EponMauGroupAll OBJECT-GROUP
```

```
    OBJECTS {  
        dot3EponMauPCSCodingViolation
```

```
    }
```

```
    STATUS current
```

```
    DESCRIPTION
```

```
        "A collection of objects of dot3 MAU definition."
```

```
    ::= { dot3EponMauGroups 1 }
```

```
dot3EponMauGroupFEC OBJECT-GROUP
```

```
    OBJECTS {  
        dot3EponMauFecAbility,  
        dot3EponMauFecMode,  
        dot3EponMauFECCorrectedBlocks,  
        dot3EponMauFECUncorrectableBlocks,  
        dot3EponMauBufferHeadCodingViolation
```

```
    }
```

```
    STATUS current
```

```
    DESCRIPTION
```

```
        "A collection of objects of FEC group definition."
```

```
    ::= { dot3EponMauGroups 2 }
```

```
-- Compliance
```

```
dot3EponMauCompliances OBJECT IDENTIFIER ::= { dot3EponMauConformance 2 }
```

```
dot3EponMauCompliance MODULE-COMPLIANCE
```

```
    STATUS current
```

```
    DESCRIPTION "The compliance statement for MAU EPON  
    interfaces."
```

```
    MODULE -- this module
```

```
        MANDATORY-GROUPS { dot3EponMauGroupAll }
```

GROUP dot3EponMauGroupFEC

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DESCRIPTION " This group is mandatory for all
EPON MAU devices Supporting FEC
functionality as for Definitions and BER
Statistics collection."

::= { dot3EponMauCompliances 1}

END

5. Relationship table of the dot3EFM MIB objects to the IEEE802.3ah objects

oMPCP managed object class (30.3.5)

dot3EFM MIB object	IEEE802.3ah object	Reference
dot3MpcpID	aMPCPID	30.3.5.1.1
dot3MpcpAdminState	aMPCPAdminState	30.3.5.1.2
dot3MpcpMode	aMPCPMode	30.3.5.1.3
dot3MpcpLinkID	aMPCPLinkID	30.3.5.1.4
dot3MpcpRemoteMACAddress	aMPCPRemoteMACAddress	30.3.5.1.5
dot3MpcpRegistrationState	aMPCPRegistrationState	30.3.5.1.6
dot3MpcpMACCtrlFramesTransmitted	aMPCPMACCtrlFramesTransmitted	30.3.5.1.7
dot3MpcpMACCtrlFramesReceived	aMPCPMACCtrlFramesReceived	30.3.5.1.8
dot3MpcpTxGate	aMPCPTxGate	30.3.5.1.9
dot3MpcpTxRegAck	aMPCPTxRegAck	30.3.5.1.10
dot3MpcpTxRegister	aMPCPTxRegister	30.3.5.1.11
dot3MpcpTxRegRequest	aMPCPTxRegRequest	30.3.5.1.12
dot3MpcpTxReport	aMPCPTxReport	30.3.5.1.13
dot3MpcpRxGate	aMPCPRxGate	30.3.5.1.14
dot3MpcpRxRegAck	aMPCPRxRegAck	30.3.5.1.15
dot3MpcpRxRegister	aMPCPRxRegister	30.3.5.1.16
dot3MpcpRxRegRequest	aMPCPRxRegRequest	30.3.5.1.17
dot3MpcpRxReport	aMPCPRxReport	30.3.5.1.18
dot3MpcpTransmitElapsed	aMPCPTransmitElapsed	30.3.5.1.19
dot3MpcpReceiveElapsed	aMPCPReceiveElapsed	30.3.5.1.20
dot3MpcpRoundTripTime	aMPCPRoundTripTime	30.3.5.1.21
dot3MpcpDiscoveryWindowsSent	aMPCPDDiscoveryWindowsSent	30.3.5.1.22
dot3MpcpDiscoveryTimeout	aMPCPDDiscoveryTimeout	30.3.5.1.23
dot3MpcpMaximumPendingGrants	aMPCPMaximumPendingGrants	30.3.5.1.24
dot3MPCPAdminControl	acMPCPAdminControl	30.3.5.2.1
dot3MpcpOnTime	laserOnTime	64.3.5.1
dot3MpcpOffTime	laserOffTime	64.3.5.1
dot3MpcpSyncTime	SyncTime	64.3.3.2
dot3MpcpRxNotSupportedMPCP		

oMPPEmulation managed object class (30.3.7)

dot3EFM MIB object	IEEE802.3ah object	Reference
dot3OmpEmulationID	aOMPPEmulationID	30.3.7.1.1
dot3OmpEmulationType	aOMPPEmulationType	30.3.7.1.2
dot3OmpEmulationSLDErrors	aSLDErrors	30.3.7.1.3
dot3OmpEmulationCRC8Errors	aCRC8Errors	30.3.7.1.4

dot30mpEmulationGoodLLID	aGoodLLID	30.3.7.1.5
dot30mpEmulationOnuPonCastLLID	aONUPONcastLLID	30.3.7.1.6
dot30mpEmulationOltPonCastLLID	aOLTPOncastLLID	30.3.7.1.7
dot30mpEmulationBadLLID	aBadLLID	30.3.7.1.8
dot30mpEmulationBroadcastLLIDNotOnuID		
dot30mpEmulationOnuLLIDNotBroadcast		
dot30mpEmulationBroadcastLLIDPlusOnuId		
dot30mpEmulationNotBroadcastLLIDNotOnuId		

oMAU managed object class (30.5.1)

dot3EFM MIB object	IEEE802.3ah object	Reference
dot3EponMauType	aMAUType	30.5.1.1.2
dot3EponMauPCSCodingViolation	aPCSCodingViolation	30.5.1.1.12
dot3EponMauFecAbility	aFECAbility	30.5.1.1.13
dot3EponMauFecMode	aFECmode	30.5.1.1.14
dot3EponMauFECCorrectedBlocks	aFECCorrectedBlocks	30.5.1.1.15
dot3EponMauFECUncorrectableBlocks	aFECUncorrectableBlocks	30.5.1.1.16
dot3EponMauBufferHeadCodingViolation		

6. Definitions - The EPON Device MIB

EPON-DEVICE-MIB DEFINITIONS ::= BEGIN

IMPORTS

```
    MODULE-IDENTITY, mib-2, OBJECT-TYPE, Counter32,
        Unsigned32, Integer32, zeroDotZero
        FROM SNMPv2-SMI
    TruthValue, DateAndTime, RowStatus, MacAddress
        FROM SNMPv2-TC
    ifIndex
        FROM IF-MIB
    MODULE-COMPLIANCE, OBJECT-GROUP
        FROM SNMPv2-CONF
    SnmpAdminString
    FROM SNMP-FRAMEWORK-MIB
    ;
```

eponDeviceMIB MODULE-IDENTITY

LAST-UPDATED "200404290000Z" -- April 29, 2004

ORGANIZATION "IETF Ethernet Interfaces and Hub MIB
 Working Group"

CONTACT-INFO

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<http://www.ietf.org/html.charters/hubmib-charter.html>

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DESCRIPTION

"The objects in this MIB module are used to manage Ethernet Passive Optical Network (EPON) devices which are based on the Ethernet in the First Mile (EFM) PON as defined in IEEE Draft P802.3ah/D3.0 clause 60,64,65.

The following reference is used throughout this MIB module:
[[802.3ah](#)] refers to:

IEEE Draft P802.3ah/D3.3: 'Draft amendment to -
Information technology - Telecommunications and
information exchange between systems - Local and
metropolitan area networks - Specific requirements -
Part 3: Carrier sense multiple access with collision
detection (CSMA/CD) access method and physical layer
specifications - Media Access Control

Parameters,Physical

Layers and Management Parameters for subscriber access
networks', 22 April 2004.

Of particular interest are Clause 64(MPCP) 65(P2mP RS) and
60 (PON PMDs). Clause 30, 'Management', and Clause
45,'Management Data Input/Output (MDIO) Interface'.

Copyright (C) The Internet Society (2003). This version
of this MIB module is part of XXXX see the RFC
itself for full legal notices."

-- Editor's Note: Replace XXXX with the actual RFC number
-- assigned by RFC Editor and remove this note

REVISION "200404290000Z" -- April 29, 2004
DESCRIPTION "Initial version, published as RFC XXXX."

::= { mib-2 XXX }

-- Editor's Note: Replace XXX with a real OID once it is
-- assigned by IANA and remove this note.

eponDeviceObjectMIB OBJECT IDENTIFIER ::= { eponDeviceMIB 1}

eponDeviceObjects OBJECT IDENTIFIER ::= { eponDeviceObjectMIB 1}

eponDeviceConformance OBJECT IDENTIFIER ::= { eponDeviceObjectMIB 2 }

eponDeviceControlObjects OBJECT IDENTIFIER ::= { eponDeviceObjects 1 }

eponDeviceStatObjects OBJECT IDENTIFIER ::= { eponDeviceObjects 2 }

eponDeviceEventObjects OBJECT IDENTIFIER ::= { eponDeviceObjects 3 }

eponDeviceControlTable OBJECT-TYPE

SYNTAX SEQUENCE OF EponDeviceControlEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Table for EPON device MIBs."

::= { eponDeviceControlObjects 1 }

eponDeviceControlEntry OBJECT-TYPE

SYNTAX EponDeviceControlEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An entry in the EPON device Control table."

INDEX { ifIndex }

::= { eponDeviceControlTable 1 }

EponDeviceControlEntry ::=

SEQUENCE {

eponDeviceObjectReset	INTEGER,
eponDeviceObjectModes	INTEGER,
eponDeviceSerialNumber	SnmpAdminString,
eponDeviceObjectFecEnabled	INTEGER,
eponDeviceObjectOamMode	INTEGER,
eponDeviceObjectDeviceReadyMode	INTEGER,
eponDeviceObjectPowerDown	TruthValue,
eponDeviceObjectNumberOfLLIDs	INTEGER,
eponDeviceObjectRemoteMACAddressLLIDTable	MacAddress,
eponDeviceObjectReportThreshold	Integer32

}

eponDeviceObjectReset OBJECT-TYPE

SYNTAX INTEGER {

running(1),

reset(2)

}

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This variable can be used to reset the EPON device. The interface may be unavailable while the reset occurs and data may be lost."

::= { eponDeviceControlEntry 1 }

eponDeviceObjectModes OBJECT-TYPE

SYNTAX INTEGER {

olt(1),

onu(2)

}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This variable defines the mode of the EPON device. When an olt it is an Optical Line Terminal device (server) and when an onu and Optical Network Unit device (client)"

::= { eponDeviceControlEntry 2 }

eponDeviceSerialNumber OBJECT-TYPE

SYNTAX SnmpAdminString

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The serial number of the manufacturer for this device."

::= { eponDeviceControlEntry 3 }

eponDeviceObjectFecEnabled OBJECT-TYPE

SYNTAX INTEGER {

noFecEnabled (1),

fecTxEnabled (2),

fecRxEnabled (3),

fecTxRxEnabled (4)

}

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This variable defines whether the EPON device uses FEC as defined in the [[802.3ah](#)] clause 65.2 for EPON. When fecTxEnabled the device supports the FEC transmission mode. When fecRxEnabled the device supports the FEC Receive mode. When fecTxRxEnabled the device supports the FEC transmission and receive mode."

::= { eponDeviceControlEntry 4 }

eponDeviceObjectOamMode OBJECT-TYPE

SYNTAX INTEGER {

noOam (1),

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```
        oamServer (2),
        oamclient (3)
    }
    MAX-ACCESS read-write
    STATUS current
```

DESCRIPTION

"This variable defines the Operation Administration and Maintenance (OAM) mode of an EPON device as defined by the [\[802.3ah\]](#) clause 57. When noOam the device does not supports the OAM mode. When oamServer the device supports the OAM mode as a server unit. When oamClient the device supports the OAM mode as a client unit."

```
::= { eponDeviceControlEntry 5 }
```

```
eponDeviceObjectDeviceReadyMode OBJECT-TYPE
```

```
SYNTAX INTEGER {
    notReady (1),
    inProcess (2),
    ready (3)
}
```

```
MAX-ACCESS read-write
STATUS current
```

DESCRIPTION

"This variable defines the mode of an EPON device in initialization 0 ready for registration as defined by the [\[802.3ah\]](#) clause 64. When notReady the device is not ready for operation. When inProcess the device is in initialization process. When ready the device is ready for registration."

```
::= { eponDeviceControlEntry 6 }
```

```
eponDeviceObjectPowerDown OBJECT-TYPE
```

```
SYNTAX TruthValue
MAX-ACCESS read-write
STATUS current
```

DESCRIPTION

"Setting this variable to powerDown will cause Device to be entered into Power down mode where no registration is allowed and only receiving data from the link"

```
::= { eponDeviceControlEntry 7 }
```

```
eponDeviceObjectNumberOfLLIDs OBJECT-TYPE
```

```
SYNTAX INTEGER
MAX-ACCESS read-Only
```

STATUS current

DESCRIPTION

"A read only variable which defines the number of registered LLIDs (as defined by the [802.3ah] clause 65) in a EPON network for an OLT. Initialization value is 0."

::= { eponDeviceControlEntry 8 }

eponDeviceObjectReportThreshold OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"A set of 8 integers, for each LLID, that defines the threshold reporting for each Queue in the REPORT message, as defined in [802.3ah] 64. The value returned shall be in 2 octets increments."

::= { eponDeviceControlEntry 9 }

eponDeviceRemoteMACAddressLLIDTable OBJECT-TYPE

SYNTAX SEQUENCE OF EponDeviceRemoteMACAddressLLIDEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION "A table of read-only value that identifies the source_address and LLIDs parameter of the remote devices in the network. This Macaddress value, as defined in [802.3ah], 30.3.5.1.5, is updated on reception of a valid frame with (1) a destination Field equal to the reserved multicast address for MAC Control specified in [802.3ah] Annex 31A, (2) lengthOrType field value equal to the reserved Type for MAC Control as specified in [802.3ah] Annex 31A. (3) an MPCP subtype value equal to the subtype reserved for MPCP as specified in [802.3ah] Annex 31A, and an LLID as allocated by the OLT. The table is defined as Remote MAC address û LLID (RMadL)"

::= { eponDeviceControlObjects 2 }

eponDeviceRemoteMACAddressLLIDEntry OBJECT-TYPE

SYNTAX EponDeviceRemoteMACAddressLLIDEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A group of entries. Applications create and delete entries using eponDeviceRMadLEntryStatus.

When adding objects to a notification they are added in the lexical order of their index in this table."

INDEX {eponDeviceRMadLLogName, eponDeviceRMadLlLLID }

::= { eponDeviceRemoteMACAddressLLIDTable 1 }

EponDeviceRemoteMACAddressLLIDEntry ::= SEQUENCE {

eponDeviceRMadlLogName

SnmpAdminString,

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eponDeviceRMadlLLID	Unsigned32,
eponDeviceRMadlLogID	OBJECT IDENTIFIER,
eponDeviceRMadlRemoteMACAddress	MacAddress,
eponDeviceRMadlType	INTEGER,
eponDeviceRMadlAction	INTEGER,
eponDeviceRMadlEntryStatus	RowStatus
}	

eponDeviceRMadlLogName OBJECT-TYPE

SYNTAX SnmpAdminString (SIZE (1..32))
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"A locally-unique, administratively assigned name for a group
of entries."
::= { eponDeviceRemoteMACAddressLLIDEntry 1 }

eponDeviceRMadlLLID OBJECT-TYPE

SYNTAX Unsigned32 (1..4294967295)
MAX-ACCESS read-write
STATUS current
DESCRIPTION
"An arbitrary integer for the purpose of identifying
the LLID."
::= { eponDeviceRemoteMACAddressLLIDEntry 2 }

eponDeviceRMadlLogID OBJECT-TYPE

SYNTAX OBJECT IDENTIFIER
MAX-ACCESS read-create
STATUS current
DESCRIPTION
"The object identifier of a MIB object to add to an entry."
DEFVAL { zeroDotZero }
::= { eponDeviceRemoteMACAddressLLIDEntry 3 }

eponDeviceRMadlRemoteMacAddress OBJECT-TYPE

SYNTAX MacAddress
MAX-ACCESS read-write
STATUS current
DESCRIPTION
"The remote MAC address of the LLID."
::= { eponDeviceRemoteMACAddressLLIDEntry 4 }

eponDeviceRMadlType OBJECT-TYPE

SYNTAX INTEGER {


```
    registered (1),
    notRegister (2),
  }
  MAX-ACCESS read-write
  STATUS current
  DESCRIPTION
    "A list of types for entries."
    ::= { eponDeviceRemoteMACAddressLLIDEntry 5 }
```

eponDeviceRMadlAction OBJECT-TYPE

```
    SYNTAX INTEGER {
    register (1),
    deregister (2),
    reregister (3
    }
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
      "A list of actions for an entry."
      ::= { eponDeviceRemoteMACAddressLLIDEntry 6 }
```

eponDeviceRMadlEntryStatus OBJECT-TYPE

```
    SYNTAX RowStatus
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
      "The control that allows creation and deletion of entries.
      Once made active an entry MAY not be modified except to
      delete it."
      ::= { eponDeviceRemoteMACAddressLLIDEntry 7 }
```

--Statistics tables

eponDeviceStatTable OBJECT-TYPE

```
    SYNTAX SEQUENCE OF EponDeviceStatEntry
    MAX-ACCESS not-accessible
    STATUS current
```

DESCRIPTION

```
"This table defines the list of statistics counters of EPON devices."
::= { eponDeviceStatObjects 1}
```

eponDeviceStatEntry OBJECT-TYPE

SYNTAX EponDeviceStatEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Table entries for Table of statistics counters of EPON devices."

INDEX { ifIndex }

::= { eponDeviceStatTable 1 }

EponDeviceStatEntry::=

SEQUENCE {

eponDeviceStatTxFramesQueue0	Counter32,
eponDeviceStatTxFramesQueue1	Counter32,
eponDeviceStatTxFramesQueue2	Counter32,
eponDeviceStatTxFramesQueue3	Counter32,
eponDeviceStatTxFramesQueue4	Counter32,
eponDeviceStatTxFramesQueue5	Counter32,
eponDeviceStatTxFramesQueue6	Counter32,
eponDeviceStatTxFramesQueue7	Counter32,
eponDeviceStatRxFramesQueue0	Counter32,
eponDeviceStatRxFramesQueue1	Counter32,
eponDeviceStatRxFramesQueue2	Counter32,
eponDeviceStatRxFramesQueue3	Counter32,
eponDeviceStatRxFramesQueue4	Counter32,
eponDeviceStatRxFramesQueue5	Counter32,
eponDeviceStatRxFramesQueue6	Counter32,
eponDeviceStatRxFramesQueue7	Counter32,
eponDeviceStatDroppedFramesQueue0	Counter32,
eponDeviceStatDroppedFramesQueue1	Counter32,
eponDeviceStatDroppedFramesQueue2	Counter32,
eponDeviceStatDroppedFramesQueue3	Counter32,
eponDeviceStatDroppedFramesQueue4	Counter32,
eponDeviceStatDroppedFramesQueue5	Counter32,
eponDeviceStatDroppedFramesQueue6	Counter32,
eponDeviceStatDroppedFramesQueue7	Counter32

}

eponDeviceStatTxFramesQueue0 OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a æQueue-0Æ frames transmission occurs. Increment the counter by one for each frame transmitted which is an output of æQueue-0Æ. The æQueue-0Æ marking matched the REPORT MPCP message Queue-0 field, as defined in [\[802.3ah\]](#) clause 64. This

counter

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is mandatory for an ONU."

::= { eponDeviceStatEntry 1}

eponDeviceStatTxFramesQueue1 OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a æQueue-1Æ frames transmission occurs. Increment the counter by one for each frame transmitted which is an output of æQueue-1Æ. The æQueue-1Æ marking matched the REPORT MPCP message Queue-1 field, as defined in [[802.3ah](#)] clause 64. This counter is mandatory for an ONU."

::= { eponDeviceStatEntry 2}

eponDeviceStatTxFramesQueue2 OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a æQueue-2Æ frames transmission occurs. Increment the counter by one for each frame transmitted which is an output of æQueue-2Æ. The æQueue-2Æ marking matched the REPORT MPCP message Queue-2 field, as defined in [[802.3ah](#)] clause 64. This counter is mandatory for an ONU."

::= { eponDeviceStatEntry 3}

eponDeviceStatTxFramesQueue3 OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a æQueue-3Æ frames transmission occurs. Increment the counter by one for each frame transmitted which is an output of æQueue-3Æ. The æQueue-3Æ marking matched the REPORT MPCP message Queue-3 field, as defined in [[802.3ah](#)] clause 64. This counter is mandatory for an ONU."

::= { eponDeviceStatEntry 4}

eponDeviceStatTxFramesQueue4 OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a æQueue-4Æ frames transmission occurs. Increment the counter by one for each frame transmitted which is an output of æQueue-4Æ. The æQueue-4Æ marking matched the REPORT MPCP

message Queue-4 field, as defined in [802.3ah] clause 64. This counter is mandatory for an ONU."

::= { eponDeviceStatEntry 5}

eponDeviceStatTxFramesQueue5 OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a æQueue-5Æ frames transmission occurs. Increment the counter by one for each frame transmitted which is an output of æQueue-5Æ. The æQueue-5Æ marking matched the REPORT MPCP message Queue-5 field, as defined in [802.3ah] clause 64. This counter is mandatory for an ONU."

::= { eponDeviceStatEntry 6}

eponDeviceStatTxFramesQueue6 OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a æQueue-6Æ frames transmission occurs. Increment the counter by one for each frame transmitted which is an output of æQueue-6Æ. The æQueue-6Æ marking matched the REPORT MPCP message Queue-6 field, as defined in [802.3ah] clause 64. This counter is mandatory for an ONU."

::= { eponDeviceStatEntry 7}

eponDeviceStatTxFramesQueue7 OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a æQueue-7Æ frames transmission occurs. Increment the counter by one for each frame transmitted which is an output of æQueue-7Æ. The æQueue-7Æ marking matched the REPORT MPCP message Queue-0 field, as defined in [802.3ah] clause 64. This counter is mandatory for an ONU."

::= { eponDeviceStatEntry 8}

eponDeviceStatRxFramesQueue0 OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a æQueue-0Æ frames reception occurs.

A

single counter at the ONU and a set of counters, one for each LLID, at the OLT. Increment the counter by one for each frame received for each LLID, which is an output of æQueue-0Æ. The æQueue-0Æ marking matched the REPORT MPCP message Queue-0 field, as defined in [\[802.3ah\]](#) clause

64. This counter is mandatory for an ONU and an OLT."

::= { eponDeviceStatEntry 9}

eponDeviceStatRxFramesQueue1 OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A count of the number of times a æQueue-1Æ frames reception occurs. A single counter at the ONU and a set of counters, one for each LLID, at the OLT. Increment the counter by one for each frame received for each LLID, which is an output of æQueue-1Æ. The æQueue-1Æ marking matched the REPORT MPCP message Queue-1 field, as defined in [\[802.3ah\]](#) clause **64. This counter is mandatory for an ONU and an OLT."**

::= { eponDeviceStatEntry 10}

eponDeviceStatRxFramesQueue2 OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a æQueue-2Æ frames reception occurs. A single counter at the ONU and a set of counters, one for each LLID, at the OLT. Increment the counter by one for each frame received for each LLID, which is an output of æQueue-2Æ. The æQueue-2Æ marking matched the REPORT MPCP message Queue-2 field, as defined in [\[802.3ah\]](#) clause 64. This counter is mandatory for an ONU and an OLT."

::= { eponDeviceStatEntry 11}

eponDeviceStatRxFramesQueue3 OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a æQueue-3Æ frames reception occurs. A single counter at the ONU and a set of counters, one for each LLID, at the OLT. Increment the counter by one for each frame received for each LLID, which is an output of æQueue-3Æ. The æQueue-3Æ marking matched the REPORT MPCP message Queue-3 field, as defined in [\[802.3ah\]](#) clause 64. This counter is mandatory for an ONU and an OLT."

::= { eponDeviceStatEntry 12}

eponDeviceStatRxFramesQueue4 OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A count of the number of times a æQueue-4Æ frames reception occurs. A single counter at the ONU and a set of counters, one for each LLID, at the OLT. Increment the counter by one for each frame received for each LLID, which is an output of æQueue-4Æ. The æQueue-4Æ marking matched the REPORT MPCP message Queue-4 field, as defined in [[802.3ah](#)] clause 64. This counter is mandatory for an ONU and an OLT."

::= { eponDeviceStatEntry 13}

eponDeviceStatRxFramesQueue5 OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a æQueue-5Æ frames reception occurs. A single counter at the ONU and a set of counters, one for each LLID, at the OLT. Increment the counter by one for each frame received for each LLID, which is an output of æQueue-5Æ. The æQueue-5Æ marking matched the REPORT MPCP message Queue-5 field, as defined in [[802.3ah](#)] clause 64. This counter is mandatory for an ONU and an OLT."

::= { eponDeviceStatEntry 14}

eponDeviceStatRxFramesQueue6 OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a æQueue-6Æ frames reception occurs. A single counter at the ONU and a set of counters, one for each LLID, at the OLT. Increment the counter by one for each frame received for each LLID, which is an output of æQueue-6Æ. The æQueue-6Æ marking matched the REPORT MPCP message Queue-6 field, as defined in [[802.3ah](#)] clause 64. This counter is mandatory for an ONU and an OLT."

::= { eponDeviceStatEntry 15}

eponDeviceStatRxFramesQueue7 OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a æQueue-7Æ frames reception occurs. A single counter at the ONU and a set of counters, one for each LLID, at the OLT. Increment the counter by one for each frame received for each LLID, which is an output of æQueue-7Æ. The æQueue-7Æ marking matched the

REPORT MPCP message Queue-7 field, as defined in [\[802.3ah\]](#) clause 64. This counter is mandatory for an ONU and an OLT."

::= { eponDeviceStatEntry 16}

eponDeviceStatDroppedFramesQueue0 OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a æQueue-0Æ frames drops occurs. Increment the counter by one for each frame dropped from æQueue-0Æ. The æQueue-0Æ marking matched the REPORT MPCP message Queue-0 field, as defined in [\[802.3ah\]](#) clause 64. This counter is mandatory for an ONU."

::= { eponDeviceStatEntry 17}

eponDeviceStatDroppedFramesQueue1 OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a æQueue-1Æ frames drops occurs. Increment the counter by one for each frame dropped from æQueue-1Æ. The æQueue-1Æ marking matched the REPORT MPCP message Queue-1 field, as defined in [\[802.3ah\]](#) clause 64. This counter is mandatory for an ONU."

::= { eponDeviceStatEntry 18}

eponDeviceStatDroppedFramesQueue2 OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a æQueue-2Æ frames drops occurs. Increment the counter by one for each frame dropped from æQueue-2Æ. The æQueue-2Æ marking matched the REPORT MPCP message Queue-2 field, as defined in [\[802.3ah\]](#) clause 64. This counter is mandatory for an ONU."

::= { eponDeviceStatEntry 19}

eponDeviceStatDroppedFramesQueue3 OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a æQueue-3Æ frames drops occurs. Increment the counter by one for each frame dropped from æQueue-3Æ. The æQueue-3Æ marking matched the REPORT MPCP message Queue-3 field,

as defined in [[802.3ah](#)] clause 64. This counter is mandatory for an ONU."

::= { eponDeviceStatEntry 20}

eponDeviceStatDroppedFramesQueue4 OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a æQueue-4Æ frames drops occurs. Increment the counter by one for each frame dropped from æQueue-4Æ. The æQueue-4Æ marking matched the REPORT MPCP message Queue-4 field, as defined in [[802.3ah](#)] clause 64. This counter is mandatory for an ONU."

::= { eponDeviceStatEntry 21}

eponDeviceStatDroppedFramesQueue5 OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a æQueue-5Æ frames drops occurs. Increment the counter by one for each frame dropped from æQueue-5Æ. The æQueue-5Æ marking matched the REPORT MPCP message Queue-5 field, as defined in [[802.3ah](#)] clause 64. This counter is mandatory for an ONU."

::= { eponDeviceStatEntry 22}

eponDeviceStatDroppedFramesQueue6 OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a æQueue-6Æ frames drops occurs. Increment the counter by one for each frame dropped from æQueue-6Æ. The æQueue-6Æ marking matched the REPORT MPCP message Queue-6 field, as defined in [[802.3ah](#)] clause 64. This counter is mandatory for an ONU."

::= { eponDeviceStatEntry 23}

eponDeviceStatDroppedFramesQueue7 OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

" A count of the number of times a æQueue-7Æ frames drops occurs. Increment the counter by one for each frame dropped from æQueue-7Æ. The æQueue-7Æ marking matched the REPORT MPCP message Queue-7 field, as defined in [[802.3ah](#)] clause 64. This counter is mandatory for an ONU."

::= { eponDeviceStatEntry 24}

--Editor's Note use reference to event MIBs [[RFC2981](#)] and
 --docsis MIBs [[RFC2669](#)]

eponDeviceEventObjectTable OBJECT-TYPE

SYNTAX SEQUENCE OF EponDeviceEventObjectEntry
 MAX-ACCESS not-accessible
 STATUS current

DESCRIPTION

"This table defines the list of statistics counters of EPON devices."
 ::= { eponDeviceEventObjects 1 }

eponDeviceEventObjectEntry OBJECT-TYPE

SYNTAX EponDeviceEventObjectEntry
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION

"Table entries for Table of Event objects for EPON devices."

INDEX { ifIndex }
 ::= { eponDeviceEventObjectTable 1 }

EponDeviceEventObjectEntry ::=

SEQUENCE {

eponDeviceSampleMinimum	Integer32,
eponDeviceDyingGaspAlarmState	TruthValue,
eponDeviceDyingGaspAlarmEnabled	TruthValue,
eponDeviceCriticalEventState	TruthValue,
eponDeviceCriticalEventEnabled	TruthValue,
eponDeviceLocalLinkFaultAlarmState	TruthValue,
eponDeviceLocalLinkFaultAlarmEnabled	TruthValue,
eponDeviceTemperatureEventIndicationState	TruthValue,
eponDeviceTemperatureEventIndicationEnabled	TruthValue,
eponDevicePowerVoltageEventIndicationState	TruthValue,
eponDevicePowerVoltageEventIndicationEnabled	TruthValue,
eponDeviceGlobalEventState	TruthValue,
eponDeviceGlobalEventEnabled	TruthValue,
eponDeviceErroredSymbolPeriodEventState	TruthValue,
eponDeviceErroredSymbolPeriodEventEnabled	TruthValue,
eponDeviceErroredFrameEventState	TruthValue,
eponDeviceErroredFrameEventEnabled	TruthValue,
eponDeviceErroredFramePeriodEventState	TruthValue,
eponDeviceErroredFramePeriodEventEnabled	TruthValue,
eponDeviceErroredFrameSecondsSummaryEventState	TruthValue,
eponDeviceErroredFrameSecondsSummaryEventEnabled	TruthValue,
eponDeviceOrganizationSpecificEventState	TruthValue,


```
eponDeviceOrganizationSpecificEventEnabled      TruthValue,
eponDeviceEventControl                          INTEGER
}
```

eponDeviceSampleMinimum OBJECT-TYPE

SYNTAX Integer32 (1..2147483647)

UNITS "seconds"

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"The minimum Frequency of events this system will accept. A system may use the larger values of this minimum to lessen the impact of constant sampling. For larger sampling intervals the system samples less often and suffers less overhead.

Unless explicitly resource limited, a system's value for this object SHOULD be 1, allowing as small as a 1 second interval for ongoing trigger sampling."

::= { eponDeviceEventObjectEntry 1 }

eponDeviceDyingGaspAlarmState OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A read-only variable, which defines the state of the Dying Gasp indication of the OAM alarm indications as described in the [\[802.3ah\]](#) clause 57. When dyingGaspAlarm the device has a dying gasp alarm asserted. When the dyingGaspAlarm state is removed the dying gasp alarm is reset "

::= { eponDeviceEventObjectEntry 2 }

eponDeviceDyingGaspAlarmEnabled OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"A control to allow DyingGaspAlarm event to be used. When the value is 'false' the event is not sampled."

```
DEFVAL { false }  
 ::= { eponDeviceEventObjectEntry 3 }
```

eponDeviceCriticalEventState OBJECT-TYPE

```
SYNTAX TruthValue  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION
```

"A read-only variable, which defines the state of the Critical Event indication of the OAM alarm indications as described in the [802.3ah] clause 57. When criticalEvent the device has a Critical Event asserted. "

```
 ::= { eponDeviceEventObjectEntry 4 }
```

eponDeviceCriticalEventEnabled OBJECT-TYPE

```
SYNTAX TruthValue  
MAX-ACCESS read-write  
STATUS current  
DESCRIPTION
```

"A control to allow CriticalEvent event to be used.
When the value is 'false' the event is not sampled."

```
DEFVAL { false }  
 ::= { eponDeviceEventObjectEntry 5 }
```

eponDeviceLocalLinkFaultAlarmState OBJECT-TYPE

```
SYNTAX TruthValue  
MAX-ACCESS read-only  
STATUS current  
DESCRIPTION
```

"A read-only variable, which defines the state of the Local Link Fault indication of the OAM alarm indications as described in the [802.3ah] clause 57. When localLinkFaultAlarm the device has a Local Link Fault alarm asserted. "

```
 ::= { eponDeviceEventObjectEntry 6 }
```

eponDeviceLocalLinkFaultAlarmEnabled OBJECT-TYPE

```
SYNTAX TruthValue  
MAX-ACCESS read-write  
STATUS current  
DESCRIPTION
```

"A control to allow LocalLinkFaultAlarm event to be used.
When the value is 'false' the event is not sampled."

```
DEFVAL { false }  
 ::= { eponDeviceEventObjectEntry 7 }
```

eponDeviceTemperatureEventIndicationState OBJECT-TYPE

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SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"A read-only variable, which defines the state of the Temperature Event indication of an EPON device. When condition of box temperature is above the threshold defined the alarm is asserted. When the condition is below that threshold the alarm is de-asserted. When temperatureEventIndication the device has a Temperature Event Indication asserted. "

::= { eponDeviceEventObjectEntry 8 }

eponDeviceTemperatureEventIndicationEnabled OBJECT-TYPE

SYNTAX TruthValue
MAX-ACCESS read-write
STATUS current
DESCRIPTION

"A control to allow TemperatureEventIndication event to be used.

When the value is 'false' the event is not sampled."

DEFVAL { false }

::= { eponDeviceEventObjectEntry 9 }

eponDevicePowerVoltageEventIndicationState OBJECT-TYPE

SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"A read-only variable, which defines the state of the Power/Voltage Event Indication of an EPON device. When condition of box Power/voltage is above the threshold defined the alarm is asserted. When the condition is below that threshold the alarm is de-asserted. When powerVoltageEventIndication the device has a Power/Voltage Event Indication asserted. "

::= { eponDeviceEventObjectEntry 10 }

eponDevicePowerVoltageEventIndicationEnabled OBJECT-TYPE

SYNTAX TruthValue
MAX-ACCESS read-write
STATUS current
DESCRIPTION

"A control to allow PowerVoltageEventIndication event to be used.

When the value is 'false' the event is not sampled."

```
DEFVAL { false }
 ::= { eponDeviceEventObjectEntry 11 }
```

eponDeviceGlobalEventState OBJECT-TYPE

```
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
```

"A read-only variable, which defines the state of the Global Event indication of an EPON device. When the indication of the event input occurs the event is asserted. When the input is removed that event is de-asserted. When globalEvent the device has a Global Event asserted.
"

```
 ::= { eponDeviceEventObjectEntry 12 }
```

eponDeviceGlobalEventEnabled OBJECT-TYPE

```
SYNTAX TruthValue
MAX-ACCESS read-write
STATUS current
DESCRIPTION
```

"A control to allow GlobalEvent event to be used.
When the value is 'false' the event is not sampled."
DEFVAL { false }

```
 ::= { eponDeviceEventObjectEntry 13 }
```

eponDeviceErroredSymbolPeriodEventState OBJECT-TYPE

```
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
```

"A read-only variable, which defines the state of the Errored Symbol Period Event indication of the OAM alarm TLV indications as described in the [\[802.3ah\]](#) clause 57.5.3. When erroredSymbolPeriodEvent the device has an Errored Symbol Period Event asserted. "

```
 ::= { eponDeviceEventObjectEntry 14 }
```

eponDeviceErroredSymbolPeriodEventEnabled OBJECT-TYPE

```
SYNTAX TruthValue
MAX-ACCESS read-write
STATUS current
DESCRIPTION
```

"A control to allow ErroredSymbolPeriodEvent event to be used.
When the value is 'false' the event is not sampled."
DEFVAL { false }

```
 ::= { eponDeviceEventObjectEntry 15 }
```


eponDeviceErroredFrameEventState OBJECT-TYPE

SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"A read-only variable, which defines the state of the Errored Frame Event indication of the OAM alarm TLV indications as described in the [802.3ah] clause 57.5.3. When erroredFrameEvent the device has an Errored Frame Event asserted. "

::= { eponDeviceEventObjectEntry 16 }

eponDeviceErroredFrameEventEnabled OBJECT-TYPE

SYNTAX TruthValue
MAX-ACCESS read-write
STATUS current
DESCRIPTION

"A control to allow ErroredFrameEvent event to be used.
When the value is 'false' the event is not sampled."

DEFVAL { false }

::= { eponDeviceEventObjectEntry 17 }

eponDeviceErroredFramePeriodEventState OBJECT-TYPE

SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"A read-only variable, which defines the state of the Errored Frame Period Event indication of the OAM alarm TLV indications as described in the [802.3ah] clause 57.5.3. When erroredFramePeriodEvent the device has an Errored Frame Period Event asserted. "

::= { eponDeviceEventObjectEntry 18 }

eponDeviceErroredFramePeriodEventEnabled OBJECT-TYPE

SYNTAX TruthValue
MAX-ACCESS read-write
STATUS current
DESCRIPTION

"A control to allow ErroredFramePeriodEvent event to be used.
When the value is 'false' the event is not sampled."

DEFVAL { false }

::= { eponDeviceEventObjectEntry 19 }

eponDeviceErroredFrameSecondsSummaryEventState OBJECT-TYPE

SYNTAX TruthValue
MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A read-only variable, which defines the state of the Errored Frame Seconds Summary Event indication of the OAM alarm TLV indications as described in the [802.3ah] clause 57.5.3. When erroredFrameSecondsSummaryEvent the device has an Errored Frame Seconds Summary Event asserted. "

::= { eponDeviceEventObjectEntry 20 }

eponDeviceErroredFrameSecondsSummaryEventEnabled OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"A control to allow ErroredFrameSecondsSummaryEvent event to be used.

When the value is 'false' the event is not sampled."

DEFVAL { false }

::= { eponDeviceEventObjectEntry 21 }

eponDeviceOrganizationSpecificEventState OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A read-only variable, which defines the state of the Organization Specific Event indication of the OAM alarm TLV indications as described in the [802.3ah] clause 57.5.3. When organizationSpecificEvent the device has an Organization Specific Event asserted. "

::= { eponDeviceEventObjectEntry 22 }

eponDeviceOrganizationSpecificEventEnabled OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"A control to allow OrganizationSpecificEvent event to be used.

When the value is 'false' the event is not sampled."

DEFVAL { false }

::= { eponDeviceEventObjectEntry 23 }

eponDeviceEventControl OBJECT-TYPE

SYNTAX INTEGER {


```

        resetLog(1),
        useDefaultReporting(2)
    }
    MAX-ACCESS    read-write
    STATUS        current
    DESCRIPTION
        "Setting this object to resetLog(1) empties the event log.
        All data is deleted. Setting it to useDefaultReporting(2)
        returns all event priorities to their factory-default
        reporting. Reading this object always returns
        useDefaultReporting(2)."
```

::= { eponDeviceEventObjectEntry 24 }

-- Events Log Table

eponDeviceEventsLogTable OBJECT-TYPE

```

    SYNTAX        SEQUENCE OF EponDeviceEventsLogEntry
    MAX-ACCESS    not-accessible
    STATUS        current
    DESCRIPTION
        "A table of objects that can be added to notifications based
        on the event as pointed to by entries in those tables."
```

::= { eponDeviceEventObjects 2 }

eponDeviceEventsLogEntry OBJECT-TYPE

```

    SYNTAX        EponDeviceEventsLogEntry
    MAX-ACCESS    not-accessible
    STATUS        current
    DESCRIPTION
        "A group of Events.  Applications create and delete entries
        using eponDeviceEventsEntryStatus.
        When adding objects to a notification they are added in the
        lexical order of their index in this table."
```

INDEX {eponDeviceEventsLogName, eponDeviceEventsLogIndex }

::= { eponDeviceEventsLogTable 1 }

EponDeviceEventsLogEntry ::= SEQUENCE {

eponDeviceEventsLogName	SnmpAdminString,
eponDeviceEventsLogIndex	Unsigned32,
eponDeviceEventsLogID	OBJECT IDENTIFIER,
eponDeviceEventsLogFirstTime	DateAndTime,
eponDeviceEventsLogLastTime	DateAndTime,
eponDeviceEventsLogCounts	Counter32,

```
eponDeviceEventsLogType          INTEGER,
eponDeviceEventsLogEntryStatus    RowStatus
}
```

eponDeviceEventsLogName OBJECT-TYPE

```
SYNTAX      SnmpAdminString (SIZE (1..32))
MAX-ACCESS   not-accessible
STATUS       current
DESCRIPTION
    "A locally-unique, administratively assigned name for a group
    of Events."
 ::= { eponDeviceEventsLogEntry 1 }
```

eponDeviceEventsLogIndex OBJECT-TYPE

```
SYNTAX      Unsigned32 (1..4294967295)
MAX-ACCESS   not-accessible
STATUS       current
DESCRIPTION
    "An arbitrary integer for the purpose of identifying
    individual Events within a eponDeviceEventsLogName group.
    Events within a group are placed in the notification in the
    numerical order of this index."
 ::= { eponDeviceEventsLogEntry 2 }
```

eponDeviceEventsLogID OBJECT-TYPE

```
SYNTAX      OBJECT IDENTIFIER
MAX-ACCESS   read-create
STATUS       current
DESCRIPTION
    "The object identifier of a MIB object to add to a
    Notification that results from the event."
DEFVAL { zeroDotZero }
 ::= { eponDeviceEventsLogEntry 3 }
```

eponDeviceEventsLogFirstTime OBJECT-TYPE

```
SYNTAX      DateAndTime
MAX-ACCESS   read-only
STATUS       current
DESCRIPTION
    "The time that an entry was created."
 ::= { eponDeviceEventsLogEntry 4 }
```

eponDeviceEventsLogLastTime OBJECT-TYPE

```
SYNTAX      DateAndTime
MAX-ACCESS   read-only
STATUS       current
DESCRIPTION
    "If multiple events are reported via the same entry, the
```



```
        time that the last event for this entry occurred,
        otherwise this should have the same value as
        eponDeviceEventsLogFirstTime. "
 ::= { eponDeviceEventsLogEntry 5 }
```

eponDeviceEventsLogCounts OBJECT-TYPE

```
SYNTAX      Counter32
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "The number of consecutive event instances reported by
    this entry. This starts at 1 with the creation of this
    row and increments by 1 for each subsequent duplicate
    event."
 ::= { eponDeviceEventsLogEntry 6 }
```

eponDeviceEventsLogType OBJECT-TYPE

```
SYNTAX  INTEGER {
    eponDeviceDyingGaspAlarmState (1),
    eponDeviceCriticalEventState (2),
    eponDeviceLocalLinkFaultAlarmState (3),
    eponDeviceTemperatureEventIndicationState (4),
    eponDevicePowerVoltageEventIndicationState (5),
    eponDeviceGlobalEventState (6),
    eponDeviceErroredSymbolPeriodEventState (7),
    eponDeviceErroredFrameEventState (8),
    eponDeviceErroredFramePeriodEventState (9),
    eponDeviceErroredFrameSecondsSummaryEventState (10),
    eponDeviceOrganizationSpecificEventState (11)
}
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "A list of types for Events."
 ::= { eponDeviceEventsLogEntry 7 }
```

eponDeviceEventsLogEntryStatus OBJECT-TYPE

```
SYNTAX      RowStatus
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION
    "The control that allows creation and deletion of entries.
    Once made active an entry MAY not be modified except to
```

```
delete it."
 ::= { eponDeviceEventsLogEntry 8 }
```

```
-- Conformance Statements
```

```
-- Conformance Groups
```

```
eponDeviceGroups OBJECT IDENTIFIER ::= { eponDeviceConformance 1 }
```

```
eponDeviceGroupControl OBJECT-GROUP
```

```
  OBJECTS {
    eponDeviceObjectReset,
    eponDeviceObjectModes,
    eponDeviceSerialNumber,
    eponDeviceObjectFecEnabled,
    eponDeviceObjectOamMode,
    eponDeviceObjectDeviceReadyMode,
    eponDeviceObjectPowerDown,
    eponDeviceObjectNumberOfLLIDs,
    eponDeviceObjectRemoteMACAddressLLIDTable,
    eponDeviceObjectReportThreshold
  }
```

```
  STATUS current
```

```
  DESCRIPTION
```

```
    "A collection of objects of eponDevice control
definition."
```

```
  ::= { eponDeviceGroups 1 }
```

```
eponDeviceGroupRMadLTable OBJECT-GROUP
```

```
  OBJECTS {
```

```
    eponDeviceRMadLLogName,
    eponDeviceRMadLLogID,
    eponDeviceRMadLRemoteMACAddress,
    eponDeviceRMadLType,
    eponDeviceRMadLAction,
    eponDeviceRMadLEntryStatus
  }
```

```
  STATUS current
```

```
  DESCRIPTION
```

```
    "A collection of objects of eponDevice remote Mac address
```


to LLID table."

::= { eponDeviceGroups 2 }

eponDeviceGroupStat OBJECT-GROUP

OBJECTS {

eponDeviceStatTxFramesQueue0,
eponDeviceStatTxFramesQueue1,
eponDeviceStatTxFramesQueue2,
eponDeviceStatTxFramesQueue3,
eponDeviceStatTxFramesQueue4,
eponDeviceStatTxFramesQueue5,
eponDeviceStatTxFramesQueue6,
eponDeviceStatTxFramesQueue7,
eponDeviceStatRxFramesQueue0,
eponDeviceStatRxFramesQueue1,
eponDeviceStatRxFramesQueue2,
eponDeviceStatRxFramesQueue3,
eponDeviceStatRxFramesQueue4,
eponDeviceStatRxFramesQueue5,
eponDeviceStatRxFramesQueue6,
eponDeviceStatRxFramesQueue7,
eponDeviceStatDroppedFramesQueue0,
eponDeviceStatDroppedFramesQueue1,
eponDeviceStatDroppedFramesQueue2,
eponDeviceStatDroppedFramesQueue3,
eponDeviceStatDroppedFramesQueue4,
eponDeviceStatDroppedFramesQueue5,
eponDeviceStatDroppedFramesQueue6,
eponDeviceStatDroppedFramesQueue7

}

STATUS current

DESCRIPTION

"A collection of objects of EPON device Statistics"

::= { eponDeviceGroups 3 }

eponDeviceGroupEvent OBJECT-GROUP

OBJECTS {

eponDeviceSampleMinimum,
eponDeviceDyingGaspAlarmState,
eponDeviceDyingGaspAlarmEnabled,
eponDeviceCriticalEventState,
eponDeviceCriticalEventEnabled,
eponDeviceLocalLinkFaultAlarmState,
eponDeviceLocalLinkFaultAlarmEnabled,

eponDeviceTemperatureEventIndicationState,
eponDeviceTemperatureEventIndicationEnabled,

```
        eponDevicePowerVoltageEventIndicationState,
        eponDevicePowerVoltageEventIndicationEnabled,
        eponDeviceGlobalEventState,
        eponDeviceGlobalEventEnabled,
        eponDeviceErroredSymbolPeriodEventState,
        eponDeviceErroredSymbolPeriodEventEnabled,
        eponDeviceErroredFrameEventState,
        eponDeviceErroredFrameEventEnabled,
        eponDeviceErroredFramePeriodEventState ,
        eponDeviceErroredFramePeriodEventEnabled ,
        eponDeviceErroredFrameSecondsSummaryEventState ,
        eponDeviceErroredFrameSecondsSummaryEventEnabled,
        eponDeviceOrganizationSpecificEventState ,
        eponDeviceOrganizationSpecificEventEnabled,
        eponDeviceEventControl
    }

    STATUS    current
    DESCRIPTION
        "A collection of objects for EPON device Events"
        ::= { eponDeviceGroups 4 }

eponDeviceGroupEventLog OBJECT-GROUP
    OBJECTS {
        eponDeviceEventsLogID,
        eponDeviceEventsLogFirstTime,
        eponDeviceEventsLogLastTime,
        eponDeviceEventsLogCounts,
        eponDeviceEventsLogType,
        eponDeviceEventsLogEntryStatus
    }

    STATUS    current
    DESCRIPTION
        "A collection of objects for EPON device Events log"
        ::= { eponDeviceGroups 5 }

-- Compliance

eponDeviceCompliances OBJECT IDENTIFIER ::= { eponDeviceConformance 2}

eponDeviceCompliance MODULE-COMPLIANCE
    STATUS    current
    DESCRIPTION "The compliance statement for EPON Devices."
```

```
MODULE -- this module
    MANDATORY-GROUPS { eponDeviceGroupControl }

GROUP      eponDeviceGroupRMadLTable
    DESCRIPTION " This group is mandatory for all
                  EPON devices supporting LLID-MAC address
                  table."

GROUP      eponDeviceGroupStat
    DESCRIPTION " This group is mandatory for all
                  EPON devices supporting interfaces
                  for Statistics collection."

GROUP      eponDeviceGroupEvent
    DESCRIPTION " This group is mandatory for all
                  EPON devices supporting interfaces
                  for event collection."

GROUP      eponDeviceGroupEventLog
    DESCRIPTION " This group is mandatory for all
                  EPON devices supporting interfaces
                  for event log collection."

::= { eponDeviceCompliances 1}
```

END

7. Security Considerations

There are number of managed objects defined in this MIB module that have a MAX-ACCESS clause of read-write. Most objects are writeable only when the link is Down. Writing to these objects can have the following potentially disruptive effects on network operation:

Including:

- Changing dot3MpcpMode mode
- Changing dot3MPCPAdminControl state
- Changing eponDeviceObjectReportThreshold
- Changing dot3EponMauFecMode mode
- Changing eponDeviceObjectReset mode
- Changing eponDeviceObjectFecEnabled mode
- Changing eponDeviceObjectOamMode mode
- Changing eponDeviceObjectDeviceReadyMode
- Changing eponDeviceObjectPowerDown
- Changing eponDeviceObjectReportThreshold
- Changing eponDeviceRMadlLogID
- Changing eponDeviceRMadlLLID
- Changing eponDeviceRMadlRemoteMacAddress
- Changing eponDeviceRMadlType
- Changing eponDeviceRMadlAction
- Changing eponDeviceRMadlEntryStatus
- Changing eponDeviceSampleMinimum
- Changing eponDeviceDyingGaspAlarmEnabled
- Changing eponDeviceCriticalEventEnabled
- Changing eponDeviceLocalLinkFaultAlarmEnabled
- Changing eponDeviceTemperatureEventIndicationEnabled
- Changing eponDevicePowerVoltageEventIndicationEnabled
- Changing eponDeviceGlobalEventEnabled
- Changing eponDeviceErroredSymbolPeriodEventEnabled
- Changing eponDeviceErroredFrameEventEnabled
- Changing eponDeviceErroredFramePeriodEventEnabled
- Changing eponDeviceErroredFrameSecondsSummaryEventEnabled
- Changing eponDeviceOrganizationSpecificEventEnabled
- Changing eponDeviceEventControl
- Changing eponDeviceEventsLogID
- Changing eponDeviceEventsLogEntryStatus

The user of this MIB module must therefore be aware that support for SET operations in a non-secure environment without proper protection can have a negative effect on network operations.

The readable objects in this MIB module (i.e., those with MAX-ACCESS other than not-accessible) may be considered sensitive in some environments since, collectively, they provide information about the performance of network interfaces and can reveal some aspects of their configuration. In such environments it is important to control

even GET and NOTIFY access to these objects and possibly even to encrypt their values when sending them over the network via SNMP.

SNMP versions prior to SNMPv3 did not include adequate security. Even if the network itself is secure (for example by using IPSec), even then, there is no control as to who on the secure network is allowed to access and GET/SET (read/change/create/delete) the objects in this MIB module.

It is RECOMMENDED that implementers consider the security features as provided by the SNMPv3 framework (see [\[RFC3410\]](#), [section 8](#)), including full support for the SNMPv3 cryptographic mechanisms (for authentication and privacy).

Further, deployment of SNMP versions prior to SNMPv3 is NOT RECOMMENDED. Instead, it is RECOMMENDED to deploy SNMPv3 and to enable cryptographic security. It is then a customer/operator responsibility to ensure that the SNMP entity giving access to an instance of this MIB module is properly configured to give access to the objects only to those principals (users) that have legitimate rights to indeed GET or SET (change/create/delete) them.

8. Intellectual Property

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