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S T A N D A R D S

Network Operations Subcommittee

AMERICAN NATIONAL STANDARD

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**Hybrid Fiber/Coax Outside Plant Status Monitoring
SCTE-HMS-FIBERNODE-MIB
Management Information Base (MIB) Definition**

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1. Scope

This document is identical to SCTE 38-5 2008 except for informative components which may have been updated such as the title page, NOTICE text, headers and footers. No normative changes have been made to this document.

This document defines information about HFC optical fiber nodes. This includes information about the functional parts of a standard HFC optical fiber node, such as optical receivers, optical transmitters, ports, and power supplies.

2. Copyright

The MIB definition found in this document may be incorporated directly in products without further permission from the copyright owner, SCTE.

3. Normative References

The following documents contain provisions, which, through reference in this text, constitute provisions of this standard. At the time of subcommittee approval, the editions indicated were valid. All standards are subject to revision, and parties to agreement based on this standard are encouraged to investigate the possibility of applying the most recent editions of the documents listed below.

- 3.1. ANSI/SCTE 37 (formerly HMS 072), Hybrid Fiber/Coax Outside Plant Status Monitoring SCTE-HMS-ROOTS Management Information Base (MIB) Definition
- 3.2. ANSI/SCTE 38-1 Hybrid Fiber/Coax Outside Plant Status Monitoring SCTE-HMS-PROPERTY-MIB Management Information Base (MIB) Definition
- 3.3. ANSI/SCTE 38-2 2005 Hybrid Fiber/Coax Outside Plant Status Monitoring SCTE-HMS-ALARMS-MIB Management Information Base (MIB)
- 3.4. IETF RFC 1155 Structure and Identification of Management Information for TCP/IP-based Internets [RFC1155-SMI]
- 3.5. IETF RFC 1212 Concise MIB Definitions
- 3.6. IETF RFC 1213 MIB for Network Management of TCP/IP-based internets: MIBII

4. Informative References

None.

5. Terms and Definitions

This document defines the following terms:

Management Information Base (MIB) - the specification of information in a manner that allows standard access through a network management protocol.

6. Requirements

This section defines the mandatory syntax of the SCTE-HMS-FIBERNODE-MIB. It follows the IETF Simple Network Management Protocol (SNMP) for defining the managed objects.

The syntax is given below.

```
-- *****
-- *
-- * Module Name:  HMS025R13.MIB
-- *
-- * SCTE Status:  ADOPTED April 2, 2002
-- *
-- * Description:  Implements SCTE-HMS-FIBERNODE-MIB for Fiber Nodes.
-- *              This MIB intended for use on all fiber node equipment.  This includes the US
-- *              strand mount or outside plant fiber nodes, and some pedestal models.
-- *              This MIB does not apply to the pedestal racks used in the European Cable
-- *              networks.
-- *
-- * EXCEPT AS NOTED, THE VOLATILITY OF CONTROL OBJECTS IN THIS MIB IS
-- * DETERMINED BY THE FIBER NODE APPLICATION
-- *
-- * Note:
-- * Objects which are not present must not have the properties present either.  This applies to:
-- *
-- * a) Any table(s) not supported by a node; e.g., if fnNumberReturnLaser indicates 0, then
-- *    a GetRequest for any object in fnReturnLaserTable should return the SNMP error NOSUCHNAME,
-- *    and properties for those objects should not be accessible.
-- * b) Any object(s) not supported by a node; e.g., if fnReturnLaserTable is supported, but object
-- *    fnReturnLaserTemp is not, then a GetRequest for that object should return the SNMP error
-- *    NOSUCHNAME and properties for that object should not be accessible.
-- *
-- *****
```

SCTE-HMS-FIBERNODE-MIB DEFINITIONS ::= BEGIN

IMPORTS

```
OBJECT-TYPE
    FROM RFC-1212
DisplayString
    FROM RFC1213-MIB
fnIdent
    FROM SCTE-HMS-ROOTS
;
```

fnAdminGroup OBJECT IDENTIFIER ::= { fnIdent 1 }

```
-- *****
-- * Administration Group
-- *****
```

```
fnVendorOID OBJECT-TYPE
SYNTAX OBJECT IDENTIFIER
ACCESS read-only
STATUS optional
DESCRIPTION
```

"This object provides a means for a vendor to point to a vendor specific extension of this MIB."

::= { fnAdminGroup 1 }

fnDeviceId OBJECT-TYPE

SYNTAX DisplayString (SIZE(0..32))

ACCESS read-only

STATUS mandatory

DESCRIPTION

"The content of this field is vendor specific. The intent is to provide manufacturer and/or product specific ASCII text information that will propagate to the manager's console verbatim. "

::= { fnAdminGroup 2 }

-- *****

-- * Return lasers

-- *****

fnNumberReturnLaser OBJECT-TYPE

SYNTAX INTEGER (1..8)

ACCESS read-only

STATUS mandatory

DESCRIPTION

"Number of entries in the return laser table.

A zero entry means the table does not exist and the functional area is not present in this device."

::= { fnIdent 2 }

fnReturnLaserTable OBJECT-TYPE

SYNTAX SEQUENCE OF FnReturnLaserEntry

ACCESS not-accessible

STATUS mandatory

DESCRIPTION

"A table containing information about return lasers in a fiber node."

::= { fnIdent 3 }

fnReturnLaserEntry OBJECT-TYPE

SYNTAX FnReturnLaserEntry

ACCESS not-accessible

STATUS mandatory

DESCRIPTION

"A list of information about each return laser in a fiber node."

INDEX { fnReturnLaserIndex }

::= { fnReturnLaserTable 1 }

FnReturnLaserEntry ::=

SEQUENCE

{

fnReturnLaserIndex

```

    INTEGER,
    fnReturnLaserCurrent
    INTEGER,
    fnReturnLaserTemp
    INTEGER,
    fnReturnLaserControl
    INTEGER,
    fnReturnLaserType
    DisplayString,
    fnReturnLaserWavelength
    INTEGER,
    fnReturnLaserOpticalPower
    INTEGER,
    fnReturnLaserRFActive
    INTEGER
}

```

fnReturnLaserIndex OBJECT-TYPE

SYNTAX INTEGER

ACCESS read-only

STATUS mandatory

DESCRIPTION

"Index into fnReturnLaserTable.

This index is application specific. It can be either the nth transmitter, or a slot number.

For example, a node may have 4 transmitters, numbered 1, 2, 3, 4, in slots 1, 3, 4, and 6.

Thus, the indexes could be .1, .3, .4, .6 (slots), OR .1, .2, .3., .4. (nth)"

```
 ::= { fnReturnLaserEntry 1 }
```

fnReturnLaserCurrent OBJECT-TYPE

SYNTAX INTEGER (0..65535)

ACCESS read-only

STATUS optional

DESCRIPTION

"Returns the return laser current. Units milliAmps.

This item requires an entry in the properties MIB."

```
 ::= { fnReturnLaserEntry 2 }
```

fnReturnLaserTemp OBJECT-TYPE

SYNTAX INTEGER (-40..80)

ACCESS read-only

STATUS optional

DESCRIPTION

"Returns the temperature of the return laser. Units in 1 degrees Celsius.

This item requires an entry in the properties MIB."

```
 ::= { fnReturnLaserEntry 3 }
```

fnReturnLaserControl OBJECT-TYPE

SYNTAX INTEGER { off(1), on(2) }