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S T A N D A R D S

Network Operations Subcommittee

AMERICAN NATIONAL STANDARD

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Digital Video Common MIB

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CONTENTS

| | |
|------------------------------------|----------|
| SCOPE | 3 |
| COPYRIGHT | 3 |
| NORMATIVE REFERENCE | 3 |
| INFORMATIVE REFERENCE | 3 |
| TERMS AND DEFINITIONS | 3 |
| REQUIREMENTS | 3 |

SCOPE

This document is identical to SCTE 154-1 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 provides the branch object identifiers for each of the MIBs within the SCTE HMS DIGITAL VIDEO COMMON MIB tree. The HMS DIGITAL COMMON MIB provides standard common MIB definitions for all HMS inside plant digital devices.

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NORMATIVE REFERENCE

IETF RFC 2571 SNMP-FRAMEWORK-MIB

IETF RFC 2578 SNMPv2-SMI

IETF RFC 2579 SNMPv2-TC

IETF RFC 2580 SNMPv2-CONF

IETF RFC 4133 ENTITY-MIB

SCTE 36 2002R2007 (formerly HMS028) SCTE-ROOT

SCTE 37 2008 SCTE-HMS-ROOTS Management Information Base (MIB)

SCTE 38-11 2008 SCTE-HMS-HEADENDIDENT-MIB

SCTE 154-5 2008 HMS-HEADENDIDENT-TC-MIB

INFORMATIVE REFERENCE

None

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, specifically SNMP.

REQUIREMENTS

This section defines the mandatory syntax of the HE-DIGITAL-COMMON-MIB. It follows the IETF Simple Network Management Protocol (SNMP) for defining managed objects. This mib falls under the SCTE-HMS-ROOTS mib defined by the SCTE Standards HMS Subcommittee.

To avoid issues related to device security and possible user contention, this MIB is only read-only. Device manufacturers are expected to provide device provisioning and control as a separate “out of band” service via protocols of their choice.

This MIB defines the Digital Branches for heDigitalQAM and heDigitalMPEG for compile purposes. Each mib file contains the entire definition to parse to avoid having to parse in all SCTE mib files.

The HE-DIGITAL branch under SCTE-HMS-ROOTS supports definitions from the following MIBs in lexicographical order :

ENTITY-MIB
HMS-ROOTS
SCTE-HMS-ROOTS
SCTE-HMS-HEADENDIDENT-MIB
SCTE-HE-DIGITAL-COMMON-MIB
SCTE-HMS-QAM-MIB
SCTE-HMS-MPEG-MIB
SCTE-HMS-MPEG-ENCODER-MIB

The syntax is given below.

```
SCTE-HE-DIGITAL-COMMON-MIB DEFINITIONS ::= BEGIN

IMPORTS
    enterprises, MODULE-IDENTITY, OBJECT-TYPE, OBJECT-IDENTITY
        FROM SNMPv2-SMI
    DisplayString, DateAndTime
        FROM SNMPv2-TC
    MODULE-COMPLIANCE, OBJECT-GROUP
        FROM SNMPv2-CONF
    entPhysicalIndex
        FROM ENTITY-MIB
    heDigital
        FROM SCTE-HMS-HEADENDIDENT-MIB -- see SCTE 38-11 (formerly HMS114)
    HeClockSource, HeResetValue, HeTenthCentigrade
        FROM SCTE-HMS-HEADENDIDENT-TC-MIB;

heDigitalCommonMIB MODULE-IDENTITY
    LAST-UPDATED      "200807210000Z "
    ORGANIZATION      "SCTE HMS Working Group"
    CONTACT-INFO      "SCTE HMS Subcommittee, Chairman
                       mail to: standards@scte.org "

    DESCRIPTION
        "The MIB module is for representing general information
        about HeadEnd Digital equipment present(or indoor)
        and is supported by an SNMP agent. heDigital is supported in
        HMS114R11.mib (SCTE 38-11)"

    REVISION "200807210000Z"
    DESCRIPTION
        "Updated file with Comments from meeting 7/9/08
        1. Update IMPORTS clause to reference:
           SCTE-HMS-HEADENDIDENT-TC-MIB for HeTenthCentigrade
           Remove Integer32."

    REVISION "200806100000Z"
    DESCRIPTION
```

"Added tree branches for MPEG and QAM so MIB would parse with any compiler."

REVISION "200712180000Z"

DESCRIPTION

"Modifications due to voting comments

1. Reordered MIB tree to fit under the heDigital branch.
2. Took out unused imports.
3. added temperature.
4. added compliance statement and made everything optional."

REVISION "200709250000Z"

DESCRIPTION

"Took out everything except the most basic place holders for future additions."

```
 ::= { enterprises scteRoot(5591) scteHmsTree (1) insidePlantIdent (11)
heDigital(5) 2 }
```

```
heDigitalCommonMIBObjects OBJECT IDENTIFIER ::= {heDigitalCommonMIB 1 }
```

```
heDigitalQAM OBJECT IDENTIFIER ::= {heDigital 3 }
```

```
heDigitalMPEG OBJECT IDENTIFIER ::= {heDigital 4 }
```

-- MIB contains 3 groups

```
heDigitalCommonConfig OBJECT IDENTIFIER ::= { heDigitalCommonMIBObjects 1 }
```

```
heDigitalCommonStatus OBJECT IDENTIFIER ::= { heDigitalCommonMIBObjects 2 }
```

```
heDigitalCommonAlarms OBJECT IDENTIFIER ::= { heDigitalCommonMIBObjects 3 }
```

```
heDigitalCommonLog OBJECT IDENTIFIER ::= { heDigitalCommonMIBObjects 4 }
```

-- The Common Tables

```
heDigitalCommonClockTable OBJECT-TYPE
```

```
SYNTAX SEQUENCE OF HeDigitalCommonClockEntry
```

```
MAX-ACCESS not-accessible
```

```
STATUS current
```

```
DESCRIPTION
```

"A table containing information about headend (or indoor) equipment."

```
 ::= { heDigitalCommonConfig 1 }
```

```
heDigitalCommonClockEntry OBJECT-TYPE
```

```
SYNTAX HeDigitalCommonClockEntry
```

```
MAX-ACCESS not-accessible
```

```
STATUS current
```

```
DESCRIPTION
```

"Information about particular headend equipment."

```
INDEX { entPhysicalIndex }
```

```
 ::= { heDigitalCommonClockTable 1 }
```

```
HeDigitalCommonClockEntry ::= SEQUENCE {
```

```
heDigitalCommonTime DateAndTime,
```

```
heDigitalCommonClockSource HeClockSource
```

```
}
```

```

heDigitalCommonTime OBJECT-TYPE
    SYNTAX      DateAndTime
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "Real time clock value for this module."
    ::= { heDigitalCommonClockEntry 1 }

heDigitalCommonClockSource OBJECT-TYPE
    SYNTAX      HeClockSource
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Real time clock source for this module."
    ::= { heDigitalCommonClockEntry 2 }

heDigitalCommonResetTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF HeDigitalCommonResetEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "A table containing information about headend (or indoor)
        equipment."
    ::= { heDigitalCommonConfig 2 }

heDigitalCommonResetEntry OBJECT-TYPE
    SYNTAX      HeDigitalCommonResetEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "Software / Hardware Reset of a specific Entity."
    INDEX      { entPhysicalIndex }
    ::= { heDigitalCommonResetTable 1 }

HeDigitalCommonResetEntry ::= SEQUENCE {
    heDigitalCommonSoftwareReset  HeResetValue,
    heDigitalCommonHardwareReset  HeResetValue,
    heDigitalCommonWarmReset      HeResetValue
}

heDigitalCommonSoftwareReset OBJECT-TYPE
    SYNTAX      HeResetValue
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "All running Software will reset. This function will initiate
        a cold start trap depending on the device. Software reset
        functions will be vendor specific."
    ::= { heDigitalCommonResetEntry 1 }

heDigitalCommonHardwareReset OBJECT-TYPE

```

```

SYNTAX      HeResetValue
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
    "The Hardware for this device will reset. This function will
initiate
    a cold start trap from the device."
 ::= { heDigitalCommonResetEntry 2 }

heDigitalCommonWarmReset OBJECT-TYPE
SYNTAX      HeResetValue
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
    "All running Software will reset. This function will initiate
    a warm start trap on the device. Software reset
    functions will be vendor specific. No configuration parameters
    can change during a Software Warm Start."
 ::= { heDigitalCommonResetEntry 3 }

heDigitalCommonTempTable OBJECT-TYPE
SYNTAX      SEQUENCE OF HeDigitalCommonTempEntry
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION
    "A table containing information about headend (or indoor)
    equipment temperature values."
 ::= { heDigitalCommonStatus 1 }

heDigitalCommonTempEntry OBJECT-TYPE
SYNTAX      HeDigitalCommonTempEntry
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION
    "Information about particular headend equipment."
INDEX       { entPhysicalIndex }
 ::= { heDigitalCommonTempTable 1 }

HeDigitalCommonTempEntry ::= SEQUENCE {
    heDigitalCommonTemperature          HeTenthCentigrade
}

heDigitalCommonTemperature OBJECT-TYPE
SYNTAX      HeTenthCentigrade
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "Temperature measured inside the headend equipment.

    This object must provide for the alarm management capabilities
    with a corresponding entry in the propertyTable of
    SCTE-HMS-PROPERTY-MIB (HMS026).

```


An alarm shall be recorded as an entry in the currentAlarmTable of SCTE-HMS-PROPERTY-MIB (HMS026).

A log record shall be added as an entry in the heCommonLogTable.

An heCommonAlarmEvent notification shall be sent."

```
::= { heDigitalCommonTempEntry 1 }
```

```
-- Conformance information
```

```
heDigitalCommonConformance OBJECT IDENTIFIER ::= {heDigitalCommonMIB 2 }
```

```
heDigitalCommonCompliances OBJECT IDENTIFIER ::= { heDigitalCommonConformance 1 }
```

```
heDigitalCompliance MODULE-COMPLIANCE
```

```
STATUS current
```

```
DESCRIPTION
```

```
"These objects describe the support level for QAM."
```

```
MODULE
```

```
GROUP heDigitalConfigGroup
```

```
DESCRIPTION
```

```
"The heDigitalConfigGroup is unconditionally optional"
```

```
GROUP heDigitalStatusGroup
```

```
DESCRIPTION
```

```
"The heDigitalStatusGroup is unconditionally optional"
```

```
::= { heDigitalCommonCompliances 1 }
```

```
-- MIB Groupings
```

```
heDigitalCommonGroups OBJECT IDENTIFIER ::= {heDigitalCommonConformance 2}
```

```
heDigitalConfigGroup OBJECT-GROUP
```

```
OBJECTS { heDigitalCommonTime,heDigitalCommonClockSource,
```

```
heDigitalCommonSoftwareReset,
```

```
heDigitalCommonHardwareReset, heDigitalCommonWarmReset}
```

```
STATUS current
```

```
DESCRIPTION
```

```
"Configuration that is common to network devices."
```

```
::= { heDigitalCommonGroups 1 }
```

```
heDigitalStatusGroup OBJECT-GROUP
```

```
OBJECTS { heDigitalCommonTemperature }
```

```
STATUS current
```

```
DESCRIPTION
```

```
"Status that is common to network devices."
```

```
::= { heDigitalCommonGroups 2 }
```

```
END
```