International Telecommunication Union

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

J.800.2

(06/2008)

SERIES J: CABLE NETWORKS AND TRANSMISSION OF TELEVISION, SOUND PROGRAMME AND OTHER MULTIMEDIA SIGNALS

Multimedia over IP in cable

Cable definition MIB specification

Recommendation ITU-T J.800.2

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Cable definition MIB specification

Summary

Recommendation ITU-T J.800.2 is referenced by several Cable industry projects including IP Cable Modems, IPCable2Home, and IPCablecom. It defines the Cable ASN.1 object identifier assignments from which each project assigns its own MIB information modules.

Source

Recommendation ITU-T J.800.2 was approved on 13 June 2008 by ITU-T Study Group 9 (2005-2008) under Recommendation ITU-T A.8 procedure.

FOREWORD

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In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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CONTENTS

Recommendation ITU-T J.800.2

Cable definition MIB specification

1 Scope

This Recommendation describes the namespace organization for the Cable industry enterprise MIB. It defines Cable Definition MIB modules whose purpose is to centrally allocate Object Identifiers (OIDs) for cable and, as such, to provide the private layout of the cable industry Object Identifier structure.

There are regional differences in the general service environment where cable industry technologies are deployed which lead to varying requirements for the organization of the namespace of the cable industry enterprise MIB. Therefore, two options for the namespace organization are included that have equal priority and are not required to be implemented in parallel nor to be interoperable.

The first of these options is defined in clause 4 and provides the Cable Definition MIB module (CLAB-DEF-MIB) to be applied for cable technology implementing the technology option adapted to a service environment like in North America. For the second technology option, the content of clause 4 is replaced by the content of Annex A. It defines two Definition MIB modules (ECL-DEF-MIB and EXCENTIS-MIB) and is to be applied in service environments like those found in Europe.

Compliance with this Recommendation requires compliance with the one or the other of these options, not with both. It is not required that equipment built to one option interoperates with equipment built to the other.

NOTE – The structure and content of this Recommendation have been organized for ease of use by those familiar with the original source material; as such, the usual style of ITU-T recommendations has not been applied.

2 References

This Recommendation is referenced by several Cable industry projects including DOCSIS, IPCable2Home, and IPCablecom. It defines the Cable OID registry from which each project assigns its own MIB information modules. As such, the Cable Definition MIB constitutes a normative reference to several Cable industry Recommendations, including those listed below.

DOCSIS Specifications

[ITU-T J.126] Recommendation ITU-T J.126, *Embedded Cable Modem device specification.*

[ITU-T J.128] Recommendation ITU-T J.128, *Set-top gateway specification for transmission systems for interactive cable television services.*

[ITU-T J.213] Recommendation ITU-T J.213, *Layer 2 virtual private networks for IP cable modem systems.*

[ITU-T J.214] Recommendation ITU-T J.214, *Cable modem TDM emulation interface*.

IPCable2Home Recommendations

[ITU-T J.191] Recommendation ITU-T J.191, *IP feature package to enhance cable modems*.

[ITU-T J.192] Recommendation ITU-T J.192, *A residential gateway to support the delivery of cable data services.*

IPCablecom Recommendations

[ITU-T J.166] Recommendation ITU-T J.166, *IPCablecom Management Information Base (MIB) framework.*

[ITU-T J.170] Recommendation ITU-T J.170, *IPCablecom security specification.*

The Cable Definition MIB Specification follows the Internet Standard Management Framework described in [IETF RFC 3410]. The Cable Definition MIB module also imports its X.509 textual convention from [IETF RFC 2578] and [IETF RFC 4131].

2.1 Normative References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

[IETF RFC 2578] IETF RFC 2578, *Structure of Management Information Version 2 (SMIv2)*, April 1999.

[IETF RFC 4131] IETF RFC 4131, *Management Information Base for Data Over Cable Service Interface Specification (DOCSIS) Cable Modems and Cable Modem Termination Systems for Baseline Privacy Plus*, September 2005.

2.2 Informative References

The following informative reference is used in this Recommendation.

[IETF RFC 3410] IETF RFC 3410, *Introduction and Applicability Statements for Internet Standard Management Framework*, December 2002.

2.3 Reference Acquisition

IETF Specifications:

IETF Secretariat, 46000 Center Oak Plaza, Sterling, VA 20166, Phone: +1-571-434-3500, Fax: +1-571-434-3535; http://www.ietf.org.

3 Abbreviations and acronyms

This Recommendation uses the following abbreviations and acronyms:

BSoD	Business Services over DOCSIS
CA	Certificate Authority
CM	Cable Modem
CMS	Call Management Server
CMTS	Cable Modem Termination System
CPE	Customer Premises Equipment
CVC	Code Verification Certificate
DEPI	Downstream External PHY Interface
DER	Distinguished Encoding Rules
DOCSIS	Data-Over-Cable Service Interface Specification
DSID	Downstream Service Identifier
DTI	DOCSIS Timing Interface
eDOCSIS	Embedded DOCSIS

eSAFE	Embedded Service/Application Functional Entity
KDC	Key Distribution Centre
L2VPN	Layer 2 Virtual Private Network
M-CMTS	Modular Cable Modem Termination System
MIB	Management Information Base
OID	Object Identifier
OSSI	Operations Support System Interface
PS	Portal Services
PW	Pseudo Wire
QoS	Quality of Service
RFI	Radio Frequency Interface
SLED	Software Loopback for eDOCSIS
TDM	Time Division Multiplexing
TEA	TDM Emulation Adapter
X509	Recommendation ITU-T X.509: Information Technology – Open Systems Interconnection – The Directory: Authentication Framework

4 Requirements

This clause applies to the first technology option referred to in clause 1. For the second option, refer to Annex A.

The Cable Definition MIB MUST be implemented as defined below.

```
CLAB-DEF-MIB DEFINITIONS ::= BEGIN
IMPORTS
    MODULE-IDENTITY,
    OBJECT-TYPE,
    enterprises
                    FROM SNMPv2-SMI           -- RFC 2578
    TEXTUAL-CONVENTION
                    FROM SNMPv2-TC            -- RFC 2579
    DocsX509ASN1DEREncodedCertificate
                    FROM DOCS-IETF-BPI2-MIB; -- RFC 4131

cableLabs MODULE-IDENTITY
    LAST-UPDATED "200803060000Z" -- March 6, 2008
    ORGANIZATION "Cable Television Laboratories, Inc."
    CONTACT-INFO
           "Postal: Cable Television Laboratories
                    858 Coal Creek Circle
                    Louisville, Colorado 80027-9750
                    U.S.A.
            Phone:  +1 303-661-9100
            Fax:    +1 303-661-9199
            E-mail: mibs@cablelabs.com"
    DESCRIPTION
            "This MIB module defines the namespace organization for the
            CableLabs enterprise OID registry."
    REVISION "200803060000Z" -- March 6, 2008
    DESCRIPTION
            "Revised Version includes ECN MIB-CLABDEF-N-07.0032-4 and
```

```
            published as CL-SP-MIB-CLABDEF-I07."
    REVISION "200701191700Z" -- January 19, 2007
    DESCRIPTION
            "This revision published as CL-SP-MIB-CLABDEF-I06."
     REVISION "200504081700Z" -- April 8, 2005
    DESCRIPTION
            "This revision published as CL-SP-MIB-CLABDEF-I05."
    ::= { enterprises 4491 }

-- Sub-tree for Registrations
clabFunction            OBJECT IDENTIFIER ::= { cableLabs 1 }
clabFuncMib2            OBJECT IDENTIFIER ::= { clabFunction 1 }
clabFuncProprietary     OBJECT IDENTIFIER ::= { clabFunction 2 }

-- Sub-tree for Project Definitions
clabProject             OBJECT IDENTIFIER ::= { cableLabs 2 }
clabProjDocsis          OBJECT IDENTIFIER ::= { clabProject 1 }
clabProjPacketCable     OBJECT IDENTIFIER ::= { clabProject 2 }
clabProjOpenCable       OBJECT IDENTIFIER ::= { clabProject 3 }
clabProjCableHome       OBJECT IDENTIFIER ::= { clabProject 4 }

-- Sub-tree for Global Security Definitions
clabSecurity            OBJECT IDENTIFIER ::= { cableLabs 3 }
clabSecCertObject       OBJECT IDENTIFIER ::= { clabSecurity 1 }

-- Sub-tree for CableLabs cross project common MIB definitions
clabCommonMibs          OBJECT IDENTIFIER ::= { cableLabs 4 }

--
-- CableLabs DOCSIS Project Sub-tree Definitions
--

--
-- CableLabs CableHome Project Sub-tree Definitions
--

--
-- CableLabs PacketCable Project Sub-tree Definitions
--

pktcSecurity OBJECT IDENTIFIER
    -- CableLabs OID reserved for security and used to specify errors
    -- that can be returned for the Kerberos KDC - Provisioning
    -- Server interface, or the MTA-CMS Kerberized IPsec interface, or
    -- the MTA-Provisioning Server Kerberized SNMPv3 interface.
    -- CableLabs PacketCable Security Specification
    ::= { clabProjPacketCable 4 }

pktcLawfulIntercept OBJECT IDENTIFIER
    -- CableLabs OID reserved for the PacketCable Electronic
    -- Surveillance Protocol (PCESP) between the Delivery Function
    -- and Collection Function. This OID is used to define the ASN.1
    -- PCESP messages.
    -- CableLabs PacketCable Electronic Surveillance Protocol
    -- Specification
    ::= { clabProjPacketCable 5 }

--
-- Sub-tree for PacketCable MIB Enhancements
--

pktcEnhancements OBJECT IDENTIFIER ::= { clabProjPacketCable 6 }

-- Subtree for the incorporation of new MIB Modules
```

```
-- (MIB enhancements) proposed to the PacketCable MIB modules.
-- This includes new MIB objects being introduced
-- as part of the PacketCable MIB enhancement efforts
-- and as a place holder for future revisions.
-- This sub-division would facilitate easier incorporation
-- of proposed IETF Internet-Drafts and RFCs by keeping enhancements
-- independent of RFC or Internet-Draft changes.
-- For new MIB tables that use previously used indices, it is
-- recommended that the AUGMENT CLAUSE be used to aid SNMP Operations,
-- as deemed necessary.

pktcPACMMibs OBJECT IDENTIFIER
    -- PacketCable MIB module defining the basic MIB
    -- Objects related to Provisioning, Activation,
    -- Configuration and Management (PACM)
    -- Reference:
    -- CableLabs PacketCable PACM Specification.
    ::= { clabProjPacketCable 7 }

pktcApplicationMibs OBJECT IDENTIFIER
    -- PacketCable MIB module defining the basic MIB
    -- Objects related to Service specific definitions
    -- Reference:
    -- CableLabs PacketCable Service specifications
    ::= { clabProjPacketCable 8 }

pktcSupportMibs OBJECT IDENTIFIER
    -- PacketCable MIB module defining the basic MIB
    -- Objects related to service support definitions,
    -- (independent of PACM or service specific definitions)
    -- Reference:
    -- CableLabs PacketCable specifications
    ::= { clabProjPacketCable 9 }

pktcEUEMibs OBJECT IDENTIFIER
    -- PacketCable MIB module defining the basic MIB
    -- Objects related to PacketCable E-UE
    -- Provisioning.
    -- Reference:
    -- CableLabs PacketCable E-UE Provisioning
    -- Framework specification
    ::= { clabProjPacketCable 10 }

--
-- PacketCable PACM sub-tree
--

pktcPACMTC OBJECT IDENTIFIER
    -- PacketCable MIB module defining PacketCable
    -- textual conventions for describing PacketCable
    -- PACM MIB objects.
    -- Reference
    -- CableLabs PacketCable Provisioning, Activation,
    -- Configuration and Management specification
    ::= { pktcPACMMibs 1 }

pktcPACMUEMib OBJECT IDENTIFIER
    -- PacketCable MIB module defining PacketCable
    -- PACM MIB Objects related to User Equipment.
    -- Reference
    -- CableLabs PacketCable Provisioning, Activation,
    -- Configuration and Management specification
    ::= { pktcPACMMibs 2 }
```

```
pktcPACMUserMib OBJECT IDENTIFIER
    -- PacketCable MIB module defining PacketCable
    -- PACM MIB Objects related to Users.
    -- Reference
    -- CableLabs PacketCable Provisioning, Activation,
    -- Configuration and Management specification
    ::= { pktcPACMMibs 3 }

--
-- PacketCable Service support sub-tree
--

pktcESSupportMibs OBJECT IDENTIFIER
    -- PacketCable MIB module defining PacketCable
    -- Electronic Surveillance (ES) support MIB Objects.
    -- Reference
    -- CableLabs PacketCable Electronic Surveillance
    -- specification
    ::= { pktcSupportMibs 1 }

--
-- PacketCable EUE sub-tree
--

pktcEUEDeviceMibs OBJECT IDENTIFIER
    -- PacketCable MIB module defining PacketCable
    -- E-UE configuration MIB Objects for specific
    -- E-UE types, such as the E-DVA.
    -- Reference
    -- CableLabs PacketCable E-UE Provisioning
    -- Framework specification
    ::= { pktcEUEMibs 1 }

--
-- CableLabs OpenCable Project Sub-tree Definitions
--

--
-- Definition of CableLabs Security Certificate Objects
--

clabSrvcPrvdrRootCACert OBJECT-TYPE
    SYNTAX      DocsX509ASN1DEREncodedCertificate
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
            "The X509 DER-encoded CableLabs Service Provider Root CA
            Certificate."
    REFERENCE
            "CableLabs CableHome Specification;
            CableLabs PacketCable Security Specification."
    ::= { clabSecCertObject 1 }

clabCVCRootCACert OBJECT-TYPE
    SYNTAX      DocsX509ASN1DEREncodedCertificate
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
            "The X509 DER-encoded CableLabs CVC Root CA Certificate."
    REFERENCE
            "CableLabs CableHome Specification;
            CableLabs PacketCable Security Specification."
    ::= { clabSecCertObject 2 }
```

```
clabCVCCACert OBJECT-TYPE
    SYNTAX      DocsX509ASN1DEREncodedCertificate
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
            "The X509 DER-encoded CableLabs CVC CA Certificate."
    REFERENCE
            "CableLabs CableHome Specification;
            CableLabs PacketCable Security Specification."
    ::= { clabSecCertObject 3 }

clabMfgCVCCert OBJECT-TYPE
    SYNTAX      DocsX509ASN1DEREncodedCertificate
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
            "The X509 DER-encoded Manufacturer CVC Certificate."
    REFERENCE
            "CableLabs CableHome Specification;
            CableLabs PacketCable Security Specification."
    ::= { clabSecCertObject 4 }

clabMfgCACert OBJECT-TYPE
    SYNTAX      DocsX509ASN1DEREncodedCertificate
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
            "The X509 DER-encoded Manufacturer CA Certificate."
    REFERENCE
            "CableLabs CableHome Specification;
            CableLabs PacketCable Security Specification."
    ::= { clabSecCertObject 5 }

--
-- CableLabs cross project common MIB sub-tree definitions
--

clabUpsMib OBJECT IDENTIFIER
    -- CableLabs cross project MIB module defining the basic management
    -- objects for the configuration and monitoring of the battery
    -- backup and UPS functionality for CableLabs compliant devices.
    ::= { clabCommonMibs 1 }

clabTopoMib OBJECT IDENTIFIER
    -- This CableLabs cross project MIB module provides
    -- management objects for the management of fiber
    -- nodes in the Cable plant
    -- Reference:
    -- CableLabs DOCSIS 3.0 OSSI Specification.
    ::= { clabCommonMibs 2 }

--
-- Textual Conventions
--

--
-- DOCSIS Defined Textual Conventions
--
```

```
DocsL2vpnIfList ::= TEXTUAL-CONVENTION
    STATUS      current
    DESCRIPTION
            "An object of this type indicates a set of CM
            MAC bridge interfaces, encoded as a BITS syntax with a ?1?
            Bit for each interface included in the set.

            Bit position eCM(0) represents a conceptual interface to
            the internal 'self' host MAC of the eCM itself. All other
            bit positions K correspond to CM MAC bridge port interface
            index with ifIndex value K.

            A BITS object is encoded as an OCTET STRING, which may have
            length zero. Bit position 0 is encoded in the most
            significant bit of the first octet, proceeding to
            bit position 7 in the least significant bit. Bit position 8
            is encoded in the most significant bit of the second octet,
            and so on.

            In a CM, ifIndex value 1 corresponds to the primary CPE
            interface. In CableHome devices, this interface is assigned
            to the embedded Portal Services (ePS) host interface, which
            provides a portal to the primary physical CPE interface.
            In many contexts of a DocsL2VpnIfList, a '1' in bit
            position 1 corresponds to 'any' or 'all' CPE interfaces
            when the CM contains more than one CPE interface.

            ifIndex value 2 corresponds to the docsCableMacLayer
            RF MAC interface.

            ifIndex values 3 and 4 correspond to the
            docsCableDownstream and docsCableUpstream interfaces,
            respectively, which are not separate MAC bridge port
            interfaces. Bit positions 3 and 4 are unused in this type;
            they must be saved and reported as configured, but
            otherwise ignored.

            ifIndex values 5 through 15 are reserved for individual
            CPE interfaces for devices that implement more than one
            CPE interface. In such devices, DocsL2vpnIfList bit
            position 1 corresponds to the set of all CPE interfaces.
            A CM with more than one CPE interface MAY assign a
            DocsL2vpnIfList bit position within the range of 5..15 to
            refer to the single primary CPE interface.

            ifIndex value 16 is assigned to any embedded Multimedia
            Terminal Adapter (eMTA) as defined by PacketCable.

            ifIndex value 17 is assigned to the IP management host
            interface of an embedded Set Top Box (eSTB). ifIndex value
            18 is reserved for the DOCSIS Set-top Gateway (DSG) traffic
            delivered to an eSTB.

            ifIndex values 19 through 31 are
            reserved for future defined embedded Service Application."
    SYNTAX      BITS {
        eCm(0),
        cmci(1),
        docsCableMacLayer(2),
        docsCableDownstream(3),
        docsCableUpstream(4),
        -- 5..15 reserved for other CPE interfaces
```

```
        eMta(16),
        eStbIp(17),
        eStbDsg(18)
        -- 19..31 reserved for other eSAFE interfaces
    }


END
```

Annex A

Requirements for European Specifications

(This annex forms an integral part of this Recommendation)

This annex applies to the second technology option referred to in clause 1. For the first option, refer to clause 4.

The Definition MIB modules MUST be implemented as defined below.

```
ECL-DEF-MIB DEFINITIONS ::= BEGIN
IMPORTS
    MODULE-IDENTITY,
    OBJECT-TYPE,
    enterprises
                    FROM SNMPv2-SMI;

euroCableLabs MODULE-IDENTITY
    LAST-UPDATED "200611021000Z" -- 02 November 2006
    ORGANIZATION "EuroCableLabs"
    CONTACT-INFO
           "Editor: Volker Leisse
            Postal: EuroCableLabs
                    Avenue des Arts 41
                    1040 Brussels
                    Belgium
            Phone:  +49 531 391-2478
            Fax:    +49 531 391-5192
            E-mail: mib@eurocablelabs.com"
    DESCRIPTION
            "This MIB module defines the organization of the namespace
            for the EuroCableLabs enterprise OID registry."

    REVISION "200601051000Z" -- 05 January 2006
    DESCRIPTION
            "This revision was published as ECL-SP-MIB-DEF-D01."
    REVISION "200611021000Z" -- 02 November 2006
    DESCRIPTION
            "This revision implements MIB-CLABDEF-N-06.0023-2 and
             was published as ECL-SP-MIB-DEF-D02."
    ::= { enterprises 24624 }

-- Sub-tree for Registrations
eclFunction             OBJECT IDENTIFIER ::= { euroCableLabs 1 }

-- Sub-tree for Project Definitions
eclProject              OBJECT IDENTIFIER ::= { euroCableLabs 2 }
eclProjDocsis           OBJECT IDENTIFIER ::= { eclProject 1 }
eclProjPacketCable      OBJECT IDENTIFIER ::= { eclProject 2 }

-- Sub-tree for Global Security Definitions
eclSecurity             OBJECT IDENTIFIER ::= { euroCableLabs 3 }

-- Sub-tree for cross project common MIB definitions
eclCommon               OBJECT IDENTIFIER ::= { euroCableLabs 4 }

--
-- EuroPacketCable Project Sub-tree Definitions
--
pktcEclMtaMib OBJECT IDENTIFIER
    -- PacketCable MIB module defining the basic management object for
```

```
    -- the Multimedia Terminal Adapter (MTA) devices compliant with
    -- PacketCable requirements.
    ::= { eclProjPacketCable 1 }

pktcEclSigMib OBJECT IDENTIFIER
    -- PacketCable MIB module defining the basic management object for
    -- the PacketCable MTA Signaling protocols. This version of the MIB
    -- includes common signaling and Network Call Signaling (NCS)
    -- related signaling objects.
    ::= { eclProjPacketCable 2 }

pktcEclEventMib OBJECT IDENTIFIER
    -- PacketCable MIB module defining the basic management objects for
    -- event reporting.
    -- Reference
    -- CableLabs PacketCable Management Event Specification
    ::= { eclProjPacketCable 3 }

pktcEclSecurity OBJECT IDENTIFIER
    -- OID reserved for security and used to specify errors
    -- that can be returned for the Kerberos KDC - Provisioning
    -- Server interface, or the MTA-CMS Kerberized IPsec interface, or
    -- the MTA-Provisioning Server Kerberized SNMPv3 interface.
    -- Reference
    -- CableLabs PacketCable Security Specification
    ::= { eclProjPacketCable 4 }

pktcEclLawfulIntercept OBJECT IDENTIFIER
    -- OID reserved for management objects for the PacketCable Lawful
    -- Intercept specifications between the Delivery Function
    -- and Collection Function. This OID is used to define the ASN.1
    -- syntax of related messages.
    -- Reference
    --
    ::= { eclProjPacketCable 5 }

pktcEclEnhancements OBJECT IDENTIFIER
    -- The following MIB OBJECTS are being introduced for
    -- incorporation of new MIB objects (MIB enhancements).
    -- This includes new MIB objects being introduced
    -- as part of the PacketCable MIB Enhancement efforts
    -- and as a place holder for future revisions.
    -- This sub-division would facilitate easier incorporation
    -- of proposed IETF Drafts/RFCs by keeping enhancements
    -- independent of RFC/Draft changes.
    -- For new MIB tables that use previously used indices, it is
    -- recommended that the AUGMENT CLAUSE be used to aid SNMP Operations,
    -- as deemed necessary.
    ::= { eclProjPacketCable 6 }

--
-- Sub-tree for EuroPacketCable MIB Enhancements
--
pktcEclEnMtaMib OBJECT IDENTIFIER
    -- PacketCable MIB module enhancements to the basic management
    -- objects defined by the MIB group pktcMtaMib for the Multimedia
    -- Terminal Adapter (MTA) devices compliant with PacketCable
    -- requirements.
    -- Reference:
    -- CableLabs PacketCable MTA Device Provisioning Specification.
    ::= { pktcEclEnhancements 1 }
```

```
pktcEclEnSigMib OBJECT IDENTIFIER
    -- PacketCable MIB module enhancements to the basic management
    -- objects defined by the MIB group pktcSigMib for the
    -- PacketCable MTA Signaling protocols.
    -- Reference:
    -- CableLabs PacketCable MTA Device Provisioning Specification.
    ::= { pktcEclEnhancements 2 }

pktcEclEnEventMib OBJECT IDENTIFIER
    -- PacketCable MIB module enhancements to the basic management
    -- objects defined by the MIB group pktcEventMib for event reporting.
    -- Reference:
    -- CableLabs PacketCable Management Event Specification.
    ::= { pktcEclEnhancements 3 }

pktcEclEnSecurityMib OBJECT IDENTIFIER
    -- PacketCable MIB module enhancements to the basic management
    -- objects defined by the reserved MIB group pktcSecurity.
    -- Reference:
    -- CableLabs PacketCable Security Specification.
    ::= { pktcEclEnhancements 4 }
--
-- End of sub-tree for EuroPacketCable MIB Enhancements
--

END

EXCENTIS-MIB DEFINITIONS ::= BEGIN
IMPORTS
   MODULE-IDENTITY,
   enterprises
       FROM SNMPv2-SMI;

excentis MODULE-IDENTITY
   LAST-UPDATED "200611150000Z"
   ORGANIZATION "Excentis"
   CONTACT-INFO
       "Wim De Ketelaere
        Gildestraat 8
        B-9000 Ghent
        Belgium
        Tel: +32 9 269 22 91
        Fax: +32 9 329 31 74
        Email: wim.deketelaere@excentis.com"
   DESCRIPTION
        "This MIB module defines the organization of the namespace
         for the Excentis enterprise OID registry."
   ::= { enterprises 7432 }

END
```

SERIES OF ITU-T RECOMMENDATIONS

Series A	Organization of the work of ITU-T
Series D	General tariff principles
Series E	Overall network operation, telephone service, service operation and human factors
Series F	Non-telephone telecommunication services
Series G	Transmission systems and media, digital systems and networks
Series H	Audiovisual and multimedia systems
Series I	Integrated services digital network
Series J	**Cable networks and transmission of television, sound programme and other multimedia signals**
Series K	Protection against interference
Series L	Construction, installation and protection of cables and other elements of outside plant
Series M	Telecommunication management, including TMN and network maintenance
Series N	Maintenance: international sound programme and television transmission circuits
Series O	Specifications of measuring equipment
Series P	Telephone transmission quality, telephone installations, local line networks
Series Q	Switching and signalling
Series R	Telegraph transmission
Series S	Telegraph services terminal equipment
Series T	Terminals for telematic services
Series U	Telegraph switching
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Series X	Data networks, open system communications and security
Series Y	Global information infrastructure, Internet protocol aspects and next-generation networks
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