

PacketCable™ Signaling MIB Specification

SUPERSEDED

PKT-SP-MIB-SIG-I09-050812

ISSUED

Notice

This PacketCable specification is a cooperative effort undertaken at the direction of Cable Television Laboratories, Inc. (CableLabs®) for the benefit of the cable industry. Neither CableLabs, nor any other entity participating in the creation of this document, is responsible for any liability of any nature whatsoever resulting from or arising out of use or reliance upon this document by any party. This document is furnished on an AS-IS basis and neither CableLabs, nor other participating entity, provides any representation or warranty, express or implied, regarding its accuracy, completeness, or fitness for a particular purpose.

© Copyright 1999 - 2005 Cable Television Laboratories, Inc.
All rights reserved.

Document Status Sheet

Document Control Number: PKT-SP-MIB-SIG-I09-050812				
Document Title: PacketCable™ Signaling MIB Specification				
Revision History: I01 Released — December 1, 1999				
SUPERSEDED				
I02 Released — March 21, 2001				
I03 Released — December 31, 2001				
I04 Released — October 18, 2002				
I05 Released — November 27, 2002				
I06 Released — April 15, 2003				
I07 Released — July 28, 2003				
I08 Released — January 13, 2004				
I09 Released — August 12, 2005				
Date: August 12, 2005				
Status:	Work in Progress	Draft	Issued	Closed
Distribution Restrictions:	Author Only	CL/Member	CL/ PacketCable Vendor	Public

Key to Document Status Codes:

- Work in Progress** An incomplete document, designed to guide discussion and generate feedback, that may include several alternative requirements for consideration.
- Draft** A document in specification format considered largely complete, but lacking review by Members and vendors. Drafts are susceptible to substantial change during the review process.
- Issued** A stable document, which has undergone rigorous member and vendor review and is suitable for product design and development, cross-vendor interoperability, and for certification testing.
- Closed** A static document, reviewed, tested, validated, and closed to further engineering change requests to the specification through CableLabs.

Trademarks:

DOCSIS®, eDOCSIS™, PacketCable™, CableHome®, CableOffice™, OpenCable™, OCAP™, CableCARD™, M-CMTST™ and CableLabs® are trademarks of Cable Television Laboratories, Inc.

CONTENTS

1 SCOPE..... 1

2 REFERENCES..... 1

 2.1 Normative References 1

 2.2 Informative References 1

3 ABBREVIATIONS 1

4 REQUIREMENTS 2

APPENDIX A. REVISION HISTORY 25

SUPERSEDED

SUPERSEDED

This page left blank intentionally.

1 SCOPE

This specification describes the PacketCable Signaling (SIG) MIB requirements.

2 REFERENCES

In order to claim compliance with this specification, it is necessary to conform to the following standards and other works as indicated, in addition to the other requirements of this specification. Notwithstanding, intellectual property rights may be required to use or implement such normative references.

2.1 Normative References

- [1] "PacketCable MIB Framework," PKT-SP-MIBS-I10-050812, August 12, 2005, Cable Television Laboratories, Inc., <http://www.packetcable.com/>
- [2] "PacketCable Network-Based Call Signaling Protocol Specification," PKT-SP-EC-MGCP-I11-050812, August 12, 2005, Cable Television Laboratories, Inc., <http://www.packetcable.com/>
- [3] "PacketCable MTA Device Provisioning Specification," PKT-SP-PROV-I11-050812, August 12, 2005, Cable Television Laboratories, Inc., <http://www.packetcable.com/>

2.2 Informative References

- [4] PacketCable Architecture Framework Technical Report, PKT-TR-ARCH-I01-991201, December 1, 1999, Cable Television Laboratories Inc., <http://www.PacketCable.com/>
- [5] IETF RFC 3261, SIP: Session Initiation Protocol, February 2002.

3 ABBREVIATIONS

There are no abbreviations used in this document.

4 REQUIREMENTS

The PacketCable NCS MIB MUST be implemented as defined below.

```
PKTC-SIG-MIB DEFINITIONS ::= BEGIN
```

```
IMPORTS
```

```
MODULE-IDENTITY,
OBJECT-TYPE,
Integer32,
IpAddress,
BITS
```

SUPERSEDED

```
    FROM SNMPv2-SMI
TEXTUAL-CONVENTION,
RowStatus,
TruthValue
```

```
    FROM SNMPv2-TC
OBJECT-GROUP,
MODULE-COMPLIANCE
    FROM SNMPv2-CONF
SnmAdminString
    FROM SNMP-FRAMEWORK-MIB
clabProjPacketCable
    FROM CLAB-DEF-MIB
ifIndex
    FROM IF-MIB;
```

```
pktcSigMib MODULE-IDENTITY
LAST-UPDATED      "200508120000Z" -- August 12, 2005
ORGANIZATION      "CableLabs -- PacketCable OSS Group"
CONTACT-INFO
    "Sumanth Channabasappa
     Postal: CableLabs, Inc.
           858 Coal Creek Circle
           Louisville, CO 80027-1266
           U.S.A.
     Phone:  +1 303-661-9100
     Fax:    +1 303-661-9199
     E-mail: mibs@cablelabs.com"
```

```
DESCRIPTION
```

```
"This MIB module supplies the basic management
object for the PacketCable Signaling
protocols. This version of the MIB includes
common signaling and Network Call Signaling
(NCS) related signaling objects.
```

```
Acknowledgements:
```

```
Angela Lyda      Arris Interactive
Sasha Medvinsky  Motorola
Roy Spitzer      Telogy Networks, Inc.
Rick Vetter      Motorola
Itay Sherman     Texas Instruments
Klaus Hermanns   Cisco Systems
Eugene Nechamkin Broadcom Corp.
Satish Kumar     Texas Instruments
Copyright 1999-2005 Cable Television Laboratories, Inc.
All rights reserved."
```

```
REVISION "200508120000Z"
```

```
DESCRIPTION
```

```
"This revision, published as part of the PacketCable
```

```

        Signaling MIB I09 Specification."
 ::= { clabProjPacketCable 2 }

PktcCodecType ::= TEXTUAL-CONVENTION
    STATUS      current
    DESCRIPTION
        "Textual Convention defines various types of
        CODECs that MAY be supported. The list of CODECs
        MUST be consistent with the Codec RTP MAP Parameters
        Table in the PacketCable CODEC specification. In-line
        embedded comments below contain the Literal Codec Name
        for each CODEC. The Literal Codec Name corresponds to
        the second column of the Codec RTP MAP Parameters Table.
        The Literal Codec Name column contains the CODEC name
        that is used in the LCD of the NCS messages CRCX/MDCX,
        and is also used to identify the CODEC in the CMS
        Provisioning Specification. The RTP Map Parameter
        Column of the Codec RTP MAP Parameters Table contains
        the string used in the media attribute line ('a=') of the
        SDP parameters in NCS messages."
    REFERENCE
        "PacketCable CODEC Specification"
    SYNTAX INTEGER {
        other      (1),
        unknown   (2),
        g729       (3), -- G729
        reserved  (4), -- reserved for future use
        g729E     (5), -- G729E
        pcmu      (6), -- PCMU
        g726at32 (7), -- G726-32
        g728      (8), -- G728
        pcma      (9), -- PCMA
        g726at16 (10), -- G726-16
        g726at24 (11), -- G726-24
        g726at40 (12) -- G726-40
    }

PktcRingCadence ::= TEXTUAL-CONVENTION
    STATUS      current
    DESCRIPTION
        "This object represents a ring cadence in bit string
        format. The ring cadence representation starts with the
        first 1 in the pattern (the leading 0s in the MSB are
        padding and are to be ignored). Each bit
        represents 100ms of tone; 1 is tone, 0 is no tone. 64
        bits MUST be used for cadence representation, LSB 4 bits
        are used for representing repeatable characteristics.
        0000 means repeatable, and 1000 means non repeatable.
        During SNMP SET operations 64 bits MUST be used,
        otherwise MTA MUST reject the value. As an example, the
        hex representation of a ring cadence of 0.5 secs on; 4
        secs off; repeatable would be:0x0001F00000000000."
    SYNTAX BITS {
        interval1 (0),
        interval2 (1),
        interval3 (2),
        interval4 (3),
        interval5 (4),
        interval6 (5),
        interval7 (6),
        interval8 (7),
        interval9 (8),
        interval10 (9),

```

```
interval11 (10),
interval12 (11),
interval13 (12),
interval14 (13),
interval15 (14),
interval16 (15),
interval17 (16),
interval18 (17),
interval19 (18),
interval20 (19),
interval21 (20),
interval22 (21),
interval23 (22),
interval24 (23),
interval25 (24),
interval26 (25),
interval27 (26),
interval28 (27),
interval29 (28),
interval30 (29),
interval31 (30),
interval32 (31),
interval33 (32),
interval34 (33),
interval35 (34),
interval36 (35),
interval37 (36),
interval38 (37),
interval39 (38),
interval40 (39),
interval41 (40),
interval42 (41),
interval43 (42),
interval44 (43),
interval45 (44),
interval46 (45),
interval47 (46),
interval48 (47),
interval49 (48),
interval50 (49),
interval51 (50),
interval52 (51),
interval53 (52),
interval54 (53),
interval55 (54),
interval56 (55),
interval57 (56),
interval58 (57),
interval59 (58),
interval60 (59),
interval61 (60),
interval62 (61),
interval63 (62),
interval64 (63)
```

```
}
```

SUPERSEDED

```

PktcSigType      ::= TEXTUAL-CONVENTION
    STATUS        current
    DESCRIPTION
        "These are the various types of signaling that
        may be supported.
        ncs - network call signaling a derivation of MGCP
        (Media Gateway Control Protocol) version 1.0
        dcs - distributed call signaling a derivation
        of SIP (Session Initiation Protocol) RFC 3261"
    SYNTAX INTEGER {
        other(1),
        unknown(2),
        ncs(3),
        dcs(4)
    }

pktcSigMibObjects      OBJECT IDENTIFIER
    ::= { pktcSigMib 1 }
pktcSigDevConfigObjects OBJECT IDENTIFIER
    ::= { pktcSigMibObjects 1 }
pktcNcsEndPntConfigObjects OBJECT IDENTIFIER
    ::= { pktcSigMibObjects 2 }
pktcSigEndPntConfigObjects OBJECT IDENTIFIER
    ::= { pktcSigMibObjects 3 }
pktcDcsEndPntConfigObjects OBJECT IDENTIFIER
    ::= { pktcSigMibObjects 4 }

--
--      The pktcSigDevCodecTable defines the codecs supported by this
--      Media Terminal Adapter (MTA).  There is one entry for each
--      codecs supported.
--

pktcSigDevCodecTable  OBJECT-TYPE
    SYNTAX          SEQUENCE OF PktcSigDevCodecEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "This table describes the MTA supported codec types."
    ::= { pktcSigDevConfigObjects 1 }

pktcSigDevCodecEntry OBJECT-TYPE
    SYNTAX          PktcSigDevCodecEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "List of supported codecs types for the MTA."
    INDEX { pktcSigDevCodecIndex }
    ::= { pktcSigDevCodecTable 1 }

PktcSigDevCodecEntry ::= SEQUENCE {
    pktcSigDevCodecIndex  Integer32,
    pktcSigDevCodecType   PktcCodecType,
    pktcSigDevCodecMax    Integer32
}

pktcSigDevCodecIndex OBJECT-TYPE
    SYNTAX          Integer32 (1..16383)
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "The index value which uniquely identifies an entry
        in the pktcSigDevCodecTable."

```

SUPERSEDED

```

 ::= { pktcSigDevCodecEntry 1 }

pktcSigDevCodecType OBJECT-TYPE
    SYNTAX      PktcCodecType
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "A codec type supported by this MTA."
 ::= { pktcSigDevCodecEntry 2 }

pktcSigDevCodecMax OBJECT-TYPE
    SYNTAX      Integer32(1..16383)
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The maximum number of simultaneous sessions of the
         specific codec that the MTA can support"
 ::= { pktcSigDevCodecEntry 3 }

--
-- These are the common signaling related definitions that affect
-- the entire MTA device.
--

pktcSigDevEchoCancellation OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "This object specifies if the device is capable
         of echo cancellation."
 ::= { pktcSigDevConfigObjects 2 }

pktcSigDevSilenceSuppression OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "This object specifies if the device is capable of
         silence suppression (Voice Activity Detection)."
 ::= { pktcSigDevConfigObjects 3 }

pktcSigDevConnectionMode OBJECT-TYPE
    SYNTAX BITS {
        voice(0),
        fax(1),
        modem(2)
    }
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "This object specifies the connection modes that the
         MTA device can support."
 ::= { pktcSigDevConfigObjects 4 }

--
-- In the United States Ring Cadences 0, 6, and 7 are custom
-- ring cadences definable by the user. The following three
-- objects are used for these definitions.
--

```



```

        Type of Service (TOS) value for call signalling."
REFERENCE
    "Refer to NCS specification"
DEFVAL { 0 }
 ::= { pktcSigDevConfigObjects 8 }

pktcSigDefMediaStreamTos OBJECT-TYPE
    SYNTAX      Integer32 (0..63)
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "This object contains the default value used in the IP
        header for setting the Type of Service (TOS) for media
        stream packets. The MTA MUST NOT update this object with
        the value supplied by the CMS in the NCS messages (if
        present). When the value of this object is updated by
        SNMP, the MTA MUST use the new value as a default starting
        from the new connection. Existing connections are not
        affected by the value's update."
REFERENCE
    "Refer to NCS specification"
DEFVAL { 0 }
 ::= { pktcSigDevConfigObjects 9 }

pktcSigTosFormatSelector OBJECT-TYPE
    SYNTAX      INTEGER {
        ipv4TOSOctet(1),
        dscpCodepoint(2)
    }
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "The format of the default signaling and media
        Type of Service (TOS) values."
DEFVAL { ipv4TOSOctet }
 ::= { pktcSigDevConfigObjects 10 }

--
--     pktcSigCapabilityTable - This table defines the valid signaling
--     types supported by this MTA.
--

pktcSigCapabilityTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF PktcSigCapabilityEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "This table describes the signaling types by this MTA."
 ::= { pktcSigDevConfigObjects 11 }

pktcSigCapabilityEntry OBJECT-TYPE
    SYNTAX      PktcSigCapabilityEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "Entries in pktcMtaDevSigCapabilityTable - List of
        supported signaling types, versions and vendor extensions
        for this MTA. Each entry in the list provides for one
        signaling type and version combination. If the device
        supports multiple versions of the same signaling type -
        it will require multiple entries."
    INDEX { pktcSignalingIndex }
 ::= { pktcSigCapabilityTable 1 }

```

SUPERSEDED

```

PktcSigCapabilityEntry ::= SEQUENCE {
    pktcSignalingIndex      Integer32,
    pktcSignalingType      PktcSigType,
    pktcSignalingVersion    SnmpAdminString,
    pktcSignalingVendorExtension SnmpAdminString
}

pktcSignalingIndex      OBJECT-TYPE
    SYNTAX      Integer32 (1..16383)
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "The index value which uniquely identifies
        an entry in the pktcSigCapabilityTable."
    ::= { pktcSigCapabilityEntry 1 }

pktcSignalingType      OBJECT-TYPE
    SYNTAX      PktcSigType
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The Type identifies the type of signaling
        used, this can be NCS, DCS, etc. This value
        has to be associated with a single signaling
        version - reference pktcMtaDevSignalingVersion."
    ::= { pktcSigCapabilityEntry 2 }

pktcSignalingVersion    OBJECT-TYPE
    SYNTAX      SnmpAdminString
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Provides the version of the signaling type -
        reference pktcSignalingType. Examples
        would be 1.0 or 2.33 etc."
    ::= { pktcSigCapabilityEntry 3 }

pktcSignalingVendorExtension OBJECT-TYPE
    SYNTAX      SnmpAdminString
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The vendor extension allows vendors to
        provide a list of additional capabilities,
        vendors can decide how to encode these
        Extensions, although space separated text is
        suggested."
    ::= { pktcSigCapabilityEntry 4 }

pktcSigDefNcsReceiveUdpPort OBJECT-TYPE
    SYNTAX      Integer32 (1025..65535)
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "This object contains the MTA User Datagram Protocol
        (UDP) receive port that is being used for NCS call
        signaling. This object should only be changed by the
        configuration file."
    REFERENCE
        "Refer to NCS specification"
    DEFVAL { 2427 }
    ::= { pktcSigDevConfigObjects 12 }

```

SUPERSEDED

```

pktcSigServiceClassNameUS    OBJECT-TYPE
    SYNTAX          SnmpAdminString (SIZE (0..15))
    MAX-ACCESS      read-write
    STATUS          obsolete
    DESCRIPTION
        "This object contains a string indicating the Service
        Class name to create an Upstream Service (US) Flow for
        NCS. If the object has an empty string value then the
        upstream NCS SF is not created and the best effort
        SF is used for upstream NCS data. The creation of the NCS
        SF primary occurs before Voice Communication Service is
        activated on the device. If this object is set to a
        non-empty (non-zero length) string, the MTA MUST create
        the NCS SF if it does not currently exist and the
        pktcSigServiceClassNameMask object has a non-zero value.
        If this object is subsequently set to an empty
        (zero-length)string, the MTA MUST delete the NCS SF
        if it exists. Setting this object to a different value
        does not cause the Upstream Service Flow to be
        re-created. The string MUST contain printable ASCII
        characters. The length of the string does not include a
        terminating zero. The MTA MUST append a terminating zero
        when the MTA creates the service flow. "
    ::= { pktcSigDevConfigObjects 13 }

pktcSigServiceClassNameDS    OBJECT-TYPE
    SYNTAX          SnmpAdminString (SIZE (0..15))
    MAX-ACCESS      read-write
    STATUS          obsolete
    DESCRIPTION
        "This object contains a string indicating the Service
        Class Name to create a Downstream Service Flow for NCS.
        If the object has an empty string value then the
        NCS SF is not created and the best effort primary SF is
        used for downstream NCS data. The creation of the NCS SF
        occurs before Voice Communication Service is activated on
        the device. If this object is set to a non-empty (non-zero
        length) string, the MTA MUST create the NCS SF if it does
        not currently exist and the pktcSigServiceClassNameMask
        object has a non-zero value. If this object is
        subsequently set to an empty (zero-length) string, the MTA
        MUST delete the NCS SF if it exists. Setting this object
        to a different value does not cause the Downstream Service
        Flow to be re-created. The string MUST contain printable
        ASCII characters. The length of the string does not include
        a terminating zero. The MTA MUST append a terminating
        zero when the MTA creates the service flow. "
    ::= { pktcSigDevConfigObjects 14 }

pktcSigServiceClassNameMask  OBJECT-TYPE
    SYNTAX          Integer32
    MAX-ACCESS      read-write
    STATUS          obsolete
    DESCRIPTION
        "This object contains a value for the Call Signaling
        Network Mask. The value is used as the NCS Call Signaling
        classifier mask. The object is used to delete the NCS SF
        when set to zero. When the object is set to a non-zero
        value by the SNMP Manager, the NCS SF are to be created."
    DEFVAL { 0 }
    ::= { pktcSigDevConfigObjects 15 }

```

```
pktcSigNcsServiceFlowState OBJECT-TYPE
    SYNTAX      INTEGER {
        notactive (1),
        active   (2),
        error    (3)
    }
    MAX-ACCESS  read-only
    STATUS      obsolete
    DESCRIPTION
        "This object contains a status value of the Call Signaling
        Service Flow.
        - 'notactive' indicates that the NCS SF is not being used,
        and has not yet been attempted to be created.
        - 'active' indicates that the NCS SF is in use.
        - 'error' indicates that the NCS SF creation resulted in
        an error and the best effort channel is used for NCS
        Signaling."
    ::= { pktcSigDevConfigObjects 16 }

pktcSigDevR1Cadence          OBJECT-TYPE
    SYNTAX      PktcRingCadence
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "This object specifies ring cadence 1 (a user defined
        field) where each bit (least significant bit)
        represents a duration of 100 milliseconds (6 seconds
        total)."
```

```
DEFVAL { { interval1, interval2, interval3, interval4,
interval5, interval6, interval7, interval8, interval9,
interval10, interval11, interval12, interval13, interval14,
interval15, interval16, interval17, interval18, interval19,
interval20 } }
-- '1111111111111111111111111000000000000000000000000000000000000000
-- 00000'
::= { pktcSigDevConfigObjects 17 }
```

```
pktcSigDevR2Cadence          OBJECT-TYPE
    SYNTAX      PktcRingCadence
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "This object specifies ring cadence 2 (a user
        defined field) where each bit (least significant
        bit) represents a duration of 100 milliseconds
        (6 seconds total)."
```

```
DEFVAL { { interval1, interval2, interval3, interval4,
interval5, interval6, interval7, interval8, interval13,
interval14, interval15, interval16, interval17, interval18,
interval19, interval20 } }
-- '1111111100001111111110000000000000000000000000000000000000000000
-- 00000'
::= { pktcSigDevConfigObjects 18 }
```

```
pktcSigDevR3Cadence          OBJECT-TYPE
    SYNTAX      PktcRingCadence
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "This object specifies ring cadence 3 (a user
        defined field) where each bit (least significant
```




```

PktcSigEndPntConfigEntry ::= SEQUENCE {
    pktcSigEndPntCapabilityIndex      Integer32
}

pktcSigEndPntCapabilityIndex OBJECT-TYPE
    SYNTAX      Integer32 (1..16383)
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
        "The associated index value in the pktcSigCapabiltyTable.
        ::= { pktcSigEndPntConfigEntry }
--
-- The NCS End Point Config table is used to define attributes that
-- are specific to connection EndPoints.
--
--

pktcNcsEndPntConfigTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF PktcNcsEndPntConfigEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "This table describes the PacketCable EndPoint selected
        signaling type. The number of entries in this table
        represents the number of provisioned end points.
        For each conceptual row of pktcSigEndPntConfigTable
        defined, an associated row MUST be defined in one of
        the specific signaling tables such as
        pktcNcsEndPntConfigTable."
    ::= { pktcNcsEndPntConfigObjects 1 }

pktcNcsEndPntConfigEntry OBJECT-TYPE
    SYNTAX      PktcNcsEndPntConfigEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "Entries in pktcNcsEndPntConfigTable - Each entry
        describes what signaling type a particular endpoint uses."
    INDEX { ifIndex }
    ::= { pktcNcsEndPntConfigTable 1 }

```

SUPERSEDED

```

PktcNcsEndPntConfigEntry ::= SEQUENCE {
    pktcNcsEndPntConfigCallAgentId          SnmpAdminString,
    pktcNcsEndPntConfigCallAgentUdpPort    Integer32,
    pktcNcsEndPntConfigPartialDialTO       Integer32,
    pktcNcsEndPntConfigCriticalDialTO      Integer32,
    pktcNcsEndPntConfigBusyToneTO          Integer32,
    pktcNcsEndPntConfigDialToneTO          Integer32,
    pktcNcsEndPntConfigMessageWaitingTO    Integer32,
    pktcNcsEndPntConfigOffHookWarnToneTO   Integer32,
    pktcNcsEndPntConfigRingingTO           Integer32,
    pktcNcsEndPntConfigInBarring           Integer32,
    pktcNcsEndPntConfigLeorLeToneTO        Integer32,
    pktcNcsEndPntConfigTuttleDialToneTO    Integer32,
    pktcNcsEndPntConfigFSMax                Integer32,
    pktcNcsEndPntConfigMax1                 Integer32,
    pktcNcsEndPntConfigMax2                 Integer32,
    pktcNcsEndPntConfigMax1QEnable          TruthValue,
    pktcNcsEndPntConfigMax2QEnable          TruthValue,
    pktcNcsEndPntConfigMWD                  Integer32,
    pktcNcsEndPntConfigTdinit               Integer32,
    pktcNcsEndPntConfigTdmin                Integer32,
    pktcNcsEndPntConfigTdmax                Integer32,
    pktcNcsEndPntConfigRtoMax               Integer32,
    pktcNcsEndPntConfigRtoInit              Integer32,
    pktcNcsEndPntConfigLongDurationKeepAlive Integer32,
    pktcNcsEndPntConfigThist                Integer32,
    pktcNcsEndPntConfigStatus               RowStatus,
    pktcNcsEndPntConfigCallWaitingMaxRep    Integer32,
    pktcNcsEndPntConfigCallWaitingDelay     Integer32,
    pktcNcsEndPntStatusCallIpAddress        IPAddress,
    pktcNcsEndPntStatusError                INTEGER
}

```

```

pktcNcsEndPntConfigCallAgentId      OBJECT-TYPE
    SYNTAX      SnmpAdminString(SIZE (3..255))
    MAX-ACCESS   read-create
    STATUS      current
    DESCRIPTION
        "This object contains a string indicating the call agent
        name(e.g.: ca@abc.def.com). The call agent name
        after the character '@', MUST be a fully qualified
        domain name and MUST have a corresponding
        pktcMtaDevCmsFqdn entry in the pktcMtaDevCmsTable. For
        each particular end-point, the MTA MUST use the current
        value of this object to communicate with the corresponding
        CMS. The MTA MUST update this object with the value of the
        'Notified Entity' parameter of the NCS message. Because of the high
        importance of this object to
        the ability of the MTA to maintain reliable NCS
        communication with the CMS, it is highly recommended not
        to change this object's value through management station
        during normal operations."

```

```
 ::= { pktcNcsEndPntConfigEntry 1 }
```

```

pktcNcsEndPntConfigCallAgentUdpPort OBJECT-TYPE
    SYNTAX      Integer32 (1025..65535)
    MAX-ACCESS   read-create
    STATUS      current
    DESCRIPTION
        "This object contains the current value of the User
        Datagram Protocol (UDP) receive port on which the call
        agent will receive NCS signaling from the endpoint.

```

For each particular end-point, the MTA MUST use the current value of this object to communicate with the corresponding CMS. The MTA MUST update this object with the value of the 'Notified Entity' parameter of the NCS message. If the Notified Entity parameter does not contain a CallAgent port, the MTA MUST update this object with default value of 2727. Because of the high importance of this object to the ability of the MTA to maintain reliable NCS communication with the CMS, it is highly recommended not to change this object's value through management station during normal operations.

REFERENCE
"Refer to NCS specification"
DEFVAL { 2727 }
 ::= { pktcNcsEndPntConfigEntry 2 }

pktcNcsEndPntConfigPartialDialTO OBJECT-TYPE
SYNTAX Integer32
UNITS "seconds"
MAX-ACCESS read-create
STATUS current
DESCRIPTION
"This object contains maximum value of the partial dial time out."
REFERENCE
"Refer to PacketCable NCS specification"
DEFVAL { 16 }
 ::= { pktcNcsEndPntConfigEntry 3 }

pktcNcsEndPntConfigCriticalDialTO OBJECT-TYPE
SYNTAX Integer32
UNITS "seconds"
MAX-ACCESS read-create
STATUS current
DESCRIPTION
"This object contains the maximum value of the critical dial time out."
REFERENCE
"Refer NCS specification"
DEFVAL { 4 }
 ::= { pktcNcsEndPntConfigEntry 4 }

pktcNcsEndPntConfigBusyToneTO OBJECT-TYPE
SYNTAX Integer32
UNITS "seconds"
MAX-ACCESS read-create
STATUS current
DESCRIPTION
"This object contains the default timeout value for busy tone. The MTA MUST NOT update this object with the value provided in the NCS Message (if present). If the value of the object is modified by the SNMP Management Station, the MTA MUST use the new value as a default only for a new signal requested by the NCS message."
REFERENCE
"Refer to NCS specification"
DEFVAL { 30 }
 ::= { pktcNcsEndPntConfigEntry 5 }

pktcNcsEndPntConfigDialToneTO OBJECT-TYPE

```

SYNTAX      Integer32
UNITS       "seconds"
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION
    "This object contains the default timeout value for dial
    tone. The MTA MUST NOT update this object with
    the value provided in the NCS Message (if present).
    If the value of the object is modified by the
    SNMP Management Station, the MTA MUST use the new value
    as a default only for a new signal requested by the NCS
    message."
REFERENCE   "Refer to NCS specification "
DEFVAL      { 16 }
 ::= { pktcNcsEndPntConfigEntry 6 }

```

SUPERSEDED

```

pktcNcsEndPntConfigMessageWaitingTO      OBJECT-TYPE
SYNTAX      Integer32
UNITS       "seconds"
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION
    "This object contains the default timeout value for
    message waiting indicator The MTA MUST NOT
    update this object with the value provided in the NCS
    Message (if present). If the value of the object
    is modified by the SNMP Management Station, the MTA MUST
    use the new value as a default only for a new signal
    requested by the NCS message."
REFERENCE   "Refer to NCS specification"
DEFVAL      { 16 }
 ::= { pktcNcsEndPntConfigEntry 7 }

```

```

pktcNcsEndPntConfigOffHookWarnToneTO     OBJECT-TYPE
SYNTAX      Integer32
UNITS       "seconds"
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION
    "This object contains the default timeout value for the
    off hook Warning tone. The MTA MUST NOT update
    this object with the value provided in the NCS Message (if
    present). If the value of the object is modified
    by the SNMP Management Station, the MTA MUST use the new
    value as a default only for a new signal requested by the
    NCS message. "
REFERENCE   "Refer to NCS specification"
DEFVAL      { 0 }
 ::= { pktcNcsEndPntConfigEntry 8 }

```

```

pktcNcsEndPntConfigRingingTO             OBJECT-TYPE
SYNTAX      Integer32
UNITS       "seconds"
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION
    "This object contains the default timeout value for
    ringing. The MTA MUST NOT update this object with
    the value provided in the NCS Message (if present).
    If the value of the object is modified by the

```

SNMP Management Station, the MTA MUST use the new value as a default only for a new signal requested by the NCS message."

REFERENCE

"Refer to NCS specification"

DEFVAL { 180 }

::= { pktcNcsEndPntConfigEntry 9 }

pktcNcsEndPntConfigRingBackTO OBJECT-TYPE

SYNTAX Integer32

UNITS "seconds"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"This object contains the default timeout value for ring back. The MTA MUST NOT update this object with the value provided in the NCS Message (if present). If the value of the object is modified by the SNMP Management Station, the MTA MUST use the new value as a default only for a new signal requested by the NCS message."

REFERENCE

"Refer to NCS specification"

DEFVAL { 180 }

::= { pktcNcsEndPntConfigEntry 10 }

pktcNcsEndPntConfigReorderToneTO OBJECT-TYPE

SYNTAX Integer32

UNITS "seconds"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"This object contains the default timeout value for reorder tone. The MTA MUST NOT update this object with the value provided in the NCS Message (if present). If the value of the object is modified by the SNMP Management Station, the MTA MUST use the new value as a default only for a new signal requested by the NCS message."

REFERENCE

"Refer to NCS specification"

DEFVAL { 30 }

::= { pktcNcsEndPntConfigEntry 11 }

pktcNcsEndPntConfigStutterDialToneTO OBJECT-TYPE

SYNTAX Integer32

UNITS "seconds"

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"This object contains the default timeout value for stutter dial tone. The MTA MUST NOT update this object with the value provided in the NCS Message (if present). If the value of the object is modified by the SNMP Management Station, the MTA MUST use the new value as a default only for a new signal requested by the NCS message."

REFERENCE

"Refer to NCS specification"

DEFVAL { 16 }

::= { pktcNcsEndPntConfigEntry 12 }

pktcNcsEndPntConfigTSMMax OBJECT-TYPE

SUPERSEDED

```

SYNTAX      Integer32
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION
    "This object contains the max time in seconds since the
    sending of the initial datagram."
REFERENCE
    "Refer to NCS specification"
DEFVAL { 20 }
 ::= { pktcNcsEndPntConfigEntry 13 }

pktcNcsEndPntConfigMax1 OBJECT-TYPE
SYNTAX      Integer32
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION
    "This object contains the suspicious error threshold
    for signaling messages."
REFERENCE
    "Refer to NCS specification"
DEFVAL { 5 }
 ::= { pktcNcsEndPntConfigEntry 14 }

pktcNcsEndPntConfigMax2 OBJECT-TYPE
SYNTAX      Integer32
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION
    "This object contains the disconnect error
    threshold for signaling messages."
REFERENCE
    "Refer to NCS specification"
DEFVAL { 7 }
 ::= { pktcNcsEndPntConfigEntry 15 }

pktcNcsEndPntConfigMax1QEnable OBJECT-TYPE
SYNTAX      TruthValue
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION
    "This object enables/disables the Max1 Domain Name
    Server (DNS) query operation when Max1 expires."
DEFVAL { true }
 ::= { pktcNcsEndPntConfigEntry 16 }

pktcNcsEndPntConfigMax2QEnable OBJECT-TYPE
SYNTAX      TruthValue
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION
    "This object enables/disables the Max2 DNS query
    operation when Max2 expires."
DEFVAL { true }
 ::= { pktcNcsEndPntConfigEntry 17 }

pktcNcsEndPntConfigMWD OBJECT-TYPE
SYNTAX      Integer32
UNITS       "seconds"
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION
    "Maximum Waiting Delay (MWD) contains the maximum

```

SUPERSEDED

number of seconds a MTA waits after a restart."
 REFERENCE
 "Refer to NCS specification"
 DEFVAL { 600 }
 ::= { pktcNcsEndPntConfigEntry 18 }

pktcNcsEndPntConfigTdinit OBJECT-TYPE

SYNTAX Integer32
 UNITS "seconds"
 MAX-ACCESS read-create
 STATUS current
 DESCRIPTION
 "This object contains the initial number of seconds
 a MTA waits after a disconnect."

REFERENCE
 "Refer to NCS specification"
 DEFVAL { 15 }
 ::= { pktcNcsEndPntConfigEntry 19 }

pktcNcsEndPntConfigTdmin OBJECT-TYPE

SYNTAX Integer32
 UNITS "seconds"
 MAX-ACCESS read-create
 STATUS current
 DESCRIPTION
 "This object contains the minimum number of seconds a
 MTA waits after a disconnect."

REFERENCE
 "Refer to NCS specification"
 DEFVAL { 15 }
 ::= { pktcNcsEndPntConfigEntry 20 }

pktcNcsEndPntConfigTdmax OBJECT-TYPE

SYNTAX Integer32
 UNITS "seconds"
 MAX-ACCESS read-create
 STATUS current
 DESCRIPTION
 "This object contains the maximum number of seconds
 a MTA waits after a disconnect."

REFERENCE
 "Refer to NCS specification"
 DEFVAL { 600 }
 ::= { pktcNcsEndPntConfigEntry 21 }

pktcNcsEndPntConfigRtoMax OBJECT-TYPE

SYNTAX Integer32
 UNITS "seconds"
 MAX-ACCESS read-create
 STATUS current
 DESCRIPTION
 "This object contains the maximum number of seconds
 for the retransmission timer."

REFERENCE
 "Refer to NCS specification"
 DEFVAL { 4 }
 ::= { pktcNcsEndPntConfigEntry 22 }

pktcNcsEndPntConfigRtoInit OBJECT-TYPE

SYNTAX Integer32
 UNITS "milliseconds"

SUPERSEDED

```

MAX-ACCESS      read-create
STATUS          current
DESCRIPTION
    "This object contains the initial number of seconds
    for the retransmission timer."
REFERENCE
    "Refer to NCS specification"
DEFVAL { 200 }
 ::= { pktcNcsEndPntConfigEntry 23 }

```

```
pktcNcsEndPntConfigLongDurationRecAllive OBJECT-TYPE
```

```

SYNTAX          Integer32
UNITS           "minutes"
MAX-ACCESS      read-create
STATUS          current
DESCRIPTION
    "Specifies a timeout value in minutes for sending
    long duration call notification message."
REFERENCE
    "Refer to NCS specification"
DEFVAL { 60 }
 ::= { pktcNcsEndPntConfigEntry 24 }

```

```
pktcNcsEndPntConfigThist OBJECT-TYPE
```

```

SYNTAX          Integer32
UNITS           "seconds"
MAX-ACCESS      read-create
STATUS          current
DESCRIPTION
    "Timeout period in seconds before no response is
    declared."
REFERENCE
    "Refer to NCS specification"
DEFVAL { 30 }
 ::= { pktcNcsEndPntConfigEntry 25 }

```

```
pktcNcsEndPntConfigStatus OBJECT-TYPE
```

```

SYNTAX          RowStatus
MAX-ACCESS      read-create
STATUS          current
DESCRIPTION
    "This object contains the Row Status associated with
    the pktcNcsEndPntConfigTable."
 ::= { pktcNcsEndPntConfigEntry 26 }

```

```
pktcNcsEndPntConfigCallWaitingMaxRep OBJECT-TYPE
```

```

SYNTAX          Integer32 (0..10)
MAX-ACCESS      read-create
STATUS          current
DESCRIPTION
    "This object contains the default value of the maximum
    number of repetitions of the call waiting tone that the
    MTA will play from a single CMS request. The MTA
    MUST NOT update this object with the information provided
    in the NCS Message (if present). If the value of
    the object is modified by the SNMP Management Station,
    the MTA MUST use the new value as a default only for a new
    signal requested by the NCS message."
DEFVAL { 1 }
 ::= { pktcNcsEndPntConfigEntry 27 }

```

```
pktcNcsEndPntConfigCallWaitingDelay OBJECT-TYPE
```

```

SYNTAX          Integer32 (1..100)

```

SUPERSEDED

```

UNITS          "seconds"
MAX-ACCESS    read-create
STATUS        current
DESCRIPTION   "This object contains the delay between repetitions
              of the call waiting tone that the MTA will play from
              a single CMS request."
DEFVAL       { 10 }
 ::= { pktcNcsEndPntConfigEntry 28 }

pktcNcsEndPntStatusCallIpAddress OBJECT-TYPE
SYNTAX       IpAddress
MAX-ACCESS   read-only
STATUS       current
DESCRIPTION  "This object contains the IP address of the CMS
              currently being used for this endpoint. This IP
              address is used to create the appropriate security
              association."
 ::= { pktcNcsEndPntConfigEntry 29 }

pktcNcsEndPntStatusError OBJECT-TYPE
SYNTAX INTEGER {
    operational          (1),
    noSecurityAssociation (2),
    disconnected          (3)
}
MAX-ACCESS   read-only
STATUS       current
DESCRIPTION  "This object contains the error status for this interface.
              The operational state indicates that all operations
              necessary to put the line in service have occurred and CMS
              has acknowledged the RSIP message successfully.
              If 'pktcMtaDevCmsIpsecCtrl' is enabled for the associated
              Call Agent, the noSecurityAssociation status indicates
              that no Security Association (SA) yet exists for this
              endpoint. Otherwise, the state is unused.
              The disconnected status indicates one of the following two:
              1. If 'pktcMtaDevCmsIpsecCtrl' is disabled then no
              security association is involved with this endpoint: the
              NCS signaling Software is in process of establishing the
              NCS signaling Link via an RSIP exchange.
              2. Otherwise, pktcMtaDevCmsIpsecCtrl is enabled, the
              security Association has been established and the NCS
              signaling Software is in process of establishing the NCS
              signaling Link via an RSIP exchange."

 ::= { pktcNcsEndPntConfigEntry 30 }

--
-- notification group is for future extension.
--
pktcSigNotificationPrefix OBJECT IDENTIFIER ::= { pktcSigMib 2 }
pktcSigNotification OBJECT IDENTIFIER ::= {
    pktcSigNotificationPrefix 0 }
pktcSigConformance OBJECT IDENTIFIER ::= { pktcSigMib 3 }
pktcSigCompliances OBJECT IDENTIFIER ::= { pktcSigConformance 1 }
pktcSigGroups OBJECT IDENTIFIER ::= { pktcSigConformance 2 }

-- compliance statements

pktcSigBasicCompliance MODULE-COMPLIANCE

```

SUPERSEDED

```

STATUS      current
DESCRIPTION
  "The compliance statement for devices that implement Signaling
  on the MTA."

MODULE  -- pktcSigMib

-- unconditionally mandatory groups

MANDATORY-GROUPS {
  pktcSigGroup
}
GROUP pktcNcsGroup
DESCRIPTION
  "This group is mandatory for any MTA implementing NCS
  signaling"
 ::= { pktcSigCompliances 1 }

-- units of conformance

pktcSigGroup OBJECT-GROUP
  OBJECTS {
    pktcSigDevCodecType,
    pktcSigDevCodecMax,
    pktcSigDevEchoCancellation,
    pktcSigDevSilenceSuppression,
    pktcSigDevConnectionMode,
    pktcSigDevR0Cadence,
    pktcSigDevR6Cadence,
    pktcSigDevR7Cadence,
    pktcSigDefCallSigTos,
    pktcSigDefMediaStreamTos,
    pktcSigTosFormatSelector,
    pktcSignalingType,
    pktcSignalingVersion,
    pktcSignalingVendorExtension,
    pktcSigEndPntCapabilityIndex,
    pktcSigDefNcsReceiveUdpPort,
    pktcSigDevR1Cadence,
    pktcSigDevR2Cadence,
    pktcSigDevR3Cadence,
    pktcSigDevR4Cadence,
    pktcSigDevR5Cadence,
    pktcSigDevRgCadence,
    pktcSigDevRsCadence,
    pktcSigDevRtCadence
  }
  STATUS current
  DESCRIPTION
    "Group of objects for the common portion of the
    PacketCable Signaling MIB."
  ::= { pktcSigGroups 1 }

```

SUPERSEDED

```

pktcNcsGroup OBJECT-GROUP
  OBJECTS {
    pktcNcsEndPntConfigCallAgentId,
    pktcNcsEndPntConfigCallAgentUdpPort,
    pktcNcsEndPntConfigPartialDialTO,
    pktcNcsEndPntConfigCriticalDialTO,
    pktcNcsEndPntConfigBusyToneTO,
    pktcNcsEndPntConfigDialToneTO,
    pktcNcsEndPntConfigMessageWaitingTO,
    pktcNcsEndPntConfigOffHookWarnToneTO,
    pktcNcsEndPntConfigRingInTone,
    pktcNcsEndPntConfigRingBackTO,
    pktcNcsEndPntConfigReorderToneTO,
    pktcNcsEndPntConfigTutterDialToneTO,
    pktcNcsEndPntConfigTSMMax,
    pktcNcsEndPntConfigMax1,
    pktcNcsEndPntConfigMax2,
    pktcNcsEndPntConfigMax1QEnable,
    pktcNcsEndPntConfigMax2QEnable,
    pktcNcsEndPntConfigMWD,
    pktcNcsEndPntConfigTdinit,
    pktcNcsEndPntConfigTdmin,
    pktcNcsEndPntConfigTdmax,
    pktcNcsEndPntConfigRtoMax,
    pktcNcsEndPntConfigRtoInit,
    pktcNcsEndPntConfigLongDurationKeepAlive,
    pktcNcsEndPntConfigThist,
    pktcNcsEndPntConfigStatus,
    pktcNcsEndPntConfigCallWaitingMaxRep,
    pktcNcsEndPntConfigCallWaitingDelay,
    pktcNcsEndPntStatusCallIpAddress,
    pktcNcsEndPntStatusError
  }
  STATUS current
  DESCRIPTION
    "Group of objects for the NCS portion of the
    PacketCable Signaling MIB. This is mandatory for
    NCS signaling."
    ::= { pktcSigGroups 2 }

pktcSigObsoleteGroup OBJECT-GROUP
  OBJECTS {
    pktcSigServiceClassNameUS,
    pktcSigServiceClassNameDS,
    pktcSigServiceClassNameMask,
    pktcSigNcsServiceFlowState
  }
  STATUS obsolete
  DESCRIPTION
    " Collection of obsolete objects for PacketCable
    Signaling MIB."
    ::= { pktcSigGroups 3}
END

```

SUPERSEDED

Appendix A. Revision History

The following Engineering Change Notices have been incorporated into PK-SP-MIB-SIG-I03-011221.

ECN	Date Ratified	Summary
mib-n-01187	12/3/01	Correct MIB error in sec-n-1029, and complete deletion of the mean deviation objects. These are MIB corrections that were driven by the security team.
prov-n-01039	5/7/01	In the provisioning specification (PKT-SP-PROV-I02-010323), it is not clear that the config file MUST be rejected if the required info is not there. Also, the CMS table in the MTA MIB does not contain the realm name, but an index into the realm table. This should be reflected in the config file table.

The following Engineering Change Notices have been incorporated into PK-SP-MIB-SIG-I04-021018:

ECN	Date Ratified	Summary
mib-n-02134	7/29/02	Specifies the string length for service class name used in Signaling MIB specifications.
mibmta-n-02083	6/24/02	This ECR makes I03 MIB specification and I05 security specification consistent.
mibsig-n-02043	6/24/02	Correcting references to Security Spec; R0,R6 and R7 Cadence parameters are made mandatory
mib-n-02118	7/15/02	The list of the CODECs in the "PktcCodecType" TEXTUAL-CONVENTION in the Signaling MIB is not consistent with the CODEC list in CODEC spec (codec-n-01228).

The following Engineering Change Notice has been incorporated into PK-SP-MIB-SIG-I05-021127:

ECN	Date Ratified	Summary
mibsig-n-02203	11/18/02	Changes MIB syntax INTEGER to Integer32 in Signaling and MTA MIB specifications.

The following Engineering Change Notices have been incorporated into PK-SP-MIB-SIG-I06-030415:

ECN	Date Ratified	Summary
mibsig-n-02222	1/20/03	Default value changed to match the description of the Ringsplash(rs) and R5 cadence MIB. Clarified requirement clarification in 64-bit Cadence representation..
mibsig-n-03050	5/19/03	The ECR accumulates changes required in the MIB SIG Specification for syntactical correctness

The following Engineering Change Notice has been incorporated into PK-SP-MIB-SIG-I07-030728:

ECN	Date Ratified	Summary
mibsig-n-03049	6/30/03	Clarifies the usage of pktcNcsEndPntStatusError MIB object when no security association involved.

The following Engineering Change Notice has been incorporated into PK-SP-MIB-SIG-I08-040113:

ECN	Date Ratified	Summary
mibsig-n-03081	11/24/03	Clarifies misleading requirement, specifically the string size range for pktcSigServiceClassNameUS and pktcSigServiceClassName DS.

The following Engineering Change Notice has been incorporated into PK-SP-MIB-SIG-I09-0500812:

ECN	Date Ratified	Summary
MIB-SIG-N-04.0176-5	8/2/2004	Number of MIB Objects can be changedb both SNMP Mangement and via NCS messages. The proper logic for such Objects must be defined