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**IPcablecom 1.0 Part 8: Network Call Signaling
Management Information Base (MIB) Requirements**

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CONTENTS

1	SCOPE	1
2	REFERENCES	1
2.1	NORMATIVE REFERENCES	1
2.2	INFORMATIVE REFERENCES.....	1
3	TERMS AND DEFINITIONS	1
4	ABBREVIATIONS	1
5	REQUIREMENTS	2

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1 SCOPE

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

2 REFERENCES

The following documents contain provisions, which, through reference in this text, constitute provisions of this standard. At the time of publication, 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.

2.1 Normative References

- [1] ANSI/SCTE 24-6 2009, IPCablecom 1.0 Part 6: Management Information Base (MIB) Network.
- [2] ANSI/SCTE 24-3 2009, IPCablecom 1.0 Part 3: Network Call Signaling Protocol for the Delivery of Time-Critical Services over Cable Television Using Data Modems
- [3] ANSI/SCTE 24-5 2009, IPCablecom 1.0 Part 5: Media Terminal Adapter (MTA) Device Provisioning Requirements for the Delivery of Real-Time Services over Cable Television Using Cable Modems

2.2 Informative References

- [4] ANSI/SCTE 24-1 2009, IPCablecom 1.0 Part 1: Architecture Framework for the Delivery of Time-Critical Services Over Cable Television Networks Using Cable Modems,
- [5] IETF RFC 3261, SIP: Session Initiation Protocol, February 2002.

3 TERMS AND DEFINITIONS

This IPCablecom standard does not use any unique terms.

4 ABBREVIATIONS

This IPCablecom standard uses the following abbreviations.

MIB Management Information Base

MTA Media Terminal Adapter

5 REQUIREMENTS

The IPCablecom NCS MIB MUST be implemented as defined below.

PKTC-SIG-MIB DEFINITIONS ::= BEGIN

IMPORTS

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

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DESCRIPTION

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

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Satish Kumar Texas Instruments
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REVISION "200711290000Z"

DESCRIPTION

"This revision, published as part of the IPCablecom Signaling MIB Standard."
 ::= { 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 IPCablecom 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

"IPCablecom 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)
}

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."
  ::= { pktcSigDevCodecEntry 1 }

```

```

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

pkcSigDevCodecMax 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"
    ::= { pkcSigDevCodecEntry 3 }

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

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

pkcSigDevSilenceSuppression 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)."
    ::= { pkcSigDevConfigObjects 3 }

pkcSigDevConnectionMode 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."
    ::= { pkcSigDevConfigObjects 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.
--

```

```
pktcSigDevR0Cadence OBJECT-TYPE
SYNTAX PktcRingCadence
MAX-ACCESS read-write
STATUS current
DESCRIPTION
    "This object specifies ring cadence 0 (a user defined
    field) where each bit (least significant bit)
    represents a duration of 200 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 } }
-- '11111111111111111111100000000000000000000000000000000000000000000000'
-- 00000'
::= { pktcSigDevConfigObjects 5 }
```

```
pktcSigDevR6Cadence OBJECT-TYPE
SYNTAX PktcRingCadence
MAX-ACCESS read-write
STATUS current
DESCRIPTION
    "This object specifies ring cadence 6 (a user defined
    field) where each bit (least significant bit)
    represents a duration of 200 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 } }
-- '11111111111111111111100000000000000000000000000000000000000000000000'
-- 00000'
::= { pktcSigDevConfigObjects 6 }
```

```
pktcSigDevR7Cadence OBJECT-TYPE
SYNTAX PktcRingCadence
MAX-ACCESS read-write
STATUS current
DESCRIPTION
    "This object specifies ring cadence 7 (a user defined
    field) where each bit (least significant bit)
    represents a duration of 200 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 } }
-- '11111111111111111111100000000000000000000000000000000000000000000000'
-- 00000'
::= { pktcSigDevConfigObjects 7 }
```

```
pktcSigDefCallSigTos OBJECT-TYPE
SYNTAX Integer32 (0..63)
MAX-ACCESS read-write
STATUS current
DESCRIPTION
    "The default value used in the IP header for setting the
```

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 }

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 }

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 tried 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 } }
-- '11111111111111111111100000000000000000000000000000000000000'
-- 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 } }
-- '11111111000011111111100000000000000000000000000000000000000'
-- 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
    bit) represents a duration of 100 milliseconds
    (6 seconds total)."
```

```
DEFVAL { { interval1, interval2, interval3, interval4,
interval7, interval8, interval9, interval10, interval13,
interval14, interval15, interval16, interval17, interval18,
interval19, interval20 } }
-- '111100111100111111110000000000000000000000000000000000000000000000'
-- 00000'
::= { pktcSigDevConfigObjects 19 }
```

```
pktcSigDevR4Cadence OBJECT-TYPE
SYNTAX PktcRingCadence
MAX-ACCESS read-write
STATUS current
DESCRIPTION
    "This object specifies ring cadence 4 (a user
    defined field) where each bit (least significant
    bit) represents a duration of 100 milliseconds
    (6 seconds total)."
```

```
DEFVAL { { interval1, interval2, interval3, interval6,
interval7, interval8, interval9, interval10, interval11,
interval12, interval13, interval14, interval15, interval18,
interval19, interval20 } }
-- '1110011111111111100111000000000000000000000000000000000000000000000000'
-- 00000'
::= { pktcSigDevConfigObjects 20 }
```

```
pktcSigDevR5Cadence OBJECT-TYPE
SYNTAX PktcRingCadence
MAX-ACCESS read-write
STATUS current
DESCRIPTION
    "This object specifies ring cadence 5 (a user
    defined field) where each bit (least significant
    bit) represents a duration of 100 milliseconds."
```

```
DEFVAL { { interval1, interval2, interval3, interval4,
interval5, interval61 } }
-- '11111000000000000000000000000000000000000000000000000000000000000000000000'
-- 01000'
::= { pktcSigDevConfigObjects 21 }
```

```
pktcSigDevRgCadence OBJECT-TYPE
SYNTAX PktcRingCadence
MAX-ACCESS read-write
STATUS current
DESCRIPTION
    "This object specifies ring cadence rg (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 } }
```

```

-- '11111111111111111111110000000000000000000000000000000000000000000000
-- 0000'
 ::= { pktcSigDevConfigObjects 22 }

pktcSigDevRsCadence OBJECT-TYPE
SYNTAX PktcRingCadence
MAX-ACCESS read-write
STATUS current
DESCRIPTION
 "This object specifies ring cadence rs (a user
  defined field) where each bit (least significant bit)
  represents a duration of 100 milliseconds (6 seconds
  total). MTA MUST reject any attempt to make this
  object repeatable."
DEFVAL { { interval1, interval2, interval3, interval4,
interval5, interval61 } }
-- '11111000000000000000000000000000000000000000000000000000000000000000
-- 01000'
 ::= { pktcSigDevConfigObjects 23 }

```

```

pktcSigDevRtCadence OBJECT-TYPE
SYNTAX PktcRingCadence
MAX-ACCESS read-write
STATUS current
DESCRIPTION
 "This object specifies ring cadence rt (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 } }
-- '11111111111111111111111000000000000000000000000000000000000000000000
-- 00000'
 ::= { pktcSigDevConfigObjects 24 }

```

```

--
-- The following Table will provide endpoint configuration
-- information that is common to all signaling Protocols.
-- Currently only the signaling index is present in an effort
-- not to deprecate any MIB objects.
--

```

```

pktcSigEndPntConfigTable OBJECT-TYPE
SYNTAX SEQUENCE OF PktcSigEndPntConfigEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
 "This table describes the IPCablecom 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."
 ::= { pktcSigEndPntConfigObjects 1 }

```

```

pktcSigEndPntConfigEntry OBJECT-TYPE
SYNTAX PktcSigEndPntConfigEntry
MAX-ACCESS not-accessible

```

```

STATUS    current
DESCRIPTION
    "Entries in pktcSigEndPntConfigTable - Each entry
    describes what signaling type a particular endpoint uses."
INDEX { ifIndex }
::= { pktcSigEndPntConfigTable 1 }

PktcSigEndPntConfigEntry ::= SEQUENCE {
    pktcSigEndPntCapabilityIndex    Integer32
}

pktcSigEndPntCapabilityIndex OBJECT-TYPE
SYNTAX    Integer32 (1..16383)
MAX-ACCESS read-create
STATUS    current
DESCRIPTION
    "The associated index value in the pktcSigCapablityTable."
::= { pktcSigEndPntConfigEntry 1 }
--
-- 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 IPCablecom 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 }

PktcNcsEndPntConfigEntry ::= SEQUENCE {
    pktcNcsEndPntConfigCallAgentId    SnmpAdminString,
    pktcNcsEndPntConfigCallAgentUdpPort    Integer32,
    pktcNcsEndPntConfigPartialDialTO    Integer32,
    pktcNcsEndPntConfigCriticalDialTO    Integer32,
    pktcNcsEndPntConfigBusyToneTO    Integer32,
    pktcNcsEndPntConfigDialToneTO    Integer32,
    pktcNcsEndPntConfigMessageWaitingTO    Integer32,
    pktcNcsEndPntConfigOffHookWarnToneTO    Integer32,
    pktcNcsEndPntConfigRingingTO    Integer32,
    pktcNcsEndPntConfigRingBackTO    Integer32,
    pktcNcsEndPntConfigReorderToneTO    Integer32,
    pktcNcsEndPntConfigStutterDialToneTO    Integer32,

```

```

pktcNcsEndPntConfigTSMMax      Integer32,
pktcNcsEndPntConfigMax1       Integer32,
pktcNcsEndPntConfigMax2       Integer32,
pktcNcsEndPntConfigMax1QEnable TruthValue,
pktcNcsEndPntConfigMax2QEnable TruthValue,
pktcNcsEndPntConfigMWD        Integer32,
pktcNcsEndPntConfigTdinit     Integer32,
pktcNcsEndPntConfigTadmin     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 IPCablecom 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 }

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 }

pktcNcsEndPntConfigTSMax OBJECT-TYPE
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
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 }

pktcNcsEndPntConfigTadmin 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"
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 }

pktcNcsEndPntConfigLongDurationKeepAlive 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)

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
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
    IPCablecom Signaling MIB."
::= { pktcSigGroups 1 }
```

```
pktcNcsGroup OBJECT-GROUP
OBJECTS {
    pktcNcsEndPntConfigCallAgentId,
    pktcNcsEndPntConfigCallAgentUdpPort,
    pktcNcsEndPntConfigPartialDialTO,
    pktcNcsEndPntConfigCriticalDialTO,
    pktcNcsEndPntConfigBusyToneTO,
    pktcNcsEndPntConfigDialToneTO,
    pktcNcsEndPntConfigMessageWaitingTO,
    pktcNcsEndPntConfigOffHookWarnToneTO,
    pktcNcsEndPntConfigRingingTO,
    pktcNcsEndPntConfigRingBackTO,
    pktcNcsEndPntConfigReorderToneTO,
    pktcNcsEndPntConfigStutterDialToneTO,
    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
IPCablecom 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 IPCablecom
Signaling MIB."
::= { pktcSigGroups 3 }
END
```
