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

IPCablecom

IPCablecom network call signalling (NCS) MIB requirements

ITU-T Recommendation J.169

(Formerly CCITT Recommendation)

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ITU-T Recommendation J.169

IPCablecom network call signalling (NCS) MIB requirements

Summary

This Recommendation describes the IPCablecom Network Call Signalling (NCS) MIB requirements.

Source

ITU-T Recommendation J.169 was prepared by ITU-T Study Group 9 (2001-2004) and approved under the WTSA Resolution 1 procedure on 9 March 2001.

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

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.

INTELLECTUAL PROPERTY RIGHTS

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As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database.

CONTENTS

ITU-T Recommendation J.169

IPCablecom network call signalling (NCS) MIB requirements

1 Scope

This Recommendation describes the IPCablecom network call signalling (NCS) MIB requirements.

2 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 revisions; all 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.

2.1 Normative references

– ITU-T J.166 (2001), *IPCablecom management information base (MIB) framework*.

– ITU-T J.162 (2001), *Network call signalling protocol for the delivery of time-critical services over cable television networks using cable modems*.

– ITU-T J.167 (2001), *Media terminal adapter (MTA) device provisioning requirements for the delivery of real-time services over cable television networks using cable modems*.

2.2 Informative reference

– ITU-T J.160 (Draft), *Architectural framework for the delivery of time-critical services over cable television networks using cable modems*.

3 Terms and definitions

This Recommendation defines the following term:

3.1 IPCablecom: An ITU-T project that includes an architecture and a series of Recommendations that enable the delivery of real-time services (such as telephony) over the cable television networks using cable modems.

4 Abbreviations

This Recommendation uses the following abbreviations:

MIB Management Information Base

MTA Media Terminal Adapter

NCS Network Call Signalling

SNMP Simple Network Management Protocol

5 Requirements

This clause defines the mandatory syntax of the IPCablecom MTA MIB. It follows the IETF Simple Network Management Protocol (SNMP) for defining the managed objects. The MIB is organized as follows:

- objects used for codecs;
- objects used for general signalling related definitions;
- objects used for endpoint-specific signalling information.

The syntax is given hereafter.

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

     IMPORTS
          MODULE-IDENTITY,
          OBJECT-TYPE,
               Integer32,
               BITS
     FROM SNMPv2-SMI
          TEXTUAL-CONVENTION,
               RowStatus,
               DisplayString,
               TruthValue
     FROM SNMPv2-TC
          OBJECT-GROUP,
          MODULE-COMPLIANCE
     FROM SNMPv2-CONF
                    SnmpAdminString
               FROM SNMP-FRAMEWORK-MIB
          clabProjIPCablecom
     FROM CLAB-DEF-MIB
          ifIndex
     FROM IF-MIB;

pktcSigMib MODULE-IDENTITY
     LAST-UPDATED "200006260000Z" -- June 26, 2000
     ORGANIZATION "IPCablecom OSS Group"
     CONTACT-INFO

     DESCRIPTION
          "This MIB module supplies the basic management
          object for the PacketCable Signalling
          protocols. This version of the MIB includes
          common signalling and Network Call Signalling
          (NCS) related signalling objects."
     ::= { clabProjPacketCable 2 }

-- Textual Conventions

PktcCodecType ::= TEXTUAL-CONVENTION  STATUS    current
     DESCRIPTION "These are the various types of codecs that
          May be supported."
     SYNTAX    INTEGER {
          other          (1),
          unknown        (2),
          g729           (3),
          g729a          (4),
          g729e          (5),
          g711mu         (6),
          g726           (7),
          g728           (8),
          g711a          (9)
```

```
     }

PktcRingCadence ::= TEXTUAL-CONVENTION
     STATUS    current
     DESCRIPTION
     "These are the ring cadence durations that are
     supported. 200 ms for each interval. Each interval is
     represented by one bit. 0 is no tone, 1 is tone."
     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)
     }

PktcSigType ::= TEXTUAL-CONVENTION
     STATUS    current
     DESCRIPTION "These are the various types of signalling that
          may be supported.
          ncs - network call signalling a derivation of
               MGCP (Media Gateway Control Protocol)
               version 1.0
          dcs - distributed call signalling a derivation
               of SIP (Session Initiation Protocol)
               RFC 2543"
     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 INTEGER,
     pktcSigDevCodecType     PktcCodecType
     }

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

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

--
--   These are the common signalling 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.
--

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)."
     ::= { 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)."
     ::= { 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)."
     ::= { 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 6.4.2 of ITU-T Recommendation J.162"
          DEFVAL    { 0 }
     ::= { pktcSigDevConfigObjects 8 }

pktcSigDefMediaStreamTos 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 media stream packets."
          REFERENCE
          "Refer to 6.4.2 of ITU-T Recommendation J.162"
     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 signalling and media
          Type of Service (TOS) values."
     ::= { pktcSigDevConfigObjects 10 }

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

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

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

PktcSigCapabilityEntry ::= SEQUENCE {
     pktcSignallingIndex     INTEGER,
     pktcSignallingType      PktcSigType,
     pktcSignallingVersion   SnmpAdminString,
     pktcSignallingVendorExtension SnmpAdminString
```

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

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

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

pktcSignallingVendorExtension    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 }
--
-- The following table will provide endpoint configuration
-- information that is common to all signalling Protocols.
-- Currently only the signalling 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 packet cable
          EndPoint selected signalling 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
          on the specific signalling 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 signalling type
          a particular endpoint uses."
     INDEX { ifIndex }
     ::= { pktcSigEndPntConfigTable 1 }

pktcSigEndPntConfigEntry ::= SEQUENCE {
     pktcSigEndPntCapabilityIndex     INTEGER
     }

pktcSigEndPntCapabilityIndex     OBJECT-TYPE
     SYNTAX        INTEGER (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 packet cable NCS EndPoint
          configuration. The number of entries in this table
          represents the number of provisioned NCS endpoints."
     ::= { pktcNcsEndPntConfigObjects 1}

pktcNcsEndPntConfigEntry    OBJECT-TYPE
     SYNTAX        PktcNcsEndPntConfigEntry
     MAX-ACCESS    not-accessible
     STATUS        current
     DESCRIPTION
          "List of attributes for a single packet cable endpoint
          interface."
     INDEX { ifIndex }
     ::= { pktcNcsEndPntConfigTable 1 }

PktcNcsEndPntConfigEntry ::= SEQUENCE {
     pktcNcsEndPntConfigCallAgentId             DisplayString,
     pktcNcsEndPntConfigCallAgentUdpPort        INTEGER,
     pktcNcsEndPntConfigPartialDialTO           INTEGER,
     pktcNcsEndPntConfigCriticalDialTO          INTEGER,
     pktcNcsEndPntConfigBusyToneTO              INTEGER,
     pktcNcsEndPntConfigDialToneTO              INTEGER,
     pktcNcsEndPntConfigMessageWaitingTO        INTEGER,
     pktcNcsEndPntConfigOffHookWarnToneTO       INTEGER,
     pktcNcsEndPntConfigRingingTO               INTEGER,
     pktcNcsEndPntConfigRingBackTO              INTEGER,
     pktcNcsEndPntConfigReorderToneTO           INTEGER,
     pktcNcsEndPntConfigStutterDialToneTO       INTEGER,
     pktcNcsEndPntConfigTSMax                   INTEGER,
```

```
    pktcNcsEndPntConfigMax1                    INTEGER,
    pktcNcsEndPntConfigMax2                    INTEGER,
    pktcNcsEndPntConfigMax1QEnable             TruthValue,
    pktcNcsEndPntConfigMax2QEnable             TruthValue,
    pktcNcsEndPntConfigMWD                     INTEGER,
    pktcNcsEndPntConfigTdinit                  INTEGER,
    pktcNcsEndPntConfigTdmin                   INTEGER,
    pktcNcsEndPntConfigTdmax                   INTEGER,
    pktcNcsEndPntConfigRtoMax                  INTEGER,
    pktcNcsEndPntConfigRtoInit                 INTEGER,
    pktcNcsEndPntConfigLongDurationKeepAlive   INTEGER,
    pktcNcsEndPntConfigThist                   INTEGER,
    pktcNcsEndPntConfigStatus             RowStatus
    }

pktcNcsEndPntConfigCallAgentId   OBJECT-TYPE
    SYNTAX        DisplayString(SIZE (0..255))
    MAX-ACCESS    read-create
    STATUS        current
    DESCRIPTION
        "This object contains a string indicating the call agent name.
        The call agent name can be a fully qualified domain name or
        an IP address. Refer to RFC 821 for details."
    ::= { pktcNcsEndPntConfigEntry 1 }

pktcNcsEndPntConfigCallAgentUdpPort   OBJECT-TYPE
    SYNTAX        INTEGER (1025..65535)
    MAX-ACCESS    read-create
    STATUS        current
    DESCRIPTION
        "This object contains the call agent User Datagram Protocol
        (UDP) port that is being used for this instance of call
        signalling."
    REFERENCE
        "Refer to 7.2.1.3 of ITU-T Recommendation J.162"
    DEFVAL    { 2427 }
    ::= { pktcNcsEndPntConfigEntry 2 }

pktcNcsEndPntConfigPartialDialTO OBJECT-TYPE
    SYNTAX        INTEGER
    UNITS         "seconds"
    MAX-ACCESS    read-create
    STATUS        current
    DESCRIPTION
        "This object contains maximum value of the partial
        dial time out."
    REFERENCE
        "Refer to Annex A of ITU-T Recommendation J.162"
    DEFVAL    { 16 }
    ::= { pktcNcsEndPntConfigEntry 3 }

pktcNcsEndPntConfigCriticalDialTO     OBJECT-TYPE
    SYNTAX        INTEGER
    UNITS         "seconds"
    MAX-ACCESS    read-create
    STATUS        current
    DESCRIPTION
        "This object contains the maximum value of the critical
        dial time out."
    REFERENCE
        "Refer to Annex A of ITU-T Recommendation J.162"
    DEFVAL    { 4 }
    ::= { pktcNcsEndPntConfigEntry 4 }
```

```
pktcNcsEndPntConfigBusyToneTO OBJECT-TYPE
     SYNTAX        INTEGER
     UNITS         "seconds"
     MAX-ACCESS    read-create
     STATUS        current
     DESCRIPTION
          "This object contains the time-out value for busy tone."
     REFERENCE
          "Refer to Annex A of ITU-T Recommendation J.162"
     DEFVAL    { 30 }
     ::= { pktcNcsEndPntConfigEntry 5 }

pktcNcsEndPntConfigDialToneTO OBJECT-TYPE
     SYNTAX        INTEGER
     UNITS         "seconds"
     MAX-ACCESS    read-create
     STATUS        current
     DESCRIPTION
          "This object contains the time-out value for dial tone."
     REFERENCE
          "Refer to Annex A of ITU-T Recommendation J.162"
     DEFVAL    { 16 }
     ::= { pktcNcsEndPntConfigEntry 6 }

pktcNcsEndPntConfigMessageWaitingTO   OBJECT-TYPE
     SYNTAX        INTEGER
     UNITS         "seconds"
     MAX-ACCESS    read-create
     STATUS        current
     DESCRIPTION
          "This object contains the time-out value for message
          waiting indicator."
     REFERENCE
          "Refer to Annex A of ITU-T Recommendation J.162"

     DEFVAL    { 16 }
     ::= { pktcNcsEndPntConfigEntry 7 }

pktcNcsEndPntConfigOffHookWarnToneTO  OBJECT-TYPE
     SYNTAX        INTEGER
     UNITS         "seconds"
     MAX-ACCESS    read-create
     STATUS        current
     DESCRIPTION
          "This object contains the time-out value for
          the off hook Warning tone."
     REFERENCE
          "Refer to Annex A of ITU-T Recommendation J.162"
     DEFVAL    { 0 }
     ::= { pktcNcsEndPntConfigEntry 8 }

pktcNcsEndPntConfigRingingTO OBJECT-TYPE
     SYNTAX        INTEGER
     UNITS         "seconds"
     MAX-ACCESS    read-create
     STATUS        current
     DESCRIPTION
          "This object contains the time-out value for ringing."
     REFERENCE
          "Refer to Annex A of ITU-T Recommendation J.162"
     DEFVAL    { 180 }
     ::= { pktcNcsEndPntConfigEntry 9 }
```

```
pktcNcsEndPntConfigRingBackTO    OBJECT-TYPE
     SYNTAX         INTEGER
     UNITS          "seconds"
     MAX-ACCESS     read-create
     STATUS         current
     DESCRIPTION
          "This object contains the time-out value for ring back."
     REFERENCE
          "Refer to Annex A of ITU-T Recommendation J.162"
     DEFVAL    { 180 }
     ::= { pktcNcsEndPntConfigEntry 10 }

pktcNcsEndPntConfigReorderToneTO OBJECT-TYPE
     SYNTAX         INTEGER
     UNITS          "seconds"
     MAX-ACCESS     read-create
     STATUS         current
          DESCRIPTION
          "This object contains the time-out value for reorder tone."
          REFERENCE
     "Refer to Annex A of ITU-T Recommendation J.162"
     DEFVAL    { 30 }
     ::= { pktcNcsEndPntConfigEntry 11 }

pktcNcsEndPntConfigStutterDialToneTO OBJECT-TYPE
     SYNTAX         INTEGER
     UNITS          "seconds"
     MAX-ACCESS     read-create
     STATUS         current
          DESCRIPTION
          "This object contains the timeout value for stutter dial tone."
          REFERENCE
          "Refer to Annex A of ITU-T Recommendation J.162"
     DEFVAL    { 16 }
     ::= { pktcNcsEndPntConfigEntry 12 }

pktcNcsEndPntConfigTSMax OBJECT-TYPE
     SYNTAX         INTEGER
     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 6.4.2 of ITU-T Recommendation J.162"
     DEFVAL    { 20 }
     ::= { pktcNcsEndPntConfigEntry 13 }

pktcNcsEndPntConfigMax1 OBJECT-TYPE
     SYNTAX         INTEGER
     MAX-ACCESS     read-create
     STATUS         current
     DESCRIPTION
          "This object contains the suspicious error threshold
          for signalling messages."
     REFERENCE
          "Refer to 6.4.2 of ITU-T Recommendation J.162"
     DEFVAL    { 5 }
     ::= { pktcNcsEndPntConfigEntry 14 }
```

```
pktcNcsEndPntConfigMax2 OBJECT-TYPE
     SYNTAX        INTEGER
     MAX-ACCESS    read-create
     STATUS        current
     DESCRIPTION
          "This object contains the disconnect error
          threshold for signalling messages."
     REFERENCE
          "Refer to 6.4.2 of ITU-T Recommendation J.162"
     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        INTEGER
     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 6.4.3.5 of ITU-T Recommendation J.162"
     DEFVAL    { 600 }
     ::= { pktcNcsEndPntConfigEntry 18 }

pktcNcsEndPntConfigTdinit OBJECT-TYPE
     SYNTAX        INTEGER
     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 6.4.3.6 of ITU-T Recommendation J.162"
     DEFVAL    { 15 }
     ::= { pktcNcsEndPntConfigEntry 19 }

pktcNcsEndPntConfigTdmin OBJECT-TYPE
     SYNTAX        INTEGER
     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 6.4.3.6 of ITU-T Recommendation J.162"
     DEFVAL    { 15 }
     ::= { pktcNcsEndPntConfigEntry 20 }

pktcNcsEndPntConfigTdmax OBJECT-TYPE
     SYNTAX    INTEGER
     UNITS     "seconds"
     STATUS    current
     DESCRIPTION
          "This object contains the maximum number of seconds
          a MTA waits after a disconnect."
     REFERENCE
          "Refer to 6.4.3.6 of ITU-T Recommendation J.162"
     DEFVAL    { 600 }
     ::= { pktcNcsEndPntConfigEntry 21 }

pktcNcsEndPntConfigRtoMax OBJECT-TYPE
     SYNTAX         INTEGER
     UNITS          "seconds"
     MAX-ACCESS     read-create
     STATUS    current
     DESCRIPTION
          "This object contains the maximum number of seconds
          for the retansmission timer."
     REFERENCE
          "Refer to 7.5.2 of ITU-T Recommendation J.162"
     DEFVAL    { 4 }
          ::= { pktcNcsEndPntConfigEntry 22 }

pktcNcsEndPntConfigRtoInit OBJECT-TYPE
     SYNTAX         INTEGER
     UNITS          "milliseconds"
     MAX-ACCESS     read-create
     STATUS         current
     DESCRIPTION
          "This object contains the initial number of seconds
          for the retransmission timer."
     REFERENCE
          "Refer to 7.5.2 of ITU-T Recommendation J.162"
     DEFVAL    { 200 }
     ::= { pktcNcsEndPntConfigEntry 23 }

pktcNcsEndPntConfigLongDurationKeepAlive OBJECT-TYPE
     SYNTAX         INTEGER
     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 Annex A of ITU-T Recommendation J.162"
     DEFVAL    { 60 }
     ::= { pktcNcsEndPntConfigEntry 24 }

pktcNcsEndPntConfigThist    OBJECT-TYPE
     SYNTAX         INTEGER
     UNITS          "seconds"
     MAX-ACCESS     read-create
     STATUS         current
```

```
     DESCRIPTION
          "Timeout period in seconds before no response is declared."
     REFERENCE
          "Refer to 6.4.2 of ITU-T Recommendation J.162"
     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 pktsNcsEndPntTable."
     ::= { pktcNcsEndPntConfigEntry 26 }

--
-- notification group is for future extension.
--
pktcSigNotification OBJECT IDENTIFIER      ::= { pktcSigMib 2 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 Signalling
          on the MTA."

MODULE – pktcSigMib


-- unconditionally mandatory groups

MANDATORY-GROUPS {
     pktcSigGroup
     }
GROUP pktcNcsGroup
     DESCRIPTION
          "This group is mandatory for any MTA implementing NCS signalling"
     ::={ pktcSigCompliances 1 }
-- units of conformance
pktcSigGroup OBJECT-GROUP
     OBJECTS {
     pktcSigDevCodecType,
     pktcSigDevEchoCancellation,
     pktcSigDevSilenceSuppression,
     pktcSigDevConnectionMode,
     pktcSigDevR0Cadence,
     pktcSigDevR6Cadence,
     pktcSigDevR7Cadence,
          pktcSigDefCallSigTos,
          pktcSigDefMediaStreamTos,
          pktcSigTosFormatSelector,
          pktcSignallingType,
     pktcSignallingVersion,
     pktcSignallingVendorExtension,
          pktcSigEndPntCapabilityIndex
          }
```

```
     STATUS    current
     DESCRIPTION
          "Group of objects for the common portion of the
          IPCablecom Signalling MIB."
     ::= { pktcSigGroups 1 }

pktcNcsGroup OBJECT-GROUP
     OBJECTS {
     pktcNcsEndPntConfigCallAgentId,
     pktcNcsEndPntConfigCallAgentUdpPort,
     pktcNcsEndPntConfigPartialDialTO,
     pktcNcsEndPntConfigCriticalDialTO,
     pktcNcsEndPntConfigBusyToneTO,
     pktcNcsEndPntConfigDialToneTO,
     pktcNcsEndPntConfigMessageWaitingTO,
     pktcNcsEndPntConfigOffHookWarnToneTO,
     pktcNcsEndPntConfigRingingTO,
     pktcNcsEndPntConfigRingBackTO,
     pktcNcsEndPntConfigReorderToneTO,
     pktcNcsEndPntConfigStutterDialToneTO,
     pktcNcsEndPntConfigTSMax,
     pktcNcsEndPntConfigMax1,
     pktcNcsEndPntConfigMax2,
     pktcNcsEndPntConfigMax1QEnable,
     pktcNcsEndPntConfigMax2QEnable,
     pktcNcsEndPntConfigMWD,
     pktcNcsEndPntConfigTdinit,
     pktcNcsEndPntConfigTdmin,
     pktcNcsEndPntConfigTdmax,
     pktcNcsEndPntConfigRtoMax,
     pktcNcsEndPntConfigRtoInit,
     pktcNcsEndPntConfigLongDurationKeepAlive,
     pktcNcsEndPntConfigThist,
     pktcNcsEndPntConfigStatus
     }
     STATUS    current
     DESCRIPTION
          "Group of objects for the NCS portion of the
          IPCablecom Signalling MIB. This is mandatory for
          NCS signalling."
     ::= { pktcSigGroups 2 }

END
```

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