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TESTING



## Euro-PacketCable L-Package Clarification

--- Project Reference ---

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## 1 Introduction

This document clarifies the requirements for the L-package events and signals for Euro-PacketCable. This document is based on Appendix A of [PKT-SP-EC-MGCP / PKT-SP-NCS1.5] and Annex A of [ETSI TS 101 909-4]. The referenced MIB-objects are defined in [draft-ietf-ipcdn-pktc-signaling].

## 2 Event and signal clarification

### 2.1 DTMF tones (0-9,\*,#,A,B,C,D)

Detection and generation of DTMF tones is described in the following ETSI documents: ES 201 235-1, ES 201 235-2, ES 201 235-3 and ES 201 235-4. DTMF tone types **MUST NOT** be supported in the MIB table `pktcSigDevToneType`. It is considered an error to try and play any digit on a phone that is on hook and an error should consequently be returned when such attempts are made (error code 402 - phone on hook).

### 2.2 Busy Tone (bz)

The busy tone can be programmed using the MIB-table `pktcSigDevToneTable`. It is considered an error to try and play busy tone on a phone that is on hook and an error should consequently be returned when such attempts are made (error code 402 - phone on hook).

### 2.3 Confirmation Tone (cf)

The confirmation tone can be programmed using the MIB-table `pktcSigDevToneTable`. It is considered an error to try and play confirmation tone on a phone that is on hook and an error should consequently be returned when such attempts are made (error code 402 - phone on hook).

### 2.4 Caller ID(`ci(time,number,name)`)

Called ID information can be transmitted in different ways. The way in which the information will be transmitted is defined by the MIB-objects `pktcSigDevCIDMode`, `pktcSigDevCIDFskAfterRing`, `pktcSigDevCIDFskAfterDTAS`, `pktcSigDevCIDFskAfterRPAS`, `pktcSigDevCIDRingAfterFSK` and `pktcSigDevCIDDTASAfterLR`.

The information has to be transmitted in accordance to ETSI EN 300 659-1 and ETSI EN 300 659-3. Each of the three fields is optional, however each of the commas will always be included.

- ❑ The time parameter is coded as “MM/DD/HH/MM”, where MM is a two-digit value for Month between 01 and 12, DD is a two-digit value for Day between 1 and 31, and Hour and Minute are two-digit values coded according to military local time, e.g. 00 is midnight, 01 is 1 a.m., and 13 is p.m.
- ❑ The number parameter is coded as an ASCII character string of decimal digits that identify the calling line number. White spaces are permitted if the string is quoted, however they will be ignored.



- The name parameter is coded as a string of ASCII characters that identify the calling line name.

A “P” in the number or name field is used to indicate a private number or name, and an “O” is used to indicate an unavailable number or name. The following example illustrates the use of the caller-id signal:

S: ci(08/14/17/26, “32 9 269 22 90”, Excentis)

## 2.5 Dial-Tone (dl)

The dial tone can be programmed using the MIB-table pktcSigDevToneTable. It is considered an error to try and play dial-tone on a phone that is on hook and an error should consequently be returned when such attempts are made (error code 402 - phone on hook).

## 2.6 Fax Tone (ft)

Please consult [PKT-SP-EC-MGCP / PKT-SP-NCS1.5] Appendix A.

## 2.7 Off-hook transition (hd)

The conditions for an off-hook transition are as specified in EG 201 188, clause 7.

## 2.8 Flash Hook (hf)

The conditions for a flash-hook transition are as specified in EG 201 188, clause 7. The time-specific conditions that define when the hf-event is generated are specified in the MIB-objects pktcNcsEndPntConfigMinHookFlash and pktcNcsEndPntConfigMaxHookFlash.

## 2.9 On-hook transition(hu)

The conditions for an on-hook transition are as specified in EG 201 188, clause 8.

## 2.10 MFPB DTMF Long duration (L)

This event is detected when a MFPB (DTMF) signal is produced for a duration longer than two seconds. In this case, the gateway will detect two successive events: first, when the signal has been recognized, the MFPB (DTMF) signal, and then, 2 s later, the long duration signal.

## 2.11 Long duration connection (ld)

This event is detected when a connection is established for more than a certain period of time. The period of time is defined in the MIB-object pktNcsEndPntConfigLongDurationKeepAlive.

This event may be detected on a connection. When no connection is specified, the event applies to all connections for the endpoint, regardless of when the connections are created.

## 2.12 Media start (ma)

Please consult [PKT-SP-EC-MGCP / PKT-SP-NCS1.5] Appendix A.



## 2.13 Modem tones (mt)

Please consult [PKT-SP-EC-MGCP / PKT-SP-NCS1.5] Appendix A.

## 2.14 Message Waiting Indicator (mwi)

The Message Waiting Indicator tone can be programmed using the MIB-table pktcSigDevToneTable. It is considered an error to try and play message waiting indicator on a phone that is on hook and an error should consequently be returned when such attempts are made (error code 402 - phone on hook).

## 2.15 Operation complete (oc)

Please consult [PKT-SP-EC-MGCP / PKT-SP-NCS1.5] Appendix A.

## 2.16 Operation failure (of)

Please consult [PKT-SP-EC-MGCP / PKT-SP-NCS1.5] Appendix A.

## 2.17 Off-hook warning tone (ot)

The off-hook warning tone can be programmed using the MIB-table pktcSigDevToneTable. It is considered an error to try and play an off-hook warning tone on a phone that is on hook and an error should consequently be returned when such attempts are made (error code 402 - phone on hook).

## 2.18 Distinctive ringing (r0, r1, r2, r3, r4, r5, r6, r7)

The distinctive ringing tone can be programmed by the MIBobjects: pktcSigDevR0Cadence, pktcSigDevR1Cadence, pktcSigDevR2Cadence, pktcSigDevR3Cadence, pktcSigDevR4Cadence, pktcSigDevR5Cadence, pktcSigDevR6Cadence, pktcSigDevR7Cadence. It is considered an error to try and ring a phone that is off hook and an error should consequently be returned when such attempts are made (error code 401 - phone off hook).

## 2.19 Ringing (rg)

The ringing cadence is defined by the MIB-object pktcSigDevRgCadence. The ringing signal may be parameterized with the signal parameter “rep” which specifies the maximum number of ringing cycles (repetitions) to apply. The following will apply the ringing signal for up to 6 ringing cycles:

S: rg(rep=6)

It is considered an error to try and ring a phone that is on line (off hook) and an error should consequently be returned when such attempts are made (error code 401 - phone on line (off hook)).



## 2.20 Reorder tone (ro)

The reorder tone can be programmed using the MIB-table pktcSigDevToneTable. It is considered an error to try and play a reorder tone on a phone that is on hook and an error should consequently be returned when such attempts are made (error code 402 - phone on hook).

## 2.21 Ringsplash (rs)

The ringsplash cadence is defined by the MIB-object pktcSigDevRsCadence. It is considered an error to try and ring a phone that is on line (off hook) and an error should consequently be returned when such attempts are made (error code 401 - phone on line (off hook)).

## 2.22 Ring back tone (rt)

The reorder tone can be programmed using the MIB-table pktcSigDevToneTable. This signal can be applied both to an endpoint and a connection. If the endpoint is off line (on hook) an error should be returned when an attempt is made to play ring back tones. When it is applied to a connection, no such check has to be made.

## 2.23 Stutter dial tone (sl)

The stutter dial tone can be programmed using the MIB-table pktcSigDevToneTable. The stutter dial tone signal may be parameterized with the signal parameter “del” which will specify a delay in ms to apply between the confirmation tone and the dial tone (e.g. needed for speed dialling). The following will apply stutter dial tone with a delay of 1,5 s between the confirmation tone and the dial tone:

S: sl(del=1500)

It is considered an error to try and play stutter dial tone on a phone that is off line (on hook) and an error should consequently be returned when such attempts are made (error code 402 - phone off line (on hook)).

## 2.24 Timer (t)

Please consult [PKT-SP-EC-MGCP / PKT-SP-NCS1.5] Appendix A.

## 2.25 Telecomm Devices for the Deaf Tones (TDD)

Please consult [PKT-SP-EC-MGCP / PKT-SP-NCS1.5] Appendix A.

## 2.26 Visual Message Waiting Indicator (vmwi)

The transmission of the VMWI messages will conform to to the requirements in EN 300 659-1, clause 6.2 and EN 300 659-3 clause 5.2.2 and clause 5.4.7. VMWI messages will only be sent from the embedded client to the attached equipment when the line is idle. If new messages arrive while the



line is busy, the VMWI indicator message will be delayed until the line goes back to the idle state. The Call Agent should periodically refresh the CPE's visual indicator.

## 2.27 Call Waiting (wt1,... wt4)

The call waiting tone can be programmed using the MIB-table pkcSigDevToneTable.

It is considered an error to try and play stutter dial tone on a phone that is off line (on hook) and an error should consequently be returned when such attempts are made (error code 402 - phone off line (on hook)).

## 2.28 DTMF tones wildcard

Please consult [PKT-SP-EC-MGCP / PKT-SP-NCS1.5] Appendix A.

