

**Access and Terminals (AT);  
Analogue Access to Public Telephone Networks;  
Advisory Notes to Standards Harmonizing Terminal Interface;  
Part 3: Country Specific Advisory Notes;  
Sub-part 2: ATAAB Advisory Note AN019  
for the Czech Republic Network;  
DTMF signalling: tone and pause duration**

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**Reference**

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## Foreword

This Technical Report (TR) has been produced by ETSI Technical Committee Access and Terminals (AT).

The present document results from comments received from the Czech Republic.

The present document is part 3, sub-part 2 of a multi-part deliverable covering Access and Terminals (AT); Analogue Access to Public Telephone Networks; Advisory Notes to Standards Harmonizing Terminal Interface, as identified below:

Part 1: "List of all Advisory Notes";

Part 2: "Generally Applicable Advisory Notes";

**Part 3: "Country Specific Advisory Notes";**

Sub-part 1: "ATAAB Advisory Note AN018 for the Czech Republic Network; Automatic dialling with dial tone detection";

**Sub-part 2: "ATAAB Advisory Note AN019 for the Czech Republic Network; DTMF signalling: tone and pause duration";**

Sub-part 3: "ATAAB Advisory Note AN020 for the Czech Republic Network; Loop current characteristics (seizing the line)".

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## Applicability

The present document is specifically applicable for Terminal Equipment intended for connection to the Public Switched Telephone Network in the Czech Republic operated by CESKY TELECOM, in addition to TBR 021 [1] and EN 301 437 [2].

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## 1 Scope

The present document gives guidance on the application of TBR 021 [1] and EN 301 437 [2] and is therefore applicable to Terminal Equipment falling within the scope of TBR 021 [1] and EN 301 437 [2].

The present document is specifically applicable for Terminal Equipment intended for connection to the Public Switched Telephone Network in the Czech Republic operated by CESKY TELECOM, in addition to TBR 021 [1] and EN 301 437 [2].

The present document discusses in particular "DTMF signalling: tone and pause duration".

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## 2 References

For the purposes of this Technical Report (TR) the following references apply:

- [1] ETSI TBR 021: "Terminal Equipment (TE); Attachment requirements for pan-European approval for connection to the analogue Public Switched Telephone Networks (PSTNs) of TE (excluding TE supporting the voice telephony service) in which network addressing, if provided, is by means of Dual Tone Multi Frequency (DTMF) signalling".
- [2] ETSI EN 301 437: "Terminal Equipment (TE); Attachment requirements for pan-European approval for connection to the analogue Public Switched Telephone Networks (PSTNs) of TE supporting the voice telephony service in which network addressing, if provided, is by means of Dual Tone Multi Frequency (DTMF) signalling".

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## 3 Definitions and abbreviations

### 3.1 Definitions

For the purposes of the present document, the terms and definitions given in TBR 021 [1] apply.

### 3.2 Abbreviations

For the purposes of the present document, the abbreviations defined in TBR 021 [1] apply.

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## 4 DTMF signalling: Tone and Pause duration

### 4.1 Problem under consideration

- Terminal Equipment approved to CTR 21 or I-CTR 37 may not interwork properly with the NTPs of the Public Switched Telephone Networks in the Czech Republic operated by CESKY TELECOM.
- Correct interworking with older digital telephone exchanges called E10 (in operation from mid 80's, altogether more than 5 % of all NTPs in the Czech Republic) requires Terminal Equipment to provide longer DTMF signalling tones and pauses than they are required by TBR 021 [1], clauses 4.8.2.4 and 4.8.2.5. Longer DTMF tones and pauses should ensure correct reception of digits in a network address sequence. Though the number of NTP connected to the telephone exchanges E10s gradually decreases they are expected to be in operation until 2005. The requirements according to TBR 021 [1] without amendments should be sufficient for TEs connected to NTPs of other PSTN exchanges in the Czech Republic.

## 4.2 Proposed solution

Terminals intended for connection to telephone exchange E10 should transmit longer DTMF tones and pauses during network addresses signalling than the minimum specified in TBR 021 [1]. The minimum duration should be 90 ms for both tones and pauses. This requirement applies where the TE controls the DTMF signalling tone duration automatically.

Other requirements related to DTMF signalling (TBR 021 [1], clauses 4.8.2.4 and 4.8.2.5) remain as stated in TBR 021 [1].

**NOTE:** It is the responsibility of the supplier to provide information to users as to whether the Terminal Equipment complies with the additional requirements for the Public Switched Telephone Network in the Czech Republic operated by CESKY TELECOM, as specified in this Advisory Note.

**Test:** The tests are as described in TBR 021 [1], clauses A.4.8.2.4 (tone duration) and A.4.8.2.5 (pause duration) but with the minimum acceptable duration in both cases being 90 ms.

**Verdict:** If the TE fails in this additional requirement the manufacturer/supplier should warn the users about the TE interworking restrictions.

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## History

<b>Document history</b>		
V1.1.1	August 2001	Publication