

# ATAAB ADVISORY NOTE

## TRAC Analogue Type Approval Advisory Board

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ATAAB Advisory Note Number: AN05rev001

Date: 1998-06-02

**Subject:** Automatic clearing of automatically originated or answered PSTN calls.

### APPLICABILITY

This note is applicable for Terminal Equipment intended for connection to the German, Greek, Norwegian, Portuguese and Spanish Public Switched Telephone Networks, in addition to:

CTR 21 (When published)

Note Until CTR 21 is available, reference should be made to ETSI document TBR 21.

#### Appendices to this Advisory Note:

- A. Additional requirement and tests for the clearing of automatic calls on the PSTNs of Greece, Portugal and Spain.
  
- B. Additional requirement and tests for the clearing of automatic calls on the PSTN of Germany and Norway.

**In consideration of the following:**

- That terminal equipment that is capable of Automatically Calling and/or Automatically Answering calls should also be capable of automatically releasing an established call;
- That continued holding the line when no useful information is being sent results in continued billing and can prevent incoming calls being presented.
- That it should be possible for Terminal Equipment to detect that a connection has failed and release the line by automatically changing from the loop condition to the quiescent condition.

**ATAAB advises the following:**

To be able to inter-work properly with the German, Greek, Norwegian, Portuguese and Spanish Public Switched Telephone Networks, the TE shall, in addition to the requirements of CTR 21, comply with the requirements found in the relevant appendix to this Advisory Note.

It is the responsibility of the supplier to provide information for users as to whether the Terminal Equipment complies with the additional requirements for the German, Greek, Norwegian, Portuguese and Spanish Public Switched Telephone Networks specified in this Advisory Note.

The relevant appendix specifies the method to assess compliance with the additional requirement, including reference to the additional test to be performed to dynamically assess compliance with the additional requirement.

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### Annex A (Normative)

to

ATAAB Advisory Note Number: AN05rev001

**Date:** 1997-02-27

**Subject:** Additional requirement and tests for the clearing of automatic calls on the PSTNs of Greece, Portugal and Spain.

## A.1 INTRODUCTION

Terminal equipment approved to CTR 21 may not inter-work properly with the Public Switched Telephone Networks in Greece, Portugal and Spain.

This Appendix specifies requirements to which a TE shall comply, in addition to the requirements of CTR 21 in order to inter-work properly with the Greek, Portuguese and Spanish Public Switched Telephone Networks. It also specifies the method to assess compliance with these requirements, including reference to additional tests to be performed to dynamically assess compliance with the additional requirements.

## A.2 NORMATIVE REFERENCES

- [1] CTR21: 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.

NOTE: This document makes reference to CTR21. Until CTR 21 is available, reference should be made to TBR21.

## A.3 REQUIREMENTS AND ASSOCIATED TESTS

NOTE: The following requirement applies only to TE with the facility of automatic calling or automatic answering and are in addition to the requirements of CTR 21 Clause 4.9 and its associated tests in A.4.9.

### A.3.1 Liberation of Loop condition by the TE (Requirement)

**Justification:** 91/263/EEC, Article 4(f); Interworking with the PSTN is assured by requiring a TE that is intended to automatically release the line to assume the off-line state when a call is no longer established.

**Requirement:** For TE that is intended to automatically releasing the line shall, when the normal signals that are exchanged between terminals are interrupted or replaced by appropriate network supervisory tones/condition, the TE shall assume the quiescent state within 360 s of the interruption.

**Test:** The test shall be conducted according to Clause A.3.2

### A.3.2 Liberation of Loop condition by the TE (Test)

**Requirement:** Subclause B.3.1

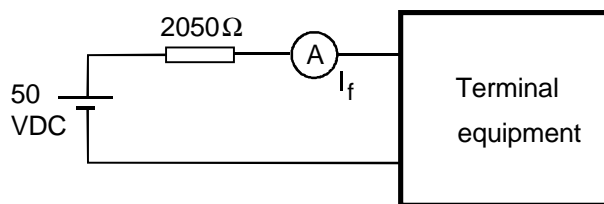
**Purpose:** To determine the ability of the TE to detect 1) the loss of signals from the distant terminal or 2) the existence of appropriate network supervisory tones, and that the TE subsequently releases the line.

**Measurement principle:**

**Preamble:** Set the TE in on-line state exchanging signals with a compatible terminal. The automatic clearing function should be enabled.

**Test state:** On-line state

**Test configuration:**



**Figure A.3.1: Liberation of loop condition**

**DC feeding arrangements:** Feed voltage = 50 V.

**Measurement points:** The network tones shall be as detailed in Table B.1.

**Table A.1 Network Supervisory Tones and Conditions for the purpose of testing automatic clearing.**

| <b>Clearing Conditions</b>  | <b>Frequency / Level</b>                       | <b>Cadence (Signal/silence)</b> |
|-----------------------------|--|---------------------------------|
| Busy tone                   | 425Hz / = -30 dBm                              | 200 / 200 ms                    |
| Number Unobtainable<br>Tone | 425Hz / = -30 dBm                              | 2x200 / 200 + 600 ms            |
| Congestion Tone             | 425Hz / = -30 dBm                              | 3x200 / 2x200+600 ms            |
| Absence of signal           | Interruption of the reception path of the TEUT | > 360s                          |

**NOTE:** In some old exchanges, the “Congestion tone” has the same characteristics of the “Busy tone”. The values given in table A.1 have tolerances of 15 % for the frequencies, and of 10 % for the times in the congestion tone and of 20 % for the times in the rest of the signals.

**Formal processing:** The normal transmission in the reception path of the TEUT is interrupted, and the first signal of the table A.1 is applied so as to appear at the line terminals of the TEUT, until 360s) has elapsed. This process is repeated for the rest of the signals.

**Verdict:** If the TE goes to quiescent state in each of the tests in less than 360s then Pass; else Fail.

**Guidance:** None

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### Annex B (Normative)

to

*Proposed*

**ATAAB Advisory Note Number:** *prAN05rev*

**Date:** 1997-02-27

**Subject:** Additional requirement and tests for the clearing of automatic calls on the German and Norwegian PSTN

## B.1 INTRODUCTION

Terminal equipment approved to CTR 21 may not inter-work properly with the German and Norwegian Public Switched Telephone Networks.

This Appendix specifies requirements to which a TE shall comply, in addition to the requirements of CTR 21 in order to inter-work properly with the German and Norwegian Public Switched Telephone Networks. It also specifies the method to assess compliance with these requirements, including reference to additional tests to be performed to dynamically assess compliance with the additional requirements.

## B.2 NORMATIVE REFERENCES

- [1] CTR21: 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.

NOTE: This document makes reference to CTR21. Until CTR 21 is available, reference should be made to TBR21.

## B.3 REQUIREMENTS AND ASSOCIATED TESTS

NOTE: The following requirement applies only to TE with the facility of automatic calling or automatic answering and are in addition to the requirements of CTR 21 Clause 4.9 and its associated tests in A.4.9.

### B.3.1 Liberation of Loop condition by the TE (Requirement)

**Justification:** 91/263/EEC, Article 4(f); Interworking with the PSTN is assured by requiring a TE that is intended to automatically release the line to assume the off-line state when a call is no longer established.

**Requirement:** For TE that is intended to automatically releasing the line shall, when the normal signals that are exchanged between terminals are interrupted, the TE shall assume the quiescent state within 180 s of the interruption.

**Test:** The test shall be conducted according to Clause B.3.2

### B.3.2 Liberation of Loop condition by the TE (Test)

**Requirement:** Subclause B.3.1



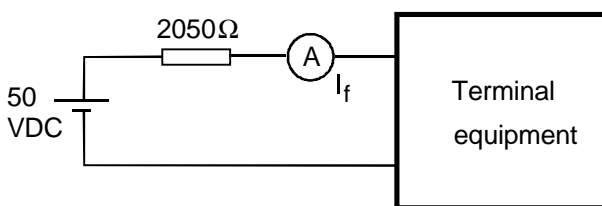
**Purpose:** To determine the ability of the TE to detect loss of signals from the distant terminal, and that the TE subsequently releases the line.

**Measurement principle:**

**Preamble:** Set the TE in on-line state exchanging signals with a compatible terminal. The automatic clearing function should be enabled.

**Test state:** On-line state

**Test configuration:**



**Figure B.3.1: Liberation of loop condition**

**DC feeding arrangements:** Feed voltage = 50 V.

**Measurement points:** The network tones shall be as detailed in Table B.1.

**Table B.1 Network Supervisory Tones and Conditions for the purpose of testing automatic clearing.**

| Clearing Conditions | Frequency / Level                              | Cadence (Signal/silence) |
|---------------------|--|--------------------------|
| Absence of signal   | Interruption of the reception path of the TEUT | > 180s                   |

**Formal processing:** The normal transmission in the reception path of the TEUT is interrupted, and the signal of table B.1 is applied so as to appear at the line terminals of the TEUT, until 180s has elapsed.

**Verdict:** If the TE goes to quiescent state in each of the tests in less than 180s then Pass; else Fail.

**Guidance:** None