



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 24.06.1998  
COM(1998) 387 final

**PROPOSAL FOR A**

**COUNCIL DECISION**

**ON A COMMON TECHNICAL REGULATION FOR THE ATTACHMENT REQUIREMENTS FOR  
CONNECTION TO THE ANALOGUE PUBLIC SWITCHED TELEPHONE NETWORKS (PSTNs) OF  
TERMINAL EQUIPMENT (EXCLUDING TERMINAL EQUIPMENT SUPPORTING THE VOICE  
TELEPHONY JUSTIFIED CASE SERVICE) IN WHICH NETWORK ADDRESSING, IF PROVIDED, IS BY  
MEANS OF DUAL TONE MULTI FREQUENCY (DTMF) SIGNALLING.**

## EXPLANATORY MEMORANDUM

The Commission hereby presents a proposal for a Council Decision on a common technical regulation for the attachment requirements for connection to the analogue Public Switched Telephone Networks (PSTNs) of terminal equipment (excluding terminal equipment supporting the voice telephony justified case service) in which network addressing, if provided, is by means of Dual Tone Multi Frequency (DTMF) signalling.

### INTRODUCTION

#### a) Background

Modems and answering machines account for a considerable and growing market. At present, these devices are approved against national regulations in each individual Member State, which represents a substantial cost and delays in time to market for the manufacturer. Because of the fragmentation of the approvals regime a substantial percentage of modem sales are met by "grey" market products, which are not approved, but which work, and originate mainly in North America and the Far East and are for instance sold via mail order services. European manufacturers in general have their products approved.

The application of Directive 91/263/EEC for this type of equipment will provide for a single type approval procedure for the Community. This Directive foresees the free movement and the putting into service of equipment, which complies with common technical regulations (CTRs). These CTRs refer to European standards produced under a mandate from the Commission by the European Telecommunications Standards Institute. In mandating ETSI to draft such standards a scope statement is adopted by the Commission after consultation of the Member States. Adoption of a CTR will lead to substantially lower approval costs for notably our European manufacturers. It is expected to eliminate the grey market. The CTR would also quickly lead to a single type approval procedure for normal telephones.

#### b) History

On 30 June 1994 the Commission, in accordance with Art.6.2 of Directive 91/263/EEC and after consultation of the regulatory Committee (Approvals Committee on Terminal Equipment or ACTE), identified that a common technical regulation (CTR) was required for equipment, which can be attached to all the telephone networks in the Community, but which isn't intended for making normal voice calls. The associated scope statement amended by ACTE on 16 February 1995 was transmitted to ETSI (annex 1), who started the development of a corresponding harmonised standard (in ETSI referred to as Technical Basis for a Regulation #21 or TBR 21), implementing the essential requirements referred to in Article 4(c) to (f) of Directive 91/263/EEC.

In the case of TBR 21, work begun in ETSI in July 1994, when a Work Item was established. It then took until December 1997 before the TBR was finally adopted. The TBR was published in February 1998.

The TBR was first submitted to a vote by the National Standards Organisations in June 1996 to be adopted as a European standard. Five Member States, holding a blocking minority, voted against the adoption of TBR 21 by ETSI. It then took from August 1996, when the result of the 1<sup>st</sup> vote was known, until October 1997 for it to be agreed to submit TBR 21 for a 2<sup>nd</sup> vote.

Since the matter proved particularly sensitive and an unsuccessful 2<sup>nd</sup> vote should be avoided, the Commission after discussion with ACTE produced a policy paper ('The Way Forward'). This document was endorsed by the Heads of Delegations in a specially convened meeting of ACTE on 16 September 1997.

TBR 21 was subsequently adopted by ETSI in December 1997 with a new foreword and published in February 1998.

With the view to render the harmonised standard obligatory via a common technical regulation, the Commission convened another special meeting of ACTE on 10 February 1998 in which it presented a draft Commission Decision. Some changes were brought to the text of the Commission to satisfy the remaining concerns of some Member States. At that meeting Portugal reserved its position on that draft.

The Commission then formally asked for the opinion of ACTE by written procedure. Although no Member State expressed a non-favourable opinion there wasn't a qualified majority in ACTE that supported the measure since 4 Member States (Belgium, Germany, Spain and Portugal) abstained, whereas Italy did not give an opinion (annex 2).

c) **Proposal**

Since the Committee did not deliver an opinion, the Commission hereby submits to the Council a proposal relating to the measure to be taken in conformity with Article 29.3 of Directive 98/13/EC.

Since no Member State expressed a non-favourable opinion on the measure, the Commission proposes that Council acts by adopting the measure, which already had been discussed extensively with Member States in the meeting of 10 February 1998.

**ANNEX 1**  
**SCOPE STATEMENT**

**TBR TITLE**

Attachment requirements for pan-European approval for connection to the analogue Public Switched Telephone Networks (PSTNs) of terminal equipment (excluding terminal equipment supporting the voice telephony justified case service) in which network addressing, if provided, is by means of DTMF signalling.

**SCOPE STATEMENT**

This Technical Basis for Regulation (TBR) specifies the technical characteristics (electrical and mechanical interface requirements and access control protocol) under Articles 4(d) and 4(f) of Directive 91/263/EEC to be provided by a single Terminal Equipment (TE) which is:

- a) intended for pan-European approval; and
- b) capable of 2-wire access to an analogue Public Switched Telephone Network (PSTN) line at the Network Termination Point (NTP); but
- c) excluding TE which is capable of supporting the voice telephony justified case service as specified in Article 4(g) of Directive 91/263/EEC.

The objective of this TBR is to ensure that no harm occurs to the public network, and to ensure interworking between network and terminal so that calls can be routed successfully through the network, but without any guarantee of terminal to terminal interoperability. There are no requirements in this TBR under Article 4(g) of Directive 91/263/EEC.

This TBR covers TE which is capable of originating a circuit-switched call using Dual Tone Multi Frequency (DTMF) signalling and/or receiving an incoming circuit-switched call. Other signalling methods (e.g. loop disconnect signalling), if provided in the terminal and intended to be used in certain European countries, are subject to appropriate national regulations in addition to this TBR, in respect of that feature. Also, signalling for supplementary features (e.g. register recall, reception of metering pulses from the network) if provided in the terminal, and intended to be used in certain European countries, are subject to the appropriate national regulations.

For each requirement in this TBR a test is given, including measurement methods. Requirements apply at that interface of the TE which connects directly (by galvanic means) to the PSTN via a network termination point. The TE may be stimulated to perform the test by additional equipment if necessary.

This TBR specifies the connection arrangements (plug or socket, of the supplier's choice) to be provided by the TE. An adapter may be required between the terminal and the existing national network termination point in individual countries. Such an adapter is outside the scope of this TBR.

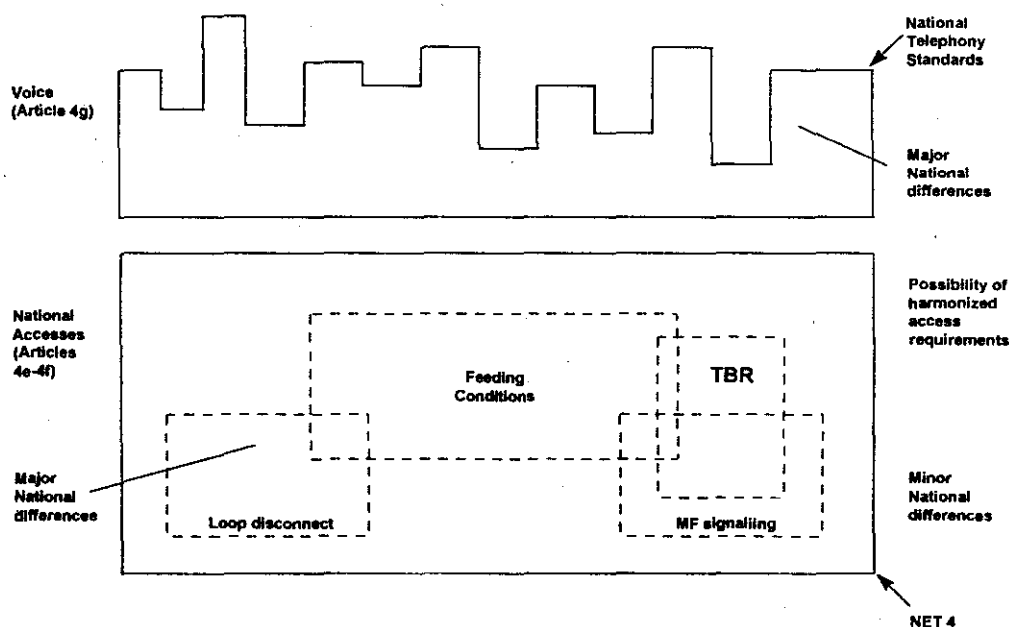
Where the origination or reception of calls by the TE is invoked, or otherwise controlled, by other equipment external to the TE, the TE still needs to be capable of fulfilling the essential requirements under Articles 4d) and 4f) at the interface to the public network. This TBR requires the manufacturer or supplier of the TE to declare the conditions met by such external devices so that their use does not cause the TE to fail to meet the essential requirements.

## NOTES FOR THE GUIDANCE OF ETSI:

### *1. GENERAL*

This TBR should provide a basic set of common requirements which would allow non-voice terminals to be connected via the network termination point to the existing analogue PSTN throughout Europe.

There is a basic similarity in the national technical access requirements for PSTN when considering the interworking that is essential for the establishment of a call to or from a single terminal (although the network may offer more advanced facilities in addition). A number of terminal equipments (e.g. modems, facsimile machines, etc.) do not support a justified case service such as voice telephony, and the approval of such equipment should be possible by meeting the essential access requirements in this TBR.



The diagram shows how a TBR for terminal with features such as low drain and MF signalling can find a possibility of harmonised access requirements by avoiding areas where there are major national differences. This approach means harmonisation can be found within the existing requirements, without having to harmonise the content of NET 4 or of national telephone requirements.

This approach does not imply that NET 4 is wrong. For each country NET 4 and the national telephone requirements will allow a greater range of terminals than the TBR allows. Terminals can still be approved on a national basis against these national essential requirements, as an alternative to approval against the TBR. But approval against the TBR will allow connection, possibly via a suitable adapter, on a pan-European basis, because the requirements in the TBR are those which are essential for pan-European approval.

## 2. CONNECTORS AND ADAPTERS

Physical connectors differ between countries. It is believed that this difficulty can be resolved by specifying a defined connector (plug or socket at the supplier's choice) as part of the TBR requirements which could be used with a suitable adapter between the terminal equipment and the existing national network termination point in individual countries where necessary. Because of its suitability for analogue interfaces and its use in a number of European countries already, the connector type RJ 11/12 is proposed, but ETSI may consider alternatives.

The advantage of a harmonised connector is to limit the types of adapters needed per country. The adapter should be a purely mechanical device, with a plug or socket on one end, and a national plug on the other. However, in some countries, more complex arrangements may be necessary, for example if call metering pulses must be filtered out to avoid disturbances within the voice band. These arrangements may be by special adapters, or by external components (i.e. not part of the terminal equipment considered in this TBR or its simple physical adapter).

## 3. CALL SET-UP SIGNALLING

For call set-up, only one type of signalling is considered in this TBR, namely DTMF signalling. ETSI should take account of possible network delays in providing dial tone.

It is recognised that in some parts of Europe users still cannot be offered this kind of signalling at every network termination point. Other signalling schemes, such as loop disconnect signalling, if provided in the terminal and stated by the supplier to be intended for use in certain European countries, will require a national approval in respect of that feature in addition to this TBR. Such terminals may carry one or more national approval marks in addition to the fully CE marking<sup>1</sup>. This TBR requires suppliers of terminals with loop disconnect signalling to state, in the user instructions for the terminals:

- a) in which countries the feature of loop disconnect signalling is intended to be used,  
*and*
- b) that the use of this feature in other countries may be prohibited by national approval regulations.

Signalling for supplementary features (e.g. register recall, reception of metering pulses from the network), if provided by the terminal and stated by the supplier to be intended for use in certain European countries, might require a national approval in respect of that feature in addition to this TBR.

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<sup>1</sup> The full CE markings is a shown in Article 11(12) of Directive 93/68/EEC, which modifies Annex VI of Directive 91/263/EEC.

Regarding signalling for echo suppressor control, if provided by the terminal, ACTE has taken the view that the terminal should not be subjected to regulation of this feature.

#### **4. USE OF PARALLEL TERMINALS**

The requirements in this TBR apply to a single terminal equipment, or at each network port of a multi-line terminal equipment, which is not intended to support the voice telephony service, such as a data switch, or a multi-line modem.

It is a national matter as to whether the PSTN will allow other terminal equipments to be connected to the network termination point in addition to a terminal equipment meeting this TBR.

A common methodology for describing series and parallel connections of terminals could usefully be produced by ETSI as an ETR. This would explain the treatment and calculation of a measure for the capability of a terminal with respect to parallel operations, for example a Parallel Connection Unit (PCU). The ETR could also identify the factors affecting voice telephony service when a terminal equipment meeting this TBR is connected to a network termination point in parallel with a telephone (or other terminal equipment supporting the voice telephony service).

The approach would allow the supplier to state, on a voluntary basis, whether the terminal goes beyond the requirements of the TBR that apply to a single terminal equipment. In that case the methodology of the ETR could be used to give guidance to national regulators, network operators, and users, on the effects of the terminal in certain series or parallel configurations, including configurations supporting the voice telephony service.

#### **5. ESSENTIAL REQUIREMENTS**

This TBR should take account of modern technical possibilities, so that there are no telecom specific requirements in Article 4a), 4b) and 4c) of Directive 91/263/EEC falling under this TBR. Reference should be made to the LVD and EMC Directives for safety and general EMC matters.

#### **6. ADDITIONAL DETAIL**

It is not yet determined whether automatic repeated call attempts are a source of potential harm to the PSTN in terms of Article 4d) of the Directive. Until this is resolved by ACTE, it is suggested that ETSI defines a simple parameter to control the interval between call attempts initiated automatically within the terminal equipment itself.

#### **7. CO-OPERATION**

ETSI is invited to co-operate with TRAC in any refinement of this scope statement which is considered necessary.

**ANNEX 2  
OPINION OF ACTE**

Member States	Weight	Yes	No	Abstention	Absent	Result*
Belgium	5			X		
Denmark	3	X				
Germany	10			X		
Greece	5	X				
Spain	8			X		
France	10	X				
Ireland	3	X				
Italy	10				X	
Luxembourg	2	X				
Netherlands	5	X				
Austria	4	X				
Portugal	5			X		
Finland	3	X				
Sweden	4	X				
United Kingdom	10	X				
<b>TOTAL</b>	<b>87</b>	<b>49*</b>		<b>28</b>	<b>10</b>	

\* Favourable opinion requires 2/3 of total weight



**Proposal for a  
COUNCIL DECISION of ....199..**

**on a common technical regulation for the attachment requirements for connection to the analogue Public Switched Telephone Networks (PSTNs) of terminal equipment (excluding terminal equipment supporting the voice telephony justified case service) in which network addressing, if provided, is by means of Dual Tone Multi Frequency (DTMF) signalling**

(Text with EEA relevance)

**THE COUNCIL OF THE EUROPEAN UNION,**

Having regard to the Treaty establishing the European Community,

Having regard to the proposal from the Commission,

Having regard to Directive 98/13/EC of the European Parliament and of the Council of 12 February 1998 relating telecommunications terminal equipment and satellite earth station equipment, including the mutual recognition of their conformity<sup>1</sup>, and in particular Article 7(2), second indent, thereof,

Whereas the Commission has identified the type of terminal equipment for which a common technical regulation is required, as well as the associated scope statement;

Whereas the corresponding harmonised standards, or parts thereof, implementing the essential requirements which are to be transformed into common technical regulations should be adopted;

Whereas the technical development of the national public telephone networks have taken place continuously during the course of the twentieth century, and that because these developments were initially undertaken independently, important technical differences will remain for some time between networks;

Whereas technical differences in PSTNs exist, and that the most significant of these are described in Advisory Notes published in ETSI Guide EG 201 121;

Whereas these Advisory Notes are voluntary in application and may contain useful information for the manufacturer;

Whereas Notified Bodies shall therefore ensure that manufacturers are aware of the applicable Advisory Notes concerning the specific requirements of certain networks;

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<sup>1</sup> OJ No L 74, 12.3.1998, p.1.

Whereas it should be possible to continue to approve terminal equipment according to national regulation for a transitional period;

Whereas manufacturers shall associate a notice with all products approved under this Decision; whereas manufacturers shall make a network compatibility declaration; whereas Notified Bodies shall ensure that manufacturers are aware of these obligations; whereas Notified Bodies shall inform other Notified Bodies of the network compatibility declarations whenever approval is granted under this Decision;

Whereas equipment falling within the scope of this Decision that has been approved under national regulations before the end of the transitional period may continue to be placed on that national market and put into service;

Whereas no opinion was delivered by ACTE on the common technical regulation provided for by this Decision; whereas, consequently according to Article 29(3) of Directive 98/13/EC the Commission has submitted to the Council the present proposal relating to the measure to be taken;

HAS ADOPTED THIS DECISION:

#### Article 1

1. This Decision shall apply to equipment which is intended to be connected as a single terminal via a 2-wire access to an analogue PSTN line at the network termination point and falls within the scope of the harmonised standard identified in Article 2(1).
2. This Decision establishes a common technical regulation covering the attachment requirements for analogue PSTN terminal equipment referred to in paragraph 1. This Decision does not cover requirements relating to the interworking of terminal equipment via the public telecommunications network, as specified in Article 5(g) of Directive 98/13/EC.

#### Article 2

1. The common technical regulation shall include the harmonised standard prepared by the relevant standardisation body implementing, to the extent applicable, the essential requirements referred to in Articles 5(d) and 5(f) of Directive 98/13/EC. The reference to the standard is set out in Annex 1.
2. Terminal equipment covered by this Decision shall comply with the common technical regulation referred to in paragraph 1, shall meet the essential requirements referred to in Articles 5(a) and 5(b) of Directive 98/13/EC, and shall meet the requirements of any other applicable Directives, in particular Council Directives 73/23/EEC<sup>2</sup> and 89/336/EEC<sup>3</sup>.

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<sup>2</sup> OJ No L 77, 26 March 1973, p. 29.

<sup>3</sup> OJ No L 139, 23 May 1989, p. 19

### Article 3

1. Notified Bodies designated for carrying out the procedures referred to in Article 10 of Directive 98/13/EC shall, as regards terminal equipment covered by Article 1(1) of this Decision, use or ensure the use of the applicable parts of the harmonised standard referred to in Article 2(1).
2. Notified Bodies shall ensure that:
  - (a) manufacturers or other applicants for approval are aware of the Advisory Notes contained in ETSI Guide EG 201 121, including any amendments thereto, and
  - (b) manufacturers are aware that they must associate a notice of the form given in Annex II with all products approved under this Decision, and
  - (c) manufacturers also make the network compatibility declarations of the form given in Annex III.
3. Notified Bodies shall inform other Notified Bodies of the network compatibility declarations made when approval is granted under this Decision.

### Article 4

1. Equipment within the scope of the harmonised standard referred to in Article 2(1) may continue to be approved under national type approval regulations for a period of 15 months after the coming into force of this Decision.
2. Terminal equipment approved under such national type approval regulations may continue to be placed on the market and put into service.

### Article 5

This Decision is addressed to the Member States.

Done at Brussels, [date *month*] 199.. .

*For the Council,*

*/signature/  
The President*

## ANNEX I

Reference to the Harmonised Standard applicable

**The harmonised standard referred to in Article 2 of this Decision is:**

**"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"**

ETSI

European Telecommunications Standards Institute

ETSI Secretariat

TBR.21 [January 1998]

(excluding the Foreword)

ADDITIONAL INFORMATION
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The European Telecommunications Standards Institute is recognised according to Council Directive 83/189/EEC.

The harmonised standard referred to above has been produced according to a Mandate issued in accordance with relevant procedures of Council Directive 83/189/EEC.

The full text of the harmonised standard referenced above can be obtained from:

European Telecommunications Standards Institute  
650 Route des Lucioles  
F-06921 Sophia Antipolis Cedex - FRANCE

European Commission,  
DGXIII/A/2 - (BU 31, 1/7),  
Rue de la Loi/Wetstraat 200,  
B-1049 Brussels.

or from any other organisation responsible for making ETSI standards available, of which a list can be found on the internet under address [www.ispo.cec.be](http://www.ispo.cec.be).

## ANNEX II

### **Text of the notice which manufacturers shall associate with products approved under this Decision**

"The equipment has been approved to [Commission Decision "CTR 21"] for pan-European single terminal connection to the Public Switched Telephone network (PSTN). However, due to differences between the individual PSTNs provided in different countries, the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN network termination point.

In the event of problems, you should contact your equipment supplier in the first instance."

*Note: The manufacturer should ensure that the vendor and user of the equipment is clearly informed of the above information by means of packaging and/or user manuals [or other forms of user instructions]*

## ANNEX III

### **Network compatibility declaration to be made by the manufacturer to the Notified Body and the vendor**

This declaration will indicate the networks with which the equipment is designed to work and any notified networks with which the equipment may have interworking difficulties

### **Network compatibility declaration to be made by the manufacturer to the user**

This declaration will indicate the networks with which the equipment is designed to work and any notified networks with which the equipment may have interworking difficulties. The manufacturer shall also associate a statement to make it clear where network compatibility is dependent on physical and software switch settings. It will also advise the user to contact the vendor if it is desired to use the equipment on another network.

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