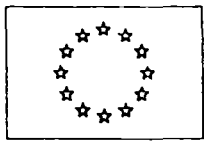

COMMISSION OF THE EUROPEAN COMMUNITIES

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PROGRESS REPORT 1995

ON THE APPROXIMATION OF THE LAWS OF THE MEMBER STATES CONCERNING TELECOMMUNICATIONS TERMINAL EQUIPMENT, INCLUDING THE MUTUAL RECOGNITION OF THEIR CONFORMITY SUPPLEMENTED IN RESPECT OF SATELLITE EARTH STATION EQUIPMENT

(Presented by the Commission)

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0. EXECUTIVE SUMMARY

This is the first Progress Report which has been prepared for submission to the Council and the European Parliament in accordance with Article 15 of the Council Directive 91/263/EEC of 29 April 1991 on the approximation of the laws of the Member States concerning telecommunications terminal equipment, including the mutual recognition of their conformity and in accordance with Article 17.1 of the Council Directive 93/97/EEC of 29 October 1993 supplementing Directive 91/263/EEC in order to include satellite earth station equipment.

These Directives aim to provide the regulatory framework appropriate to a single market for all types of telecommunications terminal equipment ranging from simple telephones to the most sophisticated multimedia terminals required by the information society. This single market requires free circulation of these terminals throughout the union, ability to connect to any network and a single, streamlined Approval procedure. The Directives specify a harmonised system for conformance testing and provide a framework for the application of harmonised European standards as Common Technical Regulations(CTRs) which specify the requirements that are essential to ensure compatibility between terminals and networks. This harmonisation of terminal equipment must be achieved within the context of telecommunications networks which, themselves, are far from harmonised.

The report highlights the specific nature of these two New Approach Directives which implement a dual approach utilising reference to harmonised standards for safety and electromagnetic compatibility requirements and mandatory requirements for certain specific telecommunications requirements.

These Directives combine in a simplified regime the placing on the internal market of telecommunications terminal equipment and satellite earth stations and the right of connection/usage of such goods without further administrative procedures. The key objective is to have a one-stop regime in this area.

So far 9 Common Technical Requirements (CTRs), which specify the mandatory essential requirements, have been adopted covering the key areas of GSM, DECT, ERMES, EURO ISDN and ONP leased lines. A further batch of 29 CTRs, covering Data Networks, Analogue PSTN, TFTS, etc., are in the process of being adopted. While these CTRs provide for the harmonisation of some significant markets such as GSM handsets, large market segments such as PABXs, key telephone systems and simple telephones are yet to be significantly addressed.

The report identifies the problems encountered in particular regarding the long delays in the preparation of the technical specifications and test suites required for type approvals.

Industry, in particular, has expressed the view that the current regime is a too heavy and bureaucratic instrument to harmonise the telecommunications equipment market.

Based on experience gained so far and an analysis of the scope of the Directives, the following actions are seen to be necessary :

i. Relaxation of the procedures applied by the notified bodies for conformity assessment.
ii. Extension of the scope of the Directives to cover all types of telecommunication equipment using the radio frequency spectrum.
iii. Fundamental review of the regulatory framework and, in particular of the two Directives, in order to adapt to the new dynamics of the market place and the future needs of the European Information Society.
iv. Improvement to guidance of a regulatory nature given to ETSI,
v. Improvement to ETSI TC and STC working practices in the area of mandated work of a regulatory nature,
vi. Reduction of the period between the approval of a proposed measure by ACTE and the publication of the CTR in the Official Journal.

These recommendations have been included in Section 5 of the Report.

One of the objectives set out by the Green Paper for the development of a Common Market for telecommunications services and products in Europe (1987) was the liberalisation of terminal equipment. Up to that day, the supply of terminal equipment in most Member States was monopolised by the state owned telecom operator who argued that this was justified by the need for a co-ordinated function between the network and the equipment.

Following the issuing of the Green Paper and the major recent developments in communications technology the liberalisation of the terminal equipment market became feasible. The need for a co-ordinated function between the network and the equipment could be fully satisfied through type approval procedures which would check compliance of the terminal with technical specifications.

Council Directive 86/361/EEC on the initial stage of the mutual recognition of type approval for telecommunications terminal equipment constituted a first step towards the establishment of a single market in this sector. Under the regime laid down by this Directive, a manufacturer or distributor could have their product tested against the relevant NET (Norme Européenne de Télécommunication) at any laboratory recognised by the national body and notified to the Commission. A certificate of Conformity and a Test Report were provided by the laboratory which could be submitted to other national bodies in place of further testing in each country. This arrangement is referred to as mutual recognition of test results. To obtain type approval applications had nevertheless to be submitted to authorities in each country. In this way, Council Directive 86/361/EEC incorporated the principle of the "mutual recognition of the results of tests of conformity with common conformity specifications" and contributed to the establishment of a common market in this sector.

This First Phase Directive was repealed in November 1992 with the entering into force of the Telecommunications Terminal Directive 91/263/EEC. This Directive established a one stop type approval procedure including the right of connection so that equipment approved in one Member State can be immediately placed on the market and put into service in all other Member States without the need for additional administrative procedures. Furthermore, the Directive lays down a number of definitions of the essential requirements necessary to provide safeguards due to the technical characteristics of the public networks. With the adoption of Directive 93/97/EEC the scope was further enhanced to cover satellite earth stations.

These Directives aimed to make the establishment of internal market in the telecommunications terminal equipment sector a reality. Furthermore, the Directives provided for the possibility for the Community to negotiate Mutual Recognition Agreements with third countries, and thereby extending the one stop approval and connection system beyond the physical boundaries of the EEA. This would give EU manufacturers the opportunity to reap the benefits of economies of scale and compete on an *equal basis* in the world markets.

The principal objective of the progress report is to give a first assessment of the regime established by the two Directives on the basis of the experience gained during the first year of implementation. This includes the progress made on drawing up the relevant harmonised standards and transforming these into technical regulations as well as the problems encountered by the relevant authorities within the Member States during the course of implementation of the Directives.

1.1 Outline of the Report Structure

The report is produced in accordance with Article 15 of Council Directive 91/263/EEC and Article 17.1 of Directive 93/97/EEC. The report is structured as follows:

Chapter 2: outlines the principles and the conformity assessment procedures applied and includes the progress achieved.

Chapter 3: analyses the functioning of the Directive and puts forward an assessment of the problems encountered.

Chapter 4: makes a number of proposals regarding the scope of the Directives, possible relaxation of procedures and a call for preparation of a Radio Equipment Directive.

Chapter 5: contains the conclusions and four recommendations.

ANNEX 1. Process for the adoption of CTRs
ANNEX 2. Numbers of People with Special Needs in Europe
ANNEX 3. List of Notified Bodies
ANNEX 4 Official Journal references to Adopted CTRs

2. THE MECHANISM OF THE DIRECTIVES 91/263/EEC AND 93/97/EEC

The technical divergence between the various telecom networks in the EU meant that the simple mutual recognition of the national type approval of terminal equipment was not possible. The "free circulation of terminal equipment" could only be achieved by a common type approval regime based on harmonised standards and/or specifications. To this end, the Directive 91/263/EEC was issued.

The Directive follows the model of the New Approach[1] Directives. It lays down a list of essential requirements and it entrusts to standardisation bodies the task of drawing up the technical specifications under mandates issued by the Commission. These technical specifications which are elaborated, usually by ETSI (European Telecommunications Standards Institute), are in the form of Technical Basis for Regulations (TBRs). Alternatively, European Telecommunications Standards (ETS), mandated to become harmonised standards under Directives 91/263/EEC and 93/97/EEC can be used to specify the essential requirements. At the same time, it requires national authorities to recognise that products manufactured in conformity with harmonised standards are presumed to comply with the "essential requirements" established by the Directive. Further to a conformity assessment procedure, products which comply with the requirements of the Directive can carry the CE marking and circulate freely in the EU.

However the provisions of Directive 91/263/EEC diverge in some respects from the model of the New Approach. According to Article 6 of the Directive, harmonised standards which implement the essential requirements[2] (c), (d), (e),

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[1] The fundamental principles of this New Approach were set out in Council Resolution 85/C 136/01 of the 7th May 1985 (O.J Reference C 136 of 4th June 1985) and they can be summarised as follows:

- legislative harmonisation is limited to the adoption of the essential safety requirements (or other requirements in the general interest).
- the task of drawing up the technical specifications is entrusted to organisation competent in the standardisation area.
- at the same time national authorities are obliged to recognise that products manufactured in conformity with harmonised standards are presumed to comply with the "essential requirements" established by the Directive.

[2] Article 4 of Directive 91/263 states that "Terminal equipment shall satisfy the following essential requirements:

a) user safety, in so far as this requirement is not covered by Directive 73/23/EEC;

b) safety of employees of public telecommunications network operators, in so far as this requirement is not covered by Directive 73/23/EEC;

c) electromagnetic compatibility requirements in so far as they are specific to terminal equipment;

d) protection of the public telecommunications network from harm;

(f), and (g) shall be transformed into Common Technical Regulations (CTRs), compliance with which shall be mandatory. This divergence is due to the fact that it is not in general possible to comply with the interworking requirements for access and/or for end-to-end communications other than by the application of unique technical solutions.

2.1. The adoption of CTRs

In order for a CTR to be adopted the Commission submits a scope statement for the development of a CTR for an identified type of terminal equipment to the Approvals Committee for Terminal Equipment (ACTE). This scope statement will have been elaborated with additional consultation with the Telecommunications Regulations Application Committee (TRAC). The opinion of ACTE regarding this draft scope statement is asked for according to the rules described in Article 148 (2) of the Treaty.

The Commission, formally, issues a mandate to the recognised standardisation bodies ETSI/CEN/CENELEC and in most cases it will be ETSI which is entrusted to develop the corresponding harmonised standard, the so called Technical Basis for Regulation (TBR). In practice, mandates may be given before the consultation process on the scope statement has been completed, in order to speed-up the process. When complete, the TBR is delivered to the Commission. TRAC will advice the Commission on the technical suitability of the TBR. The Commission then prepares a draft measure for a CTR comprising of regulatory aspects and the TBR. In this process additional consultations are made. The opinion of ACTE is then sought. If the opinion of ACTE is favourable, the Commission renders the TBR mandatory by transforming it into the CTR to be published in the Official Journal (OJ). The CTR then becomes EU law. If the opinion of ACTE is not favourable, or if no opinion is delivered, the

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e) effective use of the radio frequency spectrum, where appropriate;

f) interworking of terminal equipment with the public telecommunications network equipment for the purpose of establishing, modifying, charging for, holding and clearing real or virtual connection;

g) interworking of terminal equipment via the public telecommunication network, in justified cases.

The cases where terminal equipment supports:

(i) reserved service according to Community law;

(ii) a service which the Council has decided that there should be Community-wide availability,

are considered as justified cases and the requirements concerned are determined in accordance with the procedure provided for in Article 14 (reference to ACTE).

In addition, after consultation of representatives of the bodies referred to in Article 13 (3) and taking due account of these consultations, the Commission may propose that this essential requirement is recognized as being justified for other terminal equipment in accordance with the procedure provided for in Article 14.

Commission shall submit to the Council a proposal relating to the measure to be taken[3].

On no occasion, since the establishment of the committee, has it been necessary to refer a decision to the Council [4].

The overall process including consultations is described in more detail in Annex 1.

2.2 Progress Made to Date

Adopted CTRs

This section describes the status of all CTRs that have been adopted by the Commission on the advice of ACTE. The current status of all CTRs and proposed CTRs is summarised in Table 1.

Pan-European Cellular Digital Mobile Communications

The TBRs for GSM Phase 1 [5]Access and Telephony Application Requirements were adopted by the Commission on the advice given by ACTE in September 1993. These were published in the Official Journal[6] and came into force on 1 January 1994. This ended the interim type approval regime and type approval against CTRs 5 and 9 can now be achieved at a number of Notified Bodies. The testing and subsequent approval allows GSM equipment to be placed on the market and put into service in any Member State or EFTA country.

Integrated Services Digital Network (ISDN) Access and Telephony - CTR 3, 4 & 8

As required in the telecommunications terminal equipment Directive (91/263/EEC), CTRs 3, 4 and 8 are currently being drafted to replace NETs 3, 5, and 33 respectively. NET 3, 5 and 33 were European standards for ISDN Basic

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3 Article 14.4 of Directive 91/263/EEC

4 Since the inaugural meeting in July 1991, in total 27 meetings have been held: September 1991, October 1991, December 1991, January 1992, February 1992, April 1992, May 1992, June 1992, September 1992, October 1992, November 1992, December 1992, January 1993, March 1993, April 1993, May 1993, June 1993, September 1993, October 1993, December 1993, February 1994, April 1994, May 1994, June 1994, September 1994, and November 1994.

5 Phase 1 GSM covers full type approval to the original specification whereas Phase 2 GSM covers new features such as 12.5kHz voice codecs and enhanced supplementary services.

6 Commission Decision 94/11/EEC, OJ No. L8, 12.1.94, p. 20 and Commission Decision 94/12/EEC, OJ No. L8, 12.1.94, p. 23.

Access, Primary Rate[7] Access and 3.1 kHz Telephony Requirements. These NETs have been published by ETSI in the form of ETSs and have been referred to in the Official Journal in accordance with the provisions laid down in the First Phase Terminal Equipment Directive (86/361/EEC).

It became clear to the Commission Services that the forecast dates for development of the CTR 3 and CTR 4 were slipping significantly. Despite additional funding to ETSI little improvements in dates was envisaged. The following approach was therefore adopted due to the urgent need to have EURO ISDN placed on the market and thereby ensuring that EURO ISDN would take off. The approach was to reassess NET3 and NET5, to reduce the requirements to the exact match with the essential requirements of Council Directive 91/263/EEC and to produce cross references to the test suites which had been recently developed. The objective of the cross reference lists is to establish a presumption of conformity with the appropriate essential requirements. The Commission was therefore capable of presenting draft measures to ACTE on EURO ISDN basic access and primary rate access. A favourable opinion was reached in April 1994. The two Commission Decisions, commonly referred to as the bridging measures, were published in the Official Journal in December 1994. It should be noted that France and Germany have additional requirements beyond the bridging measures. A simplified administrative procedure, including mutual recognition provisions has been agreed to accommodate such "delta" requirements.

A draft measure relating to ISDN telephony has been presented to ACTE and a favourable opinion was obtained in September 1994.

Digital European Cordless Telephony (DECT), CTRs 6, 10 & 11

The draft measures for DECT Access Requirements and DECT Telephony Application Requirements were presented to ACTE in December 1993. A positive opinion was given and these two CTRs were published in the Official Journal in July 1994.

The DECT Public Access Profile was ready for submission to ACTE in the final form of a draft measure in September 1994. The ACTE opinion was positive.

At the June ACTE meeting it was agreed to extend the scope of CTR 6 and 10 to include DECT repeaters.

Public Land-Based European Radio Message System (ERMES), CTR 7

The ERMES TBRs delivered by ETSI have been ready for some time. However from a regulatory point of view, the essential requirements to be tested were felt to go beyond what was required for a receive-only terminal type. Following consultation with the ACTE Head of Delegations, the Commission was capable

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7 ISDN Basic access provides two 64kb/s communication channels and one 16kb/s control channel. Primary rate access provides thirty 64kb/s communication channels and one 64kb/s control channel.

of proposing a draft measure covering ERMES which was adopted in August 1995.

ONP leased lines 2048 Kbit/s unstructured and 64 Kbit/s, CTRs 12 and 14

The draft measure for ONP leased liens 2048 Kbit/sec received a favourable opinion by ACTE in December 1993. The corresponding CTR, i.e. CTR 12 was published in July 1994. The draft measure for ONP leased lines 64 Kbit/sec received a favourable opinion from ACTE in April 1994 and was adopted in December 1994.

Proposed CTRs

In addition, twelve draft CTRs are under preparation. These draft CTRs for which scope statements ACTE has given a favourable opinion and mandates given to ETSI are as follows:

Pan-European Cellular Digital Mobile Communications

In order to expedite type approvals for GSM Phase 2 terminals, the Commission Services have already prepared draft Measures for CTRs 19 and 20 and have consulted ACTE thereon. As soon as the relevant harmonised standards, TBRs 19 and 20, are available the formal opinion will be requested from ACTE.

X.21 Network Access, CTR 1

The technical basis for regulation completed ETSI vote in July 1995. ACTE expressed a favourable opinion on the draft measure in September 1995. It has been agreed that only layer 1 should be included in the CTR. Layers 2 and 3 are considered to be harmonised standards.

X.25 Network Access, CTR 2

As in the case of X.21 above, it has been agreed that only layer 1 should be included in the CTR. Layers 2 and 3 are considered to be harmonised standards. The public enquiry phase has been passed. The draft Measure is therefore to be presented to ACTE during 1995.

EURO ISDN Basic Access and Primary Rate Access, CTR 3 & 4

As mentioned earlier, these CTRs will replace the current CTR 3 and CTR 4 (bridging measures). Expected date of coming into force is 1996 before the expiry of the bridging measures (November 1996). A scope statement has been agreed for Packet Mode Bearer Service access for both primary and basic rate.

ONP 2 Mbit/sec structured leased lines, CTR 13

The technical basis for regulation is currently in the Public Enquiry phase and the ETSI vote result is expected before the end of 1995. The draft measure will be very close to the text of already adopted ONP CTRs.

PSTN non-voice attachments, CTR 21

A CTR for non-voice PSTN Attachments is intended to regulate the essential requirements for non-speech analogue attachments to the public telecommunications network. This would include, in particular, modems. This is an important problem for the European telecommunications terminal industry. At present there are a number of national approval regimes in place to test modems and other non-voice PSTN attachments in each of the Member States individually. This is a lengthy and expensive process for manufacturers and distributors.

However modems from markets other than the European market are being connected to all analogue networks currently existing in the Member States. Many of these modems are US sourced. This has created a 'grey' market in these non-voice attachments which can be connected to the network without being approved for marketing or connection in the Member States.

A draft scope statement has been elaborated, on which ACTE has delivered a favourable opinion and a mandate has been given to ETSI. The standardisation work is in progress and the draft TBR should complete Public Enquiry by November 1995.

Terrestrial Flight Telephone Systems (TFTS)

A CTR on for TFTS would harmonise airborne terminal equipment capable of allowing passengers in commercial aircraft access to the public telecommunications networks. The European Radiocommunications Committee (ERC) has allocated the 1670-1675 MHz and 1800-1805 MHz bands for this service. Additional approval or certification procedures would probably be needed to supplement the proposed CTR to ensure compliance of the equipment with the general safety aspects of the aircraft. These would be under the jurisdiction of the Civil Aviation Authorities.

The scope statement for TFTS has been elaborated. A mandate has been placed with ETSI. Standardisation work is in progress and the draft TBR is expected to go for Public Enquiry by February 1996.

ONP Analogue Leased Lines 2 and 4 wires, CTRs 15 & 17

These two ONP leased line CTRs both have scope statements, mandates have been placed with ETSI, the vote result is expected in December 1995.

DECT Generic Access Profile, CTR 22

To further enhance the connectivity of DECT to different networks, the current Public Access Profile needs to be broadened. Therefore a scope statement has been elaborated defining the requirements for a Generic Access Profile. A mandate has been given to ETSI, standardisation work is in progress and the completion of the ETSI voting procedure is expected in March 1996.

Trans-European Trunked Radio (TETRA)

This is a technology for Private Mobile Radio (PMR) communications. It allows speech and data communication within a closed user group and could be used to connect to the public telecommunications network.

In particular it can form the basis of a trans-European network including international roaming agreements between the national public safety organisations. The police forces are, for example, considering basing their communications systems on the principles laid down in the relevant TETRA standards

Problems have also been encountered in the harmonisation of the frequency bands to be used in this system. This is because the bands most suitable for TETRA are currently reserved for military and police applications in the EU Member States. Discussions are being carried out with the relevant authorities to attempt to free these bands for civilian applications.

A scope statement has been agreed which asks ETSI to elaborate the requirements for emergency services use of TETRA, taking into account the issues identified above and without prejudice to the applicability of Directive 91/263/EEC for this class of equipment.

Digital Cellular System (DCS 1800)

The Digital Cellular System is essentially a modification to the GSM specification to support operation in the 1800 MHz band. The lower power used and the use of frequencies in the higher band imply small coverage but support higher traffic densities. ETSI has already developed standards for DCS 1800 systems and terminals. DCS 1800 systems are also commonly referred to as the Personal Communications Network (PCN).

Scope statements for DCS 1800 Access and DCS 1800 Telephony have been agreed. Problems have been encountered in the harmonisation of the frequency bands to be used by DCS 1800 due to the current usage of the allocated bands by non-public services. Two draft measures are currently under preparation which duly take this issue into account.

DECT/GSM Access

At the June ACTE meeting a scope statement was agreed for equipment that uses DECT frequencies and protocols for access to the GSM network.

Satellite Earth Stations

Scope statements were agreed at the June ACTE meeting for the following classes of satellite earth stations :-

L-Band low data rate land mobile satellite earth stations.

Ku-Band TVRO satellite earth stations.

Ku-Band VSAT satellite earth stations.

Ku-Band land mobile satellite earth stations.

Ku-Band satellite news gathering transportable earth stations.

PSTN Voice Access and Analogue Handset Telephony

The market for analogue PSTN terminal equipment is still the major portion of the total telecommunications terminal equipment sales. Despite the rapid introduction of newer technologies, this situation is likely to remain unchanged for several years. The domestic user market for analogue equipment continues to expand with the use of second and third fixed phones or with cordless technologies. The business market also continues to expand. In addition the life span of analogue equipment has reduced dramatically with the development of new features necessitating new models. All these factors imply a continuing requirement for analogue terminal approvals.

In addition to the immediate market needs, the liberalisation of voice telephony service and the liberalisation of telecommunications infrastructure are foreseen for 1998 onwards. The regulatory framework for the post 1998 environment is currently being developed, but it is already clear that the concept of Universal Service is crucially important and that the definition of Universal Service will include, as a minimum, a Universal Voice Telephony Service. At the same time as encouraging competition for services and for infrastructure, we must carefully safeguard the harmonisation objectives in the terminal equipment market.

Scope statements for PSTN Voice Access and Analogue Handset Telephony were given a favourable opinion at the September ACTE meeting. ETSI have not yet given estimates for the completion dates.

For the purpose of giving an overview of the CTRs adopted or under development, please refer to Table 1.

The relevant Official Journal references are given in Annex 4

TABLE 1: STATUS OF CTRs ADOPTED OR UNDER DEVELOPMENT

CTR Number	NET Equivalent (if applicable)	Area of Harmonisation	Adoption Date of CTR measures
CTR 1	NET 1	X.21 Network Access	expected 12/95
CTR 2	NET 2	X.25 Network Access	expected 08/96
CTR 3	NET 3	ISDN Basic Access (Bridging Measure)	adopted 20/12/94
CTR 4	NET 5	ISDN Primary Rate Access (Bridging Measure)	adopted 20/12/94
CTR 5	NET 10	GSM (Phase 1) Access Requirements	adopted 21/01/94
CTR 6	-	DECT Access Requirements	adopted 29/07/94
CTR 7	-	ERMES Receive Only Access	adopted 2/8/95
CTR 8	NET 33	Digital Telephony over ISDN	expected 11/95
CTR 9	-	GSM (Phase 1) Telephony Attachment Requirements	adopted 12/01/94
CTR 10	-	DECT Telephony Terminal Requirements	adopted 29/07/94
CTR 11	-	DECT Public Access Profile (PAP)	expected 11/95
CTR 12	-	ONP Leased Lines: 2048 Kbit/s Unstructured	adopted 29/07/94
CTR 13	-	ONP Leased Lines: 2048 Kbit/s Structured	expected 03/96
CTR 14	-	ONP Leased Lines: 64 Kbit/s	adopted 29/12/94
CTR 15	-	ONP Leased Lines: Ordinary and special quality voice - 2 wire	expected 04/96
CTR 17	-	ONP Leased Lines: Ordinary and special quality voice - 4 wire	expected 04/96
CTR 19	-	GSM (Phase 2) Access Requirements	expected 06/96
CTR 20	-	GSM (Phase 2) Telephony Attachment Requirements	expected 06/96
CTR 21	-	Analogue PSTN Non-Voice Access	expected 8/96
CTR 22	-	DECT Generic Access Profile	expected 07/96
CTR 23	-	TFTS	expected 03/97

CTR Number	NET Equivalent (if applicable)	Area of Harmonisation	Adoption Date of CTR measures
CTR 24	-	Leased lines D34U/D34S	expected 09/96
CTR 25	-	Leased lines D140U/S	expected 09/96
CTR 26	-	L-band low data rate mobile earth stations	expected 10/97
CTR 27	-	Ku-band earth stations	expected 10/97
CTR 28	-	Ku-band VSATs	expected 10/97
CTR 29	-	Ku-band TVROs	expected 10/97
CTR 30	-	Ku-band SNG	expected 10/97
CTR 35	-	TETRA "Emergency access"	expected 3/98
CTR 36	-	DECT/GSM Radio	expected 10/97

2.3 New Candidate CTRs

ACTE is considering the treatment of the following classes of terminal but is yet to take a position :

Personal Satellite Communications Network (PSCN)

A CTR for PSCN would cover terminal equipment capable of being connected to the public telecommunications network via low earth orbit satellites. This is considered to be a large market for future mobile telephony and falls within the scope of the Satellite Earth Station Equipment Directive and thus within the CTR regime.

ETSI have been given a mandate. This standardisation mandate (M/057) calls for harmonised standards to be adopted by end 1995.

Terminals for People with Special Needs

There is a growing awareness, recognised by regulators, that elderly and disabled people have the right to expect the same standard of service and access as every other member of the public. The numbers of people involved is indicated in Annex 2.

The Commission has consequently tabled a number of contributions at the most recent ACTE meetings and it has been decided to make an in-depth analysis on the needs of this group and the extent to which these needs can be met within current legislative framework on type approvals.

It is remains to be seen whether a scope statement for a CTR will be possible.

DECT

Consideration is being given to the need for scope statements on DECT/GSM Dual Mode and DECT/ISDN profile CTRs.

2.4 Market Coverage

For The following high value segments of the terminal equipment market no single market exists yet:

- Simple telephones

- Key Systems

- PABXs

- Private Networks (apart from leased lines)

2.5 Conformity Assessment Procedures

According to Article 3 of the Directive 91/263/EEC, terminal equipment can only be placed on the market and put into service if it complies with the requirements laid down in the Directive. The verification of equipment's conformity to these requirements is tested during the Conformity Assessment Procedures.

The Conformity Assessment Procedures are used to test equipment's conformity to the essential requirements of the Directive. The onus is placed on the manufacturer to gain certification and approval prior to the affixing of the CE marking and the subsequent placing of the product on the market.

Under the 91/263/EEC Directive, a manufacturer can choose between a number of Conformity Assessment Procedures any of which is sufficient to result in approval of the equipment for European market entry, and to allow the manufacturer to affix the CE marking:

- the full quality assurance procedure (module H), where the manufacturer who operates an approved quality system, subject to surveillance by a notified body, is enabled to certify that the products concerned satisfy the requirements of the Directive that apply to them.

- the type examination procedure (module B), where the manufacturer requests a Notified Body to ascertain that a specimen meets the provision of the Directive that apply to it and issue the relevant EC type-examination certificate. Subsequent to this certificate, the manufacturer has two options:

  i. to issue a Declaration of Conformity to Type (module C), subject to
  - control by a notified body using random product checks, or

  ii. to implement a production quality assurance programme (module D) subject to surveillance by a notified body and ensure in a written declaration of conformity to type that the products concerned are in conformity with the type as described in the EC type-examination.

Once the procedures described above are completed, the notified bodies shall issue an administrative approval for the connection of the concerned terminal equipment to the public telecommunications network. Under the Council Decision 93/465/EEC, the CE marking must be affixed during the production control phase. This can only take place after the administrative approval has been issued. It follows that the administrative approval must be issued from the notified body chosen for the production control phase. It is this notified body, responsible for issuing the administrative approval and the last body to intervene in the process, whose identification number is used for the CE marking.

The complexity of the mechanism of the conformity assessment procedures has been criticised as non proportional to the objective aimed at. While these procedures were appropriate when they were formulated, the change in circumstances since then could mean that review is now required.

2.6 Specifics for the Satellite Earth Station Directive, 93/97/EEC

The satellite earth station Directive extends the Terminal Equipment Directive to include Satellite Earth Stations. The purpose of this Directive is to lay down a mechanism which will permit the effective use of orbital resources in conjunction with the radio frequency spectrum and avoidance of harmful interference between space-based and terrestrial communications systems and other systems. Therefore this Directive focuses on the space interface of the satellite earth station equipment.

The satellite earth station Directive lays down the type approval procedures for equipment which is capable of being used either for transmission only, or for transmission and reception, or for reception only of radio-communication signals by means of satellites or other space-based systems. These type approval procedures aim at safeguarding the following main objectives:

- the public telecommunications network
- the effective use of the frequency spectrum
- the effective use of orbital resources and the avoidance of harmful interference between space-based and terrestrial communications systems and other systems.

In view of these main objectives the Directive makes the following distinctions with respect to the conformity assessment procedures to which satellite earth station equipment are subject to:

i. *Transmit or transmit-receive satellite earth station equipment:* this equipment may affect the use of the frequency spectrum and the orbital resources and therefore should always be type approved according to the conformity assessment procedures, laid down by the Directive 91/263/EEC, regardless of its intended use.
However, if the equipment is not intended to be connected to the public telecommunications network, the conformity assessment procedure need not be applied to its terrestrial interface provided that the manufacturer or the supplier fills in the appropriate declaration of intended use, mentioned in Article 2 of the Directive 91/263/EEC and Article 11 of the Directive 93/97/EEC

ii. *Receive only satellite earth station equipment:* this equipment, although it also makes use of the frequency spectrum and orbital resources, does not have the capability to affect the use or provoke harmful interferences between space-based and terrestrial communications systems and other systems. Therefore the principle of proportionality imposes that with respect to the space interface of this equipment, it is upon the manufacturer to choose either the classical conformity assessment procedures or the Community internal production control procedures set out in the Annex of the Directive 93/97/EEC, the latest being a simple self declaration.
Nevertheless, the interface to the terrestrial network of the receive only equipment is subject to the same rules as terminal equipment and it therefore has to be duly type approved whenever it is intended to be connected to the

public network or accompanied by the manufacturer's declaration whenever it is capable to be connected but not intended for such a purpose.

2.7 Mutual Recognition Arrangements (MRAs)

The seventh recital of the Directive 91/263/EEC states:

> *"....real, comparable access to third country markets for European manufacturers should preferably be achieved through multilateral negotiations within GATT, although bilateral talks between the Community and third countries may also contribute to this process...."*[8]

This statement gives the foundation for third country negotiations both within the scope of GATT and on an individual country by country basis. In the course of such negotiations the Commission must ensure that the opening up of the Community market in terminal equipment is not unilateral or without full reciprocity.

The Council adopted a negotiating mandate for the mutual recognition of conformity assessment procedures between the EU and certain third countries on 21 September 1992.

The MRAs are expected to include fields such as pharmaceuticals, medical devices, chemicals and telecommunications. The main areas of interest in the telecommunications sector prior to and during negotiations includes the following:

- agreement on sectors for inclusion in the MRA and precise definition of these sectors;
- legal framework regarding market access for third country manufacturers, including any tariff, origin or technical barriers;
- conformity assessment procedures including mechanisms, bodies and standards within the negotiating countries and the criteria used for evaluation of test files from third country testing agencies;
- the essential requirements governing equipment eligible for conformity assessment; and
- the bodies responsible for the formulation of standards for conformity assessment.

In addition there are several horizontal issues that must be addressed in an MRA. These include intellectual property rights, product liability laws (as applied to the manufacturer, the certification body, the accreditation authority, the importer, and the distributor) and origin rules.

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[8] Council Directive 91/263/EEC, OJ No L 128, 23.5.1991, p. 2.

The Commission began negotiations with the US., Canada, Australia and New Zealand in 1994, these being the priority countries for the conclusion of Mutual Recognition Agreements with the European Union. For each of these countries, telecommunications terminal equipment is regarded as a a priority sector.

In the case of Australia and New Zealand, encouraging progress has been made in drafting the telecommunications part of the agreement. Both of these countries are willing to base an agreement on full mutual recognition including the function of certification.

Progress has been slower with USA and Canada because both countries would prefer to use an approach which first would conclude an agreement on mutual recognition of test results. The European approach is to pursue an agreement based on full mutual recognition of testing and certification.

In addition to continuing discussions with the first four priority countries, negotiations will begin in 1995 with Japan and Switzerland.

A difficulty which needs to be overcome is that a substantial proportion of the European telecommunications terminals market is not yet harmonised. Particular examples are PSTN voice terminals and certain classes of radio equipment. These areas continue to be subject to national regulation. In many of the national legal systems it is not currently possible to transfer national rights to a third country to work as a notified body.

2.8 Relations with EFTA Countries

The European Union enjoys close co-operation with the EFTA countries in telecommunications. As a result it is the Commission's policy to extend the 'one stop approval' market to include the EFTA nations, within the framework of the European Economic Area (EEA). EFTA Member State delegations currently attend the ACTE meetings, but they have only observer status and are therefore not entitled to express their opinion on draft measures. The EFTA Secretariat and the EFTA Surveillance Authority are also represented with observer delegations. This participation by EFTA is in accordance with the procedure adopted by the Commission on 1 June 1994[9].

The EFTA countries and the EU Member States have, through the Agreement establishing the European Economic Area (EEA), extended the principle of the four freedoms (free movement of goods, persons, services and capital) of the single market to cover all 17 countries. The EEA Agreement entered into force on 1 January 1994. The EEA, which is based on EC legislation existing on that date, provides for the legislative framework in terms of trade market access and competition rules throughout the region. The EFTA countries have accepted the Community acquis in the field of technical harmonisation and the principle of a single mutually recognised testing and certification regime and a single CE marking regime within the EEA. The general principles on the free movement of goods as expressed in Articles 30 and 36 (Articles 11 and 13 of the EEA

9 Procedure d'information et de consultation pendant la période de pre-adhesion, SEC (94) 909 et /2.

Agreement) and the relevant rulings of the EC Court of Justice are also applicable in the EFTA countries (Article 6 of the EEA Agreement).

Switzerland, although a member of EFTA, has not joined the EEA but will nevertheless implement the technical part of the CTRs. The operation of this unique arrangement has not yet been finalised. Liechtenstein has formally ratified the EEA Agreement in May 1995 following modification of their customs union with Switzerland .

The EFTA countries have taken the necessary institutional measures to ensure the good functioning of the EEA by setting up the Standing Committee of the EFTA State, the EFTA Surveillance Authority and the EFTA Court. Joint EFTA-EU institutions have also been created such as the EEA Joint Committee, which is responsible for taking decisions regarding the development of the EEA to new EU legislation and its homogeneous application throughout the EEA.

The modus operandi of the CTR regime within the EEA has not yet been finalised. Under the EEA, any new EU legislation must be ratified by the EU/EFTA Joint Committee. Following this ratification, each of the EFTA-EEA Member States transposes this new legislation into national law. In the EU Member States, power can be transferred from the Member States and the Council of Ministers to a Committee (in the case of the CTR regime, this is ACTE) in order to be adopted.

This difference in procedure, brought about because CTRs are considered as new legislation and not as acquis communitaire to the 91/263 or the 93/97 Directives, could result in the EFTA-EEA Member States erecting barriers to trade by delaying the adoption of the CTR into their national law, while having full access to the markets in other EEA Member States.

Following the accession to the European Union of Austria, Finland and Sweden, the relationship between the EU and EFTA under the EEA framework will have to adapt to the new situation.

3. PROBLEMS ENCOUNTERED DURING THE IMPLEMENTATION OF THE DIRECTIVE

The following sections examine a number of issues that have arisen during the application of the Directive.

3.1 Experience on the Scope of Directive 91/263/EEC

The following issues relating to the scope of the Directive have been identified.

Equipment not intended to be connected to the network: Can a grey market develop?.

The Directive 91/263/EEC concerns telecommunications equipment capable of being connected to the public telecommunication network in order to send, process or receive information. A critical principle of the Directive is that all equipment with the physical characteristics of telecommunications equipment must have affixed a marking which will indicate whether or not it can be connected to a public network. The marking thus, serves two purposes: it enables a surveillance authority to easily identify the approval status of the equipment while at the same time informing the user of the intended purpose of the equipment.

The Directive distinguishes between equipment intended to be connected to the public telecommunications network and equipment not intended for such a purpose and provides that it is only the first one which should be type approved.

In 1991, when the Directive was adopted, it was quite clear that the main prerequisites of the type approval procedures were the protection of the public network and the interoperability of the terminal equipment with the public network or via the public network. Accordingly, to the extent that these objectives were met, there was no need for further regulation. Consequently, equipment having the physical characteristics of terminal equipment but not intended to be connected to the public network did not need any further regulation.

Given the construction of the present Directive this approach undoubtedly has a solid logical basis. The Directive imposes mandatory CTRs to terminal equipment intended to be connected to the public network. The extension of these mandatory standards to all equipment with the physical characteristics of terminal equipment, disregarding its use, could not be justified by the aims of the Directive.

It has however been argued that the distinction between equipment intended to be connected to the network and equipment not intended to be connected may permit the creation of a "grey" market. Manufacturers could declare that their product is not intended to be connected to the public network and thus avoid the cumbersome procedures of type approval. In this way providers would be able to place their equipment in the market at a considerably lower cost than if the equipment was type approved. If the user connected this unapproved equipment to the network, he would assume all risks and responsibilities thereof. The possible solutions are the following:

i. Amend the Directive in such way that all equipment capable for being connected directly or indirectly to the network will have to be type approved:

This solution would prevent the creation of a "grey" market but at the same time it would not be in line with the principle of proportionality. The theory of New Approach Directives is that legislative harmonisation should be limited to the adoption of those essential requirements with which products put on the market must conform[10]. The essential requirements which one should safeguard in the area of terminal equipment are the safety of the network and interoperability (safety of user and of employees are adequately regulated by Directive 73/23/EEC, EMC by Directive 89/336/EEC). However if a terminal is not connected to the public network, none of these essential requirements are in issue any more and therefore there is no justification for a type approval procedure.

ii. Provide for national measures which will deter the fraud in an efficient way.

The Directive requires Member States to lay down efficient mechanisms for this purpose. This could be achieved by drawing the attention of the users to their responsibilities in case of misuse of the terminal equipment. Manufacturers, in particular, have expressed the view that there must be a balance between regulation and surveillance in order to deter grey importers while not overly penalising legitimate manufacturers. This implies some harmonisation of surveillance between Member States.

The user should be adequately informed about the significance of the markings as well as the possible penalties and other consequences in case of a misuse of the equipment.

iii. Simplify the requirements to reduce costs of approval and minimise time to market.

This would reduce the relative advantage that the grey market has compared to manufacturers who follow the correct regulatory route. It should also reduce the cost of products and improve the responsiveness to the market place.

The risk is that problems may arise with compatibility between the terminal equipment and the networks to which they are connected.

Equipment indirectly connected to the public network: do personal computers and other IT equipment fall within the scope of this definition?

As mentioned above, the Directive only regulates the placing on the market and connection to the network of equipment intended to be connected to the public network. This can only be equipment directly connected to the termination of the public network or equipment which interworks with a public telecom network

[10] Council Resolution of 7 May 1985 on a new approach to technical harmonisation and standards (85/C136/01).

being connected directly or indirectly to the network in order to send, process or receive information.

It follows from this definition that only equipment capable of interworking with the network can fall within the scope of the Directive. The term interworking contains a clear element of interaction with the network which limits the scope of the Directive only to equipment which has this capability.

Therefore in the case of IT equipment, it is the network interface circuitry , integrated or not in the IT equipment, which ensures the interworking of the IT with the network and which therefore has to be type approved together with the software drivers responsible for initiating, terminating or modifying the call.

An in-depth analysis of the objectives of the Directive will lead to the same conclusion. The Directive mainly aims at ensuring the protection of the network and the interoperability of the terminal with the network or via the network. It would not therefore be reasonable to impose type approval procedures on IT equipment on the basis of this Directive as far as this equipment functions independently from the network.

There is considerable variation across Member States on the approach on indirectly connected terminals. These approaches vary from having no requirements for such equipment beyond that required for directly connected equipment to having a range of requirements for the indirectly connected terminals themselves as well as the switching equipment such as PABX or key systems. These requirements include such aspects as the protection of privacy and the provision of facilities for users with special needs e.g. Visually Handicapped Operators Consoles. There is an urgent need to resolve this issues since private switching equipment represents one of the largest markets for telecommunications terminal equipment in Europe.

There is considerable support for the view that Article 2, referring to equipment which is capable but not intended for connection to the public network is confusing and of little practical benefit. It would also remove the requirement for negative marking which is not found to be helpful by many parties (see Para 3.3). Classes of equipment which could fall under this article are modems used only for private network links but it is difficult for a manufacturer to confirm the "intention of a user of such a portable item. Another example is radio equipment not intended for connection but the considerations in Para 3.2 below should cover concerns in this area.

3.2 The coverage of radio equipment

There is ambiguity on which radio equipment is covered by the Directive 91/263.

The ambiguity relates to whether or not the radio frequency spectrum is part of the "public telecommunications network" due to the fact that it is a limited natural resource accessible to all, including the fixed public telecommunications network. If the spectrum is regarded as part of the public network, any terminal equipment which makes use of a system of communication employing the radio frequency spectrum would be presumed to be intended for connection to the public telecommunications network.

On the other hand, if the spectrum is not regarded as part of the network infrastructure, only radio terminal equipment which is intended to interwork with the fixed telecommunications network would be covered by the Directive.

The Commission believes that the intention of the Council was to include the radio frequency spectrum which is allocated to public telecommunications within the definition of public network infrastructure and that terminal equipment capable of making use of this spectrum would fall under the TTE Directive. This intention would be made unambiguous by introducing the following alternative text in Article 1.3 of the Directive : "However, equipment which is capable of connection to the public telecommunications network and which uses the radio frequency spectrum for connection and/or communication is equipment for which the procedures of article 2 may not be applied."

3.3 Marking Regime

A series of Directives, designed to remove technical barriers to trade, provided for the affixing of the CE marking. Each one of these Directives sets forth its own rules for the use and the design of the CE marking. In the interest of simplifying Community legislation and making it more consistent, the Council adopted Directive 93/68/EEC which aims to replace the various provisions of all these Directives with uniform prescriptions. However, the Directive remains optional until 1st January 1997 so that manufacturers will be able to adjust gradually to the new situations and to sell their stocks of products manufactured in line with the rules that were previously in force, bearing the non-harmonised markings.

When the manufacturer follows the harmonised regime and affixes the EC marking on the terminal equipment as described in Directive 93/68/EEC, this marking indicates that the equipment is also presumed to conform to the provisions of all other Directives that may be applicable to it. With respect to terminal equipment, the Directives that may be applicable are the 91/263/EEC TTE Directive, the 73/23/EEC Low Voltage Directive and the 89/336/EEC Electromagnetic Compatibility Directive.

The aspect of dual marking appears in some cases where the manufacturer may have an interest in placing on the market terminal equipment which complies at the same time with national requirements and to a CTR. This could be the case, for instance, with EURO ISDN terminal equipment which also is designed to conform to additional national sets of requirements. In this case, two different markings need to be affixed to the equipment. This is acceptable if the documentation accompanying the equipment explicitly indicates the meaning of each of the markings affixed.

The practical application of the marking regime has necessitated many discussions with industry representatives. This, in turn, has led to clarifications being given concerning the marking of the equipment for which neither CTRs nor harmonised standards exist; for indirectly connected equipment and for equipment consisting of sub assemblies need only have marks placed on the telecommunications related elements. For example, communications software

which can be loaded into a personal computer can only convey marking information in the literature supplied with the product.

Industry and some regulators have expressed concerns regarding the effectiveness of negative marking according to Annex VII of Directive 91/263, as a mechanism to control the grey market and they have proposed that negative marking should be abandoned. It should be noted, however, that the intention of the negative marking was more to open up markets for off-network equipment rather than to specifically control the grey market.

3.4 The slowness of the standardisation process

The implementation of Directive 91/263/EEC and its amending Directives has been hampered, among other things, by the delays in standardisation of the technical areas within ETSI where deliverables have often been over a year late. This has resulted in late availability of TBRs to be adopted as CTRs and therefore of harmonised technical regulations governing particular equipment types. Some of the problems encountered have stemmed from inaccurate forecasting of the work involved at the outset, with subsequent pressure to maintain the optimistic deadlines.

The choice of approval procedure to be followed within ETSI needs to be clearly agreed at an early stage. The normal practice is to avoid the use of accelerated procedures for regulatory documents. In principle, the accelerated procedures exist to speed up the approval of 'non-contentious' issues. However because of the need to generate and adopt the TBRs quickly, the accelerated procedures have been used in an attempt to speed up the elaboration of TBRs which may contain contentious issues. This can result in failed votes which require reference back and consequently result in no saving of time.

The lack of TBRs and CTRs for particular equipment types has meant that, in practice, some of these areas have been governed by the NET regime. This has caused confusion for manufacturers and suppliers, particularly those new to the European market, in that under the NET regime, approval must be applied for in each of the Member States, but under the CTR regime, now governing equipment types for which CTRs exist, approval need only be granted in one Member State for the product to be placed on the market throughout the EU.

The delays during the production of European Telecommunications Standards have been particularly noticeable in the ISDN and DECT cases.

The delays to the DECT standards were partly caused by the lack of personnel within ETSI and the manufacturers to develop these standards because a greater emphasis was placed on the development of standards for GSM. This point is specifically mentioned in the recent Green Paper on Mobile Communications:

> *"DECT has [...] faced a number of issues during development [including] competition from investment in the development of GSM, resulting in a shortage of manpower for the development of the*

standard [and] as with GSM, there have been delays in getting CTRs approved in good time."[11]

The delays in development of the TBRs within ETSI stem partly from the way in which ETSI itself operates. It has to be noted that the right level of resources is not always put at the disposal of the recognised standardisation organisations, in particular in the case of ETSI, by the ETSI members themselves. It is essential to have the timely availability of experts whereby work on the identified technical basis for regulations can be effected speedily and within the time schedule envisaged. It may be that the non-availability of experts is due to the relative priority of the class of terminals being addressed with respect to market needs. Where this is the cause, this should be made clear.

In addition, experience has shown that when ETSI needs help on interpretation of the essential requirements laid down by both Directives, this guidance is not communicated in an effective way to ETSI. The current procedures of requesting help and receiving a response via a chain involving the ETSI TBR manager, an ETSI rapporteur, a TRAC correspondent and thence reporting back to the Commission Services have great scope for improvement. A direct route of communication between the Commission services and ETSI TCs and STCs is available by the use of Commission Counsellors but a lack of resources on the part of the Commission Services has reduced the effectiveness of this mechanism.

Delays have also been introduced by the lack of clear guidance from the regulators. In some cases it has taken a number of ACTE meetings to resolve certain issues e.g. the X.25 layer issue, the ERMES CTR issue, the coverage of TETRA by 91/263, indirectly connected terminals.

Having regard to the timely development of TBRs experience has also shown that the ETSI TC/STC working practices, in particular regarding the consensus making process and the resolution procedures following a Public Enquiry, are too slow and cumbersome. It is believed that considerable time could be saved if, from the beginning of the TBR work, the working practices would take into account for agreement at the final voting stage.

The need for a review of the working procedures of European standards organisations in the development of harmonised standards is urgent as indicated by the recent Bangemann Group Report:

"The Group recommends a review of the European standardisation process in order to increase its speed and responsiveness to markets."[12]

This report highlights three levels at which action should be taken to rectify the present situation: operators, investors and public procurement offices should establish an MoU to set specification requirements which would provide input to

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[11] COM (94) 145, 27.04.1994, Towards a Personal Communications Environment: Green Paper on a Common Approach in the field of mobile and personal communications within the European Union, Annex A Section 2.2.

[12] "Europe and the global information society: Recommendations to the European Council", The Bangemann High-Level Group on the Information Society, 26 May 1994, p. 14.

the recognised standardisation bodies as a way of increasing market responsiveness; the European standards institutes should be encouraged to establish their work programmes on the basis of market priorities.

3.5 Experiences in the Elaboration of TBRs

There have been a number of problems encountered within ETSI during the course of elaboration of the CTRs requested by the Commission. These problems have slowed down the production of the TBRs or have stifled debate on technical issues. Frequently, the standards upon which the TBRs are based prove not to be fit for the purpose and result in much more work being required than was originally predicted. The resulting delays are not highlighted early enough and therefore not reflected in the workplan.

The Commission also believes that work on regulatory standards should concentrate on what is 'essential' in some technical areas. For example, no firm position has been reached concerning the inclusion of all three layers in TBR2 (X.25 Network Access) despite several attempts at reaching agreement. This has resulted in ETSI developing full three layer[13] documents when only Layer 1 could be required[14]. A similar problem occurred with the TBR 9 (GSM Phase 1 Telephony Attachment Requirements) and its 'bis', 'ter' and 'quad' extensions. Subsequently, the 'bis', 'ter' and 'quad' extensions have not been adopted as CTRs, but considered as voluntary standards. These types of problems result in significant delays due to the extra work involved.

There are problems in developing the TBRs as ETSI is frequently lacking a well defined interpretation of the applicability of the Directives. To take a recent example, it is still unclear how satellite networks will be regulated. The question arises as to whether or not the satellite network is part of the infrastructure as defined under 91/263/EEC and as to which side of the satellite is considered as the Network Termination Point for the purposes of developing a TBR. Clear and consistent guidance by the Commission must be given to ETSI in this area.

After a slow start, in some areas, ETSI has learnt that better structuring of the test parts is a key factor in speeding-up the production and improving the quality of the TBRs. As a consequence, the new TBRs 19 & 20 (GSM Phase 2) should provide a significant improvement to the testing regime for GSM.

The Commission believes that there should be more involvement of technical experts during the planning phases of TBR production, so that more realistic and accurate time scales and resource predictions are indicated from the beginning of the work.

A particular problem has been the delays resulting from the requirement to translate the TBRs into all Union languages. This problem has been made worse by the enlargement of the Union. The use of harmonised standards may alleviate this problem.

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[13] i.e. including only the three lowest layers of the ISO Open Systems Interconnect 7 Layer Model.

[14] ACTE has issued an informal opinion that only level 1 should be regulated.

There have been difficulties with the maintenance of CTRs following adoption. Formally amendments cannot be made without following a process which is equivalent to adopting a new CTR. A pragmatic solution has been adopted by the issuing of Advisory Notes which clarify the ISDN and GSM CTRs. However, there is no legal status for these notes. Consideration should be given to an efficient process whereby CTRs can be maintained in a controlled manner in the light of experience. A possible solution could be based upon the official corrigendum procedure.

3.6 Harmonised standards and CTRs

Directive 91/263/EEC has been based on the principles laid down by the Council resolution of 7 May 1985 on the New Approach to technical harmonisation and standards. According to these principles, the legislative harmonisation should be limited to the adoption of the essential requirements in the general interest. The elaboration of these essential requirements into harmonised standards is entrusted to the standardisation bodies. Compliance with these harmonised standards gives presumption of conformity to the relevant essential requirements.

The Directive 91/263/EEC diverges from the classical New Approach model by imposing mandatory standards CTRs for reasons explained the recitals of the Directive:

> *"whereas in respect of the essential requirements related to interworking with public telecommunications networks and in cases where it is justified, through such networks, it is generally not possible to comply with such requirements other than by the application of unique technical solutions; whereas such solutions shall therefore be mandatory."*

While this recital suggests that interworking of the equipment with the network can be achieved only through a unique technical solution, the qualification "in general" implies that exceptions of this general rule are possible.

This position is reinforced by Article 6 par. 2 of the Directive where it is provided that:

> *" the Commission shall ... adopt ... the measure identifying the type of terminal equipment for which a common technical regulation is required ..."*

It follows that terminal equipment is the subject of CTR only if this is considered necessary. It is for the Commission to identify in which cases the interworking of terminal equipment with the network can only be achieved through a unique technical solution and propose the corresponding CTRs to the ACTE committee. In all other cases, the principles of the New Approach apply in their entirety. Where delay in the production of a CTR is prejudicing the development of the European Type Approval regime the Commission can propose the use of harmonised standards.

Consequently it is the Commission Services position that :- In the absence of a CTR but in the presence of a relevant harmonised standard whose reference has been published in the EU Official Journal, compliance of terminal equipment to the essential requirements laid down in Article 4 of Directive 91/263/EEC will be presumed. Terminal equipment compliant with these essential requirements can be affixed the EC marking and circulate freely in the EU. The absence of the CTR may either be due to delay in its production or to the fact that a CTR is not required.

Notwithstanding the clear Commission Services position on this matter, certain Member States believe that, due to the nature of the transposition of the Directive into national law and their interpretation of European law. harmonised standards may not be used as described above. Furthermore, doubts have been expressed as to the practicality of using harmonised standards in a consistent manner. The Member States who have reservations of the use of harmonised standards believe it is most important to ensure that there is no ambiguity in any new legislation.

3.7 Competition amongst Designated Laboratories

Member States are in the process of notifying to the Commission not only the national notified bodies but also the designated laboratories. It would be useful for Member States to also notify organisations which are accredited to make audits for the approval of quality assurance systems according to Annex III and IV of Directive 91/263/EEC.

Regarding Notified Bodies, a list has been published in the Official Journal[15]. This list contains 18 entries covering 10 of the then Member States plus Austria, Finland, Norway and Sweden.

Laboratories may be designated either with respect to CTRs or TBRs once they have passed the adoption procedure.

Given that manufacturers also can choose Notified Bodies, competition has therefore started between both laboratories and Notified Bodies. It is most important that laboratories are truly independent, including lack of subsidy as part of a larger organisation and cross subsidy from other work. In order to give confidence to the market, the need for full independence and transparency is particularly important where an designated test house has in the past been within a network operator's overall organisation. The Commission will also ensure that in practice mutual recognition of approvals and results will operate fairly and with full reciprocity between all Member States.

3.8 Responsiveness of Processes Supporting the Directives

The speed of resolution of issues relating to the implementation of the directives has been criticised. This is, in part, due to the complexity of the subject and the many different interest groups both within and between Member States. An

15 OJ No. C203, 23.07.1994

example of this complexity is the process whereby the specification of what is truly an "essential" requirement as defined under article 4 of the Directive involves technical, regulatory, marketing, legal and testing considerations as well as a full understanding of the intentions of the Directives. All this has to be resolved in an environment where technology, markets and regulatory policy are all changing rapidly.

Issues such as the above example are resolved by the various bodies described in Annex 1 and co-ordinated by Commission Services having consulted ACTE. Since most of the bodies involved are representative for all the regulatory and economic players, the process can become cumbersome resulting in slowness and, in some cases, loss of focus.

Further delays can be introduced following the resolution of issues due to the nature and performance of the instruments used to implement decisions such as Commission Decisions. Often legal opinion is sought which can introduce further delays.

While many of the delays experienced in the resolution of problems may be inevitable, it is suggested that in any review of the current Directives the following issues should be considered:-

The task being tackled seems too complex and should be simplified.

The right balance between the extent of the requirements, the heaviness of the regulation and the extent of the surveillance should be established.

The processes should be improved, perhaps by applying techniques such as Business Process Re-engineering.

3.9 Assessment of Conformity

Concerns have been expressed on the difficulties experienced in ensuring consistency in the application of the procedures of the Directive between Member States. In order to ensure that there is a consistent interpretation of the Directive the European Organisation of Testing and Certification has been mandated to produce the "Handbook on Implementation of Conformity Assessment Procedures relating to Directive 91/263/EEC". This handbook has been prepared by the ADLNB members. In general the Handbook is seen as a useful clarification of the Directive. There was a general belief that the interpretation included in Annex 2 of the Handbook was too onerous. Consequently this part of the handbook has been redrafted to meet these concerns.

4. PERSPECTIVES FOR THE FUTURE

The regime has been criticised as extremely rigid and it has been argued that in practice the Directives have not always equally met the requirements of all parties i.e. residential customers, business customers, terminal manufacturers, network equipment manufacturers, new operators, established operators, regulators. Manufacturers have been arguing that the telecommunications industry has changed to such an extent that there is no longer a need for such a stringent type approval regime. This may be true. It has also been noted that large sectors of the market are not yet addressed e.g. analogue telephones and PABX. The experience gained by the implementation of the present Directive and the comments that the Commission has received from the various interested parties lead the Commission to the conclusion that the following points may require reconsideration:

4.1 Essential Requirements

According to one of the fundamental principles of the new approach, the legislative harmonisation shall be limited to the adoption of the essential safety requirements (or other requirements in the general interest).

One of the essential requirements laid down by Directive 91/263/EEC is the interoperability of the terminal with the network and in justified cases the interoperability of the terminals via the network. There is however a concern whether interoperability ought to be retained as an essential requirement in the present Directive.

On the one hand the TransEuropean Network provision of Articles 129 b), 129 c), and 129 i), calls for deriving the full benefits of TENs and by "promoting interconnection and interoperability of national networks as well as access to such networks". These objectives would be enhanced if they were complemented by a single European market for compatible terminals. The changes in the regulatory environment and markets for new network providers means that the old definition of the term "public network" is becoming more and more impractical for this purpose. Interconnection and inter-operability requirements may have an effect on any re-definition of the currently defined essential requirements.

In addition, due account should be taken of the Civil Protection Code. For example, the European Emergency number "112" can only be used if a 112 call can be made, if the Emergency Centre can be reached, if the type of distress/emergency situation can be communicated and repeated and if instructions can be received by the caller. Other references could be given to tracing or erroneous call, to interception, and to the public security exemption clause of Article 36 of the Treaty.

On the other hand, other Approval regimes such as the US appear to function well with a much more limited definition of what is "essential" and there is a general desire to reduce the complexity and cost of type approvals.

These issues along with others like the potential regulation of aspects such as the regulation of terminals for people with special needs suggest that a fundamental

review is required of the definition of what is truly "essential" and of the mechanisms that ensure compliance to those requirements, in particular, the CTRs and the use of harmonised standards. The Commission has started work on this review.

4.2 Conformity assessment procedures: The time for simplification.

The conformity assessment procedures of the Directive have been criticised as complex, lengthy and costly. Furthermore it can be argued that the complexity of these procedures may favour the development of the grey market.

These concerns could be addressed in two different ways:

Firstly, the principle of using the models of the Global Approach already referred to in the Directives should be maintained. However, each of the procedures could be revisited for the purpose of relaxing the requirements as contained in the current annexes. It would, in addition, be highly desirable to scrutinise the rationale for the test cases themselves. Furthermore, a number of identified test suites could be entrusted to a manufacturers declaration according to Module A. In this process the Notified Bodies would still maintain the principle of safe-guarding appearing in an a priori assessment. Such a three step relaxation is in fully line with the spirit of the Directives.

Secondly, a procedure totally relying on full confidence in a manufacturers declaration is theoretically possible.

This would imply that:

- self declaration of the manufacturer or the importer: according to Module A the EC declaration of conformity certifies that the product concerned complies with the relevant CTRs or harmonised standards. A notified body should subsequently issue the administrative approval on the basis of this self declaration. The notified body should keep a register with these self declarations, available to all other notified bodies or national authorities. Further to this procedure, the manufacturer will be able to affix the CE marking of conformity on the terminal and place it on the market.

- such an a posteriori philosophy would require intensive market surveillance and strict penalties should be provided for the manufacturer who has made a false declaration. Under most national laws, a false declaration to an authority may generate penal, administrative and civil responsibilities.

There is however very different and strong views regarding a priori versus a posteriori assessments. In particular regarding radio communications it seems rather impossible to rely on a posteriori assessments. It should therefore be considered to further investigate the first route outlined above.

It may well be necessary to improve the effectiveness of market surveillance carried out by the Member States in order to complement a possible simplification in conformity assessment procedures

4.3 Modifications of the scope of the Directive

The current scope of the Directive distinguished between terminal equipment intended to be connected to a public network versus equipment not intended to be connected to a public network. With the appearance of private telecommunications networks in particular in the business sector as described in a recent report presented to the ETSI Business Telecommunications Technical Committee (TC-BTC), due consideration needs to be taken of the existence of this large and quickly growing market with respect to the objectives of the directives.

4.4 The Rationale for a Radio Equipment Directive

As already discussed certain types of radio equipment does not fall within the scope of the Directive. However the free circulation of this equipment can be lawfully impeded by national authorities on the grounds of possible harmful interferences. The radio spectrum is a limited natural resource and accordingly the effective use of radio frequency spectrum is an essential requirement which can justify the adoption of harmonisation measures at a Community level.

Mobile telecommunications are currently the most flourishing sector in the whole telecommunication area. Private business gain every day efficiency by the introduction of radio closed user groups which permit the employees to move around while keeping permanently in touch with their offices. Consequently, manufacturers urgently need a harmonised and stable legal framework which will permit them to create strong economies of scale in this new strategic market.

There is a clear preference for there not to be a separate Radio Directive but to include any radio terminal specific requirements within a single terminals directive. To this end, the Commission envisages the amendment of the Directives which would lay down a harmonised type approval scheme for communications terminal equipment making use of telecommunications allocated spectrum. Care will be necessary in defining the borderline between spectrum management and EMC. It is presumed that spectrum allocation aspects will continue to fall outside the scope of any terminals directive.

4.5 Relations with ETSI

The harmonised standards drawn up in respect of the essential requirements applicable is entrusted to the recognised standardisation bodies ETSI/CEN/CENELEC. Up until now most CTRs were based in their entirety upon TBRs produced and agreed by ETSI although CENELEC has been involved in some aspects of EMC. The relation with ETSI is therefore of particular interest. As the Commission has the special status of Councillor at ETSI the co-operation in the administrative level is recognised by both parties as being efficient, professional and satisfactory. At the technical level, and for a number of reasons covered in previous sections, ETSI has not been capable of finalising a number of deliverables at the point in time originally forecast.

The Commission believes that ETSI TC/STC working practices can be made more effective within the current ETSI Rules of Procedure. This proposal forms the basis of Recommendation Number 3.

Furthermore, experience is proving that the maintenance of adopted TBRs needs to be addressed with high priority.

The Resolution recently adopted at the ETSI General Assembly upon a proposal from the High Level Task Force provides for an important restructuring within ETSI whereby the concerns above could be lifted.

4.6 Liberalisation of Infrastructure

As already indicated the current type approval legislation has been built upon the concept of public telecommunications network. The security of this network as well as its harmonious function with connected equipment were considered a public concern justifying regulation, for it represented a huge investment serving special national interest.

However, the definition given to this public infrastructure by the Directive clearly refers to the old telecommunications environment where the network was a state owned infrastructure. Although this has changed in some member states where the telecom infrastructure is liberalised or privatised, the definition has been accepted as still valid, the reasoning being that the term "public" does not refer to ownership but indicates the openness of the infrastructure to the public. Consequently, any telecommunication infrastructure which is open to all members of the public on the same basis (and on which ONP obligations are imposed) is considered as public telecommunications infrastructure deserving regulatory protection.

However in view of the imminent liberalisation of the infrastructure, these definitions will need revision. The liberalisation regime will give rise to the emergence of a multitude of network operators not necessarily of the same size or with the same functions and subsequent obligations. The current regulatory environment will require substantial modification to handle this situation.

The present definition of terminal equipment relies on the existence of harmonised public networks. If this notion disappears, it would be very difficult to make the distinction between a switch and a terminal since at the termination point of one network, may be the switching equipment of another network or service provider. The distinction between terminal equipment and infrastructure equipment is becoming increasingly difficult.

The interconnection of all infrastructures and the interoperability of services and applications will become an increasingly important issue, since as already stressed in the Bangemann report, these two features are essential to the deployment of the information infrastructure.

It is noteworthy that the ONP Directives, which under the present regime regulate the relation between the network operator and a service provider refer to a situation, where the network operator is a monopoly or holds a dominant position and therefore it is susceptible to impede competition by refusing access

to its network or by adopting technical specifications which do not permit interconnection of the networks or interoperability of services.

In this liberalised environment, where many more players will provide an ever-wider range of network services, the challenges presented to the establishment of a single harmonised telecommunications terminal market will be considerable . Harmonised standards will offer to all economic operators affected by telecommunications necessary safeguards that will enable them to benefit from the information society. However, under certain circumstances, conformity assessment can be equally well based upon compliance with the essential requirements in the absence of TBRs. Thus, the Notified Bodies nominated by the Member States should be encouraged to make use of this option where there is market demand and TBRs have not yet been developed.

The future situation will multiple and competing network providers is believed to lead to the offering of new innovative services and intelligent use of the subscriber interfaces. In order to preserve a multi-vendor Community-wide equipment market "lock-in" or "bundling" of services and equipment has to be avoided. A balance will therefore have to be stuck between regulation and competition. The implementation thereof may be best assured through the future license regime.

5. CONCLUSIONS AND RECOMMENDATIONS

Directive 91/263/EEC established an internal market in the terminal equipment sector.

Equipment duly type approved in one Member State can be freely commercialised and connected to the network in the rest of the Community.

The adoption of 11 CTRs by the Commission enabled the achievement of a considerable harmonisation in the sector and that a further batch of 12 CTRs is under way is noted with satisfaction.

In view of the recent developments in the sector, some aspects of the mechanisms of the Directive have been criticised as cumbersome and non proportionate to the objective aimed at.

The regime would correspond better to the actual needs of the markets if:

- essential requirements were reduced to the absolute minimum;
  - guidance regarding regulatory aspects were improved.
  - the consultation process were to become more effective.
- the production of harmonised standards was accelerated;
  - leading to timely availability of relevant standards.
  - conformity assessment procedures were relaxed;
  - true cost-based type approval was a reality.
  - accreditation criteria were fully harmonised.
- a regulatory framework for radio terminal equipment using telecommunications allocated spectrum established:
  - effective use of frequency spectrum became horizontal.
  - possibility to create strong economies of scales in this new strategic market was achieved.

The first recommendation is that, given the extent of the issues identified above, it is recommended that the two Directives are fundamentally reviewed and changed to adapt to the new dynamics of the market place and the future needs of the European Information Society.

The other three recommendations aim to provide for an immediate improvement regarding the points addressed above, pending the fundamental review.

RECOMMENDATIONS

The extent of the issues identified in this progress report and the changes to the environment since the Directives were originally drafted, suggests the following recommendation:

Recommendation N° 1:
It is recommended that the two Directives are fundamentally reviewed and amended as necessary in order to adapt to the new dynamics of the market place and the needs of the European Information Society over the next ten years. Full account should be taken of current and planned horizontal legislation as well as developments in the liberalisation of the infrastructure.

In the meantime, some of the more pressing issues can be addressed by the following shorter term actions.

The following recommendations try to maximise the synergy between the directly involved players for the purpose of shortening the backlog which unfortunately exists today. These recommendations aim to achieve improvements which would have immediate effect.

- In the area of standardisation experience has shown that the regulatory requirements, which have a one-to-one correlation with the essential requirements laid down by both directives, are not communicated in an effective way to the standardisation organisations, in particular to ETSI. The current procedures of entrusting the communication to a chain via the ETSI TBR manager, via an ETSI rapporteur, via a TRAC correspondent and then reporting back to ETSI Technical Assembly and to the Commission Services have a great scope for improvement. The considerable delay and scope for different interpretations would be reduced if a single management information point in the Commission was informed as soon as any relevant issue is identified. This observation leads to the following recommendation :

Recommendation N° 2:
For the purpose of improving the guidance to standardisation organisations, in particular to ETSI, in the area of regulatory constraints, objectives and requirements, the current communication chain shall be replaced by a focal management information point within the Commission Services.

The Commission Services would, of course, continue to take into account the interests of all parties, industry, regulators and operators.

- Having regard to the timely development of the Technical Basis for Regulations, experience has shown that the ETSI procedures, in particular regarding the consensus making process and the resolution procedures following a public enquiry, cause

unnecessary delays. It is believed that much time could be saved if, from the beginning of the TBR mandate assignment, every decision at all levels with ETSI were to be made taking due account of the final voting. The whole process should be reviewed, from drafting of scope statements to publication in National Regulations. These aspects are covered by the following recommendation :

Recommendation N° 3:
Having regard to the considerable delays imposed by the current working methods applied in the elaboration of CTRs, a review should be carried out of the processes and decision making at all levels in the development of the Common Technical Regulations should be carried out taking into account the need for agreement at the final voting stage and always limiting the scope strictly to the essential requirements applicable.

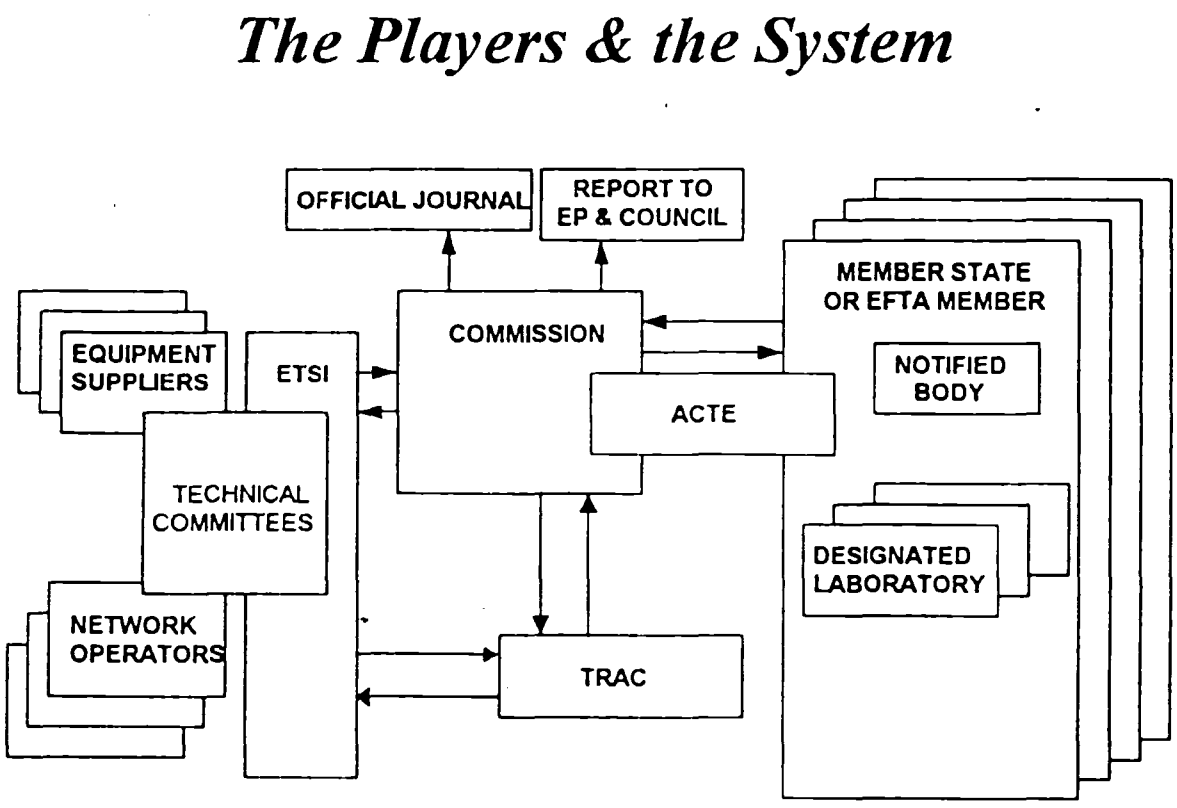
- Observing that considerable time elapses between the adoption of the draft measures by the ACTE Committee and the publication of the measures in the Official Journal, it is understood that this delay is partly caused by the practice of having the Commission translation services translate, into all Community languages, the technical specifications referred to in the Decisions. The overall process would be significantly speeded up if only the Decision itself were translated.

To improve this situation reference is given to recommendation N° 3, which has a direct parallel in the attached draft Council Resolution, (ref. draft Council Resolution, section "Invites the Commission", paragraph c):

Recommendation N° 4:
In order to accelerate the timely availability of Commission Decisions, the Commission Services should minimise the translation requirements to the Annexes of those decisions, while duly taking into account the legal obligations of the CTRs.

ANNEX 1 PROCESS FOR THE ADOPTION OF CTRS

The overall process including consultations is shown in the following diagram:



ACTE: The Approvals Committee for Terminal Equipment was set up under the Terminal Equipment Directive to advise the CEC in its drive towards harmonisation of technical standards for terminal equipment. ACTE is chaired by a representative of the Commission and comprises of delegations from each of the Member States. The Committee is of an advisory nature . The opinion of the Committee can be requested following two different approaches. Either an opinion of a general nature can be sought, if necessary by taking a vote. The opinion is recorded by simply reflecting the majority of a vote. Alternatively, in the particular case of identifying the type of terminals for which a CTR should be developed, and for the later opinion on the draft measures proposed by the representatives of the Commission, the opinion shall be delivered by the majority as laid down in Article 148 (2) of the Treaty. TRAC, ETSI and the EFTA countries are invited to send observer delegations to ACTE. These delegations participate in all parts of ACTE's work except the regulatory aspects. The Committee operates under the commitology rules that apply to all Commission chaired committees. These rules cover such aspects as voting procedures, representation, quora etc.

ETSI: The European Telecommunications Standards Institute has over 300 members from all fields of the telecommunications sector and is open for membership to

all countries within the CEPT geographical area (continental Europe). Among other activities, ETSI produces TBRs according to mandates provided by the CEC and based on one or more European Telecommunication Standards (ETSs). ETSI has the responsibility of maintaining the standards referred to in the CTRs.

TRAC: The Telecommunications Regulations Application Committee provides advice on request from the Commission to establish a technically consistent framework for CTRs and to assist with the elaboration of the scope statements for TBRs. The TRAC representatives generally are delegations from each of the Member States and from the EFTA and some other European countries representing regulators and operators. Other responsibilities of TRAC outside the scope of the CTR regime include advising ETSI on the work plan.

ADLNB: The Association of Designated Laboratories and Notified Bodies is open for membership to all Designated Laboratories (DLs) and Notified Bodies (NBs). The DLs are responsible for testing and the NBs for type approval of telecommunications equipment under the relevant national legislation. The ADLNB provides the forum for the DLs and NBs to exchange information freely and to discuss issues relating to the implementation of the Conformity Assessment Procedures (see Section 3.1).

MSs: The governments of the Member States are responsible for designating the Notified Bodies and Designated Laboratories, for the proper accreditations and for implementing the appropriate national legislation to ensure harmonisation of the Telecommunication Terminal Equipment market. They must ensure that national testing regimes as implemented by the NBs and DLs are limited to the essential requirements laid down in the CTRs. They are also responsible for market surveillance and ensuring that equipment is only placed on the market if it is appropriately marked.

In order to comply with the international obligations stipulated by GATT, the Commission undertakes that they will carry out the notifications for every CTR ahead of its publication in the Official Journal. Notifications are addressed to the GATT Committee on Technical Barriers to Trade. Notifications are done under the GATT-TBT-Code Article 2.5.2 as the CTRs constitute a technical regulation *"which may have a significant effect on trade of the other Parties"*. It should be noted that CTRs do not fall under the GATT-TBT-Article 4 on preparation, adoption and applications of standards.

ANNEX 2 NUMBERS OF PEOPLE WITH SPECIAL NEEDS IN EUROPE

In Europe there are about 100 million elderly people and 50 million who are disabled, according to "The forgotten Millions : Access to telecommunications for people with disabilities" (1994, Office for Official Publications of the European Communities, Luxembourg), where the following impairments are listed:

Mobility impaired	
Wheelchair user	2,800,000
Cannot walk without aid	45,000,000
Hearing impaired	
Profoundly deaf	1,100,000
Hard of Hearing	80,000,000
Visually impaired	
Blind	1,100,000
Low vision	11,500,000
Speech and language impaired	
Speech	2,300,000
Language	5,600,000
Dyslexia	25,000,000
Intellectually impaired	30,000,000
Dexterity impaired	
Cannot use fingers	1,100,000
Cannot use one arm	1,100,000
Reduced strength	22,500,000
Reduced co-ordination	11,500,000

All the above impairments impact on the use of telecommunications services - clearly, disabled people are a significant part of the telecommunications market.

ANNEX 3 LIST OF NOTIFIED BODIES

This list refers to the situation as reported up to 31 October 1995. Updated lists will be published from time to time in the Official Journal. The up to date situation with respect to both Notified Bodies and Designated Laboratories can be confirmed by reference to the appropriate Notified Body.

LIST OF NOTIFIED BODIES

Name and address	Identification number	Responsible for the following products	Responsible for the following procedures/modules	Annexes of the Directives
NATIONAL STANDARDS AUTHORITY OF IRELAND Nsai, Gasnevin IRL - Dublin 9	0050	All telecommunications terminal equipment	Type-examination Conformity to type Production quality assurance Full quality assurance	Annex I Annex II Annex III Annex IV
ISTITUTO ITALIANO DEL MARCHIO DI QUALITA - IMQ Slsfema CSQ V. Quintiliano 43 I - 20138 Milano	0051	All telecommunications terminal equipment	Production quality assurance Full quality assurance	Annex III Annex IV
DIRECTION GENERALE DES POSTES ET TELECOMMUNICATIONS 20 Avenue de Ségur F - 75700 Paris	0165	All telecommunications terminal equipment	Type-examination Conformity to type Production quality assurance Full quality assurance	Annex I Annex II Annex III Annex IV
ISPETTORATO GENERALE DELLE TELECOMUNICAZIONI IGT Viale America 201 I - 00144 Roma	0166	All telecommunications terminal equipment	Type-examination Conformity to type	Annex I Annex II
HOOFDDIRECTIE TELECOMMUNICATIE EN POST - DIRECTIE OPERATIONELE ZAKEN Postbus 450 NL - 9700 Al Groningen	0167	All telecommunications terminal equipment and satellite earth station equipment	Type-examination Conformity to type	Annex I Annex II

Name and address	Identification number	Responsible for the following products	Responsible for the following procedures/modules	Annexes of the Directives
BRITISH APPROVALS BOARD FOR TELECOMMUNICATIONS BABT Claremont House, 34 Molesey Road, Hersham, Walton-on-Thames Surrey UK - KT12 4RQ	0168	All telecommunications terminal equipment	Type-examination Conformity to type Production quality assurance Full quality assurance	Annex I Annex II Annex III Annex IV
TELESTYRELSEN Holsteinsgade 63 DK - 2100 Kobenhavn	0170	All telecommunications terminal equipment	Type-examination Conformity to type	Annex I Annex II
BUNDESAMT FÜR ZULASSUNGEN IN DER TELEKOMMUNIKATION BZT Postfach 10 04 43 D - 66004 Saarbrücken	0188	All telecommunications terminal equipment	Type-examination Conformity to type Production quality assurance Full quality assurance	Annex I Annex II Annex III Annex IV
DELTA DANSK ELEKTRONIK, LYS & AKUSTIK Venlighedsvej 4 DK - 2970 Horsholm	0199	All telecommunications terminal equipment	Production quality assurance Full quality assurance	Annex III Annex IV
DIRECCION GENERAL DE TELECOMUNICACIONES Plaza de la Cibeles S/N Palacio de Comunicaciones E - 28014 Madrid	0341	All telecommunications terminal equipment and satellite earth station equipment	Type-examination Conformity to type Production quality assurance Full quality assurance	Annex I Annex II Annex III Annex IV
KEMA NV Kwaliteitssystemen Postbus 9035 Ultrechseweg 310 NL - 6800 Et Arnhem	0344	All telecommunications terminal equipment and satellite earth station equipment	Production quality assurance Full quality assurance	Annex III Annex IV
SWEDISH NATIONAL TESTING AND RESEARCH INSTITUTE SP Box 857 S - 501 15 Boras	0402	Tele Terminal Equipment for connection to public analogue network except PABX	Type-examination Conformity to type	Annex I Annex II

Name and address	Identif-cation number	Responsible for the following products	Responsible for the following procedures/modules	Annexes of the Directives
SIS CERTIFIERING AB Box 3295 S - 103 66 Stockholm	0412	All telecommunications terminal equipment	Production quality assurance Full quality assurance	Annex III Annex IV
SEMKO AB Box 1103 S - 164 22 Kista	0413	Telefax machines and telefax modems Modems incl. stand alone, printed circuit cards in PC and lap top, Computer equipments with tele connections Alarm equipments with tele connections Remote-control-and control equipments with tele connections, Telefax switches, Terminals for the disabled, Number transmitters	Conformity to type	Annex II
INSTITUTO DAS COMUNICACOES DE PORTUGAL ICP Avenida José Malhoa, Lote 16832 P - 1000 Lisboa	0415	All telecommunications terminal equipment	Type-examination Conformity to type Production quality assurance Full quality assurance	Annex I Annex II Annex III Annex IV
SUOMEN STANDARDISOIMISLIITTO SFS SERTIFIOINTIOSASTO (FINNISH STANDARDS ASSOCIATION SFS - CERTIFICATION DEPARTMENT Maistraatinportti 2 FIN - 00240 Helsinki	0416	All telecommunications terminal equipment	Production quality assurance Full quality assurance	Annex III Annex IV
COMLAB Comlab P.O. Box 96 NL - 2007 Kjeller	0436	All telecommunications terminal equipment	Type-examination Conformity to type	Annex I Annex II

Name and address	Identification number	Responsible for the following products	Responsible for the following procedures/modules	Annexes of the Directives
ÖSTERREICHISCHER VERBAND FÜR ELEKTROTECHNIK (ÖVE) Eschenbachgasse 9 A - 1010 Wien	0462	All telecommunications terminal equipment	Type-examination Conformity to type Production quality assurance Full quality assurance	Annex I Annex II Annex III Annex IV
INSTITUT BELGE DES SERVICES POSTAUX ET DES TELECOMMUNICATIONS IBPT Avenue de l'Astronomie 14 Boîte 21 B - 1030 Bruxelles	0468	All telecommunications terminal equipment	Type-examination Conformity to type Production quality assurance	Annex I Annex II Annex III
SERVICE DE L'ENERGIE DE L'ETAT SEE B.P. 10 L - 2010 Luxembourg	0499	All telecommunications terminal equipment and satellite earth station equipment	Type-examination Conformity to type Production quality assurance Full quality assurance	Annex I Annex II Annex III Annex IV
TELECOMMUNICATIONS ADMINISTRATION CENTRE TAC P.O. Box 53 FIN - 00211 Helsinki	0523	All telecommunications terminal equipment	Type-examination Conformity to type	Annex I Annex II
DANSK STANDARD Baunegardsvej 73 DK - 2900 Hillerup	0527	All telecommunications terminal equipment	Production quality assurance Full quality assurance	Annex III Annex IV
NATIONAL TELECOMMUNICATIONS COMMISSION (NTC) 60, Kiffisias Avenue GR - 15125 Maroussi	0544	All telecommunications terminal equipment	Type-examination Conformity to type	Annex I Annex II

ANNEX 4 OFFICIAL JOURNAL REFERENCES TO ADOPTED CTRS

	TBR	Official Journal Reference
GSM Access	TBR 5	(OJ L8 94/11/EC)
GSM Telephony	TBR 9	(OJ L8 94/12/EC)
DECT Access	TBR 6	(OJ L194 94/471/EC)
DECT Telephony	TBR 10	(OJ L194 94/472/EC)
ONP 2 Mbit/s Leased Line unstructured	TBR 12	(OJ L194 94/470/EC)
ONP 64 Kbit/s Leased Line	TBR 14	(OJ L339 94/821/EC)
ISDN Basic Access, Bridging Measure		(OJ L329 94/797/EC)
ISDN Primary Rate Access, Bridging Measure		(OJ L329 94/796/EC)
ERMES	TBR7	(OJL182 95/290/EC)

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