



European Radiocommunications Committee (ERC)
within the European Conference of Postal and Telecommunications Administrations (CEPT)

**ANALYSIS, ASSESSMENT AND PROPOSALS FOR SPECTRUM REGULATION
WITHIN CEPT**

The Hague, February 2001

INDEX TABLE

1	PREFACE.....	1
1.1	CONTENT AND AIM OF THE REPORT	1
1.2	RADIO SPECTRUM REGULATION IS A COMPLEX MATTER WITH MANY INFLUENCES	1
1.3	ENVIRONMENT IS DEVELOPING AND CHANGING.....	1
1.4	NEED TO ANALYSE AND TO ASSESS IMPLICATIONS FOR CEPT ERC.....	1
1.5	ITEMS STUDIED IN THIS ERC REPORT	2
2	ANALYSIS OF THE ENVIRONMENT.....	2
2.1	ITU.....	2
2.2	WTO / GATS / TBT	3
2.3	EU LEGISLATION ON TELECOMMUNICATIONS, R&TTE DIRECTIVE IN PARTICULAR	4
2.4	THE '99 TELECOMMUNICATIONS REVIEW AND THE PROPOSED NEW REGULATORY FRAMEWORK	5
2.5	ICAO AND IMO	6
2.6	THE REGIONAL AGREEMENT CONCERNING THE RADIOTELEPHONE SERVICE ON INLAND WATERWAYS OF APRIL 6, 2000 (RAINWAT BASLE-AGREEMENT)	7
3	CONSOLIDATION OF PROVISIONS	8
3.1	WTO RULES AND EU LEGISLATION INCLUDING THE '99 TELECOMMUNICATIONS REVIEW AND THE PROPOSED NEW REGULATORY FRAMEWORK	8
3.2	EU RULES AND ITU RADIO REGULATIONS	8
3.3	ICAO AND IMO	9
3.4	RAINWAT BASLE-AGREEMENT AND CEPT ERC DELIVERABLES.....	9
4	SITUATION OF CEPT ERC OUTPUT	9
4.1	THE CATEGORIES OF OUTPUT DOCUMENTS OF THE ERC THAT ARE RELEVANT TO DISCUSS IN THIS REPORT ARE THE FOLLOWING:	9
4.2	OUTPUT DOCUMENTS CONCERNING HARMONISED USE OF FREQUENCIES	9
4.3	OUTPUT DOCUMENTS CONCERNING LICENSING.....	10
4.4	OUTPUT DOCUMENTS CONCERNING FREE CIRCULATION	10
5	IMPLICATIONS OF THIS DEVELOPMENT FOR ACTIVITIES OF CEPT ERC	10
5.1	SERVICE.....	10
5.2	CONVERGENCE	11
5.3	GENERAL AUTHORISATION VS. INDIVIDUAL LICENSE.....	11
5.4	SPECTRUM DESIGNATION / SPECTRUM DECISIONS	12
5.5	USE OF STANDARDS IN ERC OUTPUT	13
5.6	RECEIVER PERFORMANCE.....	13
6	CONCLUSIONS AND PROPOSALS TO ERC.....	14
6.1	SERVICE.....	14
6.2	CONVERGENCE	14
6.3	LICENSING	14
6.4	SPECTRUM DESIGNATION / SPECTRUM DECISIONS	14
6.5	USE OF STANDARDS IN ERC DELIVERABLES	14
6.6	RECEIVER PERFORMANCE	15
	ANNEX I.....	16
	<i>Frequency spectrum allocation and standardisation in the context of international obligations and EU legislation</i>	
	ANNEX II.....	23
	<i>ERC Decisions for the designation of frequency bands in the light of the WTO Agreement and R&TTE Directive</i>	<i>23</i>

ANALYSIS, ASSESSMENT AND PROPOSALS FOR SPECTRUM REGULATION WITHIN CEPT

1 PREFACE

1.1 Content and aim of the Report

Chapter 1 provides a broad introduction to the problem.

Chapter 2 aims at showing the existing and developing international framework for radio spectrum regulations in different fora.

Chapter 3 then tries to assess the interworking and possible contradictions within that framework and to conclude on a practical consolidated interpretation.

Chapter 4 is a layout of the existing situation of the ERC deliverables.

Chapter 5, based on the analysis and interpretation of Chapter 3, tries to assess the implication of the current development for future ERC work.

Chapter 6 sums up conclusions and proposals on how to contribute to the development of successful future regulation in radiocommunications.

1.2 Radio Spectrum regulation is a complex matter with many influences

Due to its physical characteristics the radio frequency spectrum needs internationally co-ordinated regulation on access and use. In other words, "with everybody in the air, nobody could be heard" as the US Supreme Court stated already early in the last century. **Therefore, at the global level ITU World Radio Conferences has been created, providing for the worldwide Radio Regulations (ITU RR). Alongside these guidelines the CEPT/ERC Plenary routinely adopts "Decisions" and "Recommendations"** which propose harmonised regulations on spectrum use in Europe. Individual Administrations which are members of CEPT/ERC generally apply these regulations either directly (as in the case of "Recommendations") or after committing themselves officially to applying them (as in the case of "Decisions").

However, radiocommunications have become more widespread and constitute an important backbone to many government duties and commercial activities. Thus, regulation for access to and use of the scarce resource of radio frequency spectrum is not only an issue for ITU, CEPT and national Administrations, but is also covered in a more or less general way by other international treaties and regulations such as the regulations of the IMO (International Maritime Organisation), the ICAO (International Civil Aviation Organisation), the WTO GATS and TBT rules as well as EU law. However a comprehensive consolidated overview with regard to the different obligations and rules under international law and treaties as well as the mechanism of their interworking or of possible conflicts between them is missing at present.

1.3 Environment is developing and changing

There have been recent developments such as the internal market in the European Union, the global efforts to remove technical barriers to trade in goods and national obstacles to free trade in services within the framework of the WTO TBT and GATS. Consequently, new conditions on non-discrimination, transparency, objectivity, proportionality and legitimate objectives have entered the world of radio regulation rule setting and application.

1.4 Need to analyse and to assess implications for CEPT ERC

Recently the question was raised in several fora (ERC, TCAM) as to what extent CEPT and its member Administrations were free to regulate access to and use of the radio frequency spectrum as they had done in the past.

Concern was raised that developments in EU and WTO horizontal rules on competition and barriers to trade as well as ITU Radio Regulations might have been lost out of sight in the ongoing development of a framework for ERC Decisions and Recommendations.

One of the most important policy goals of CEPT ERC is to contribute to harmonising European regulation in the field of radiocommunications by promoting practical co-operation between Administrations and the creation of a dynamic market in the field of European telecommunications.

Moreover, it is a reality that ERC plays a key role in providing the necessary practical solutions for Administrations to keep pace with the technical and regulatory developments in the field of radiocommunications. At the same time it is a policy goal of CEPT ERC to establish prospective views (scenarios) of the regulatory environment.

Therefore, there is a clear need for CEPT ERC to analyse developments in other relevant fora and to assess their possible implications for existing and future ERC work.

1.5 Items studied in this ERC Report

In order to cope with the aim of the Report the following items were studied:

(a) analysing :

- the way forward proposed by the European Commission as a result of the consultation on the Radio Spectrum Green Paper;
- the point of view taken by the Commission on licensing in the 1999 Communications Review;
- EU telecommunications regulation and in particular the R&TTE Directive,
- the subject of licensing in the ITU-Radio Regulations.
- the WTO GATS and TBT framework

(b) to consider the (possible) implications for the existing ERC licensing policy, taking into account ERC Report 61 on licensing.

2 ANALYSIS OF THE ENVIRONMENT

2.1 ITU

Article S18 of the ITU Radio Regulations states that "*no transmitting station may be established or operated by a private person or by any enterprise without a licence issued in an appropriate form*". In addition to this statement, Article S18 contains some advice on special agreements between countries, licence conditions (in particular the secrecy of communications), provisions on the issuance of licences and language and inspection of licences. Also a few special provisions for ship and aircraft licences are given.

The statement seems to require each station to be individually licensed, but the term 'in an appropriate form' is usually interpreted to include the possibility to issue general licences or licence exemptions.

In addition to Article S18, there are stipulations on licences in Article S25 (amateur radio service) and Articles S39 and S49, which deal with the inspection of aeronautical and maritime stations. Recommendation 7 (Rev WRC-97) of the Radio Regulations gives advice on the content and format of ship station and aircraft station licences.

Many of the procedures of the Radio Regulations imply the use of individual licences or other types of individual authorisation, although the term 'licence' is not mentioned. Such procedures are for example:

- assignment of frequencies
- issuance of call signs and other identities
- frequency co-ordination procedures
- operator certification
- notification and registration into ITU databases

Conclusion:

The provisions of the Radio Regulations, by their choice of wording, seem to imply the use of individual licences, however a general licence or a licence exemption can also be considered to be 'an authorisation by the government of the country' as referred to in Article S18, so there is clearly room for such forms of licensing.

Therefore there is in general no reason to assume that the ITU RR are a barrier for a licence policy within the CEPT based on deregulation. Even with regard to Article S25 on Radio Amateurs, the provisions do not explicitly refer to an individual licence. However with regard to maritime and aeronautical stations, judging from Articles S39 and S49, an individual licence is clearly indicated and is something that has to be "physically" produced. From these provisions it can be concluded that an individual licence is required. (See further below).

2.2 WTO / GATS / TBT

a) WTO

Frequency allocation or designation of frequencies for a specific utilisation is subject to the legal implications of the commitments taken by the EC and its Member States in the WTO framework communications services. These commitments are predominantly included in the GATS Agreement on Basic Telecommunications Services and in the Technical Barriers to Trade (TBT) Agreement.

The WTO rules can be found in:

- Art. 2 of WTO TBT (Technical Barriers to Trade Agreement),
- Art. VI of GATS (General Agreement on Trade in Services) establishes criteria for the drafting of "disciplines" in domestic regulations. No such disciplines related to licensing requirements have been drafted yet by the Council on Trade in Services, as foreseen in Art. VI.4 One can assume that GATS clarification by "disciplines" or by solving of conflict will take years.

b) GATS

Recognising the fact that access to frequencies constitutes a condition *sine qua non* to ensure effective market access for **radiocommunications services** and that frequency management measures may act as disguised barriers to trade, disciplines and obligations with respect to frequency management have been set in the **Basic Telecommunications Agreement**.

Measures which have the purpose or effect of blocking, or unreasonably limiting, market access for operators from other WTO Member countries are not allowed. Insofar as a country has undertaken market access commitments in a given telecommunications sub-sector, discriminatory, anti-competitive or arbitrary frequency allocation or designation decisions are forbidden by the GATS. On the other hand, the GATS recognise that frequency management policies, if implemented in accordance with its provisions, do not *per se* constitute a market access barrier.

As long as CEPT allocation or designation of frequencies follows the GATS requirements of non-discrimination, transparency and objectivity, there should not be any conflict with GATS obligations. These GATS requirements are also reflected in the provisions of EU law – the Mobile and Licensing Directives - applicable to national licensing.

c) TBT Agreement

The purpose of the **Agreement on Technical Barriers to Trade (TBT)** is to ensure that technical regulations and standards as well as procedures for the assessment of conformity (e.g. testing and certification) do not create unnecessary obstacles to **trade in goods**. The Agreement requires that Members apply to imported products the same non-discriminatory treatment in relation to technical regulations, standards, and conformity assessment procedures (Art. 2.1), as they would apply to national products.

Since this Agreement relates to trade in goods, its rules apply to technical requirements and standards for telecommunications equipment. Technical regulations shall not be more trade-restrictive than necessary to fulfil a legitimate objective, taking account of the risks non-fulfilment would create.

The TBT also stipulates that, whenever appropriate, technical regulations should be based on product requirements in terms of performance rather than design or descriptive characteristics. This, however, can sometimes not be achieved for frequency management measures, as radio compatibility is always dependent on specific technical characteristics.

d) Detailed wording of the rules

- Criteria of "**a legitimate objective**" (TBT - Art. 2.2) and "**solving fundamental technological problems**" (Art. VI.4 of GATS).
- TBT Art. 2.2 states that technical regulations "shall not be more trade restrictive than necessary to fulfil a legitimate objective".
- A useful example of what a legitimate objective can be, or rather what kind of problem solving can constitute a "legitimate objective", is given in TBT Art. 2.4. This article indicates that international standards must be used except when this would be an ineffective or inappropriate means for the fulfilment of the legitimate objectives pursued, for instance because of climatic or geographical factors or fundamental technological problems. In the case of spectrum, a legitimate objective is to avoid harmful interference (concept established by ITU RR and reused by the EU R&TTE).
- WTO members shall ensure that technical regulations "**shall not be more restrictive than necessary**" (TBT - Art. 2.2, confirmed by a "no more burdensome than necessary" criterion in GATS-Art. VI, which seems identical to this first criterion).
- These technical regulations "**must not be maintained if the objectives to be achieved by adoption of the technical regulation can be addressed in a less trade-restrictive manner**" (proportionality 1).
- Art. 2.2 of TBT states that WTO members shall take "**account of the risks that non fulfilment (of the legitimate objective) would create**" (proportionality 2).
- WTO members must use **international standards** as a basis for their technical regulations where they exist or their completion is imminent (TBT - Art. 2.4), and standardisation organisations for which "membership is opened to at least all WTO Member States" (GATS Art. VI: (5)(b) on disciplines).
- Disciplines (see 2.0 above) shall ensure that "**objective and transparent criteria**, such as competence and ability to supply the service" are used in licensing requirements (GATS Art. VI:4 on disciplines).
- **Requirements cannot be "in themselves a restriction** on the supply of the service" (GATS Art. VI on disciplines).
- GATS Art. VI.5-a- (ii) excludes the technical **rules which "could not reasonably have been expected** when the (GATS) commitment was made" (fairness).
- *Freedom of spectrum management policies (missing)*.

2.3 EU legislation on telecommunications, R&TTE Directive in particular

The **R&TTE Directive** establishes a transparency mechanism (Art.4.1) by which the EU Member States notify their national spectrum regulations. However, this directive does not harmonise or give a set of rules for spectrum regulations themselves. It does not answer the question of what restrictions Member States are allowed to impose on spectrum use, what they are not allowed to impose, or even what they are expected to impose. As is usually the case with transparency mechanisms, the R&TTE Directive formally creates only a transparency procedure, which in turn raises questions indirectly on the substance of the information thus made public.

It should be noted that according to the R&TTE Directive receiver parameters generally could no longer be imposed as essential requirements on radio equipment. Therefore, radio equipment can be placed on the market whatever their receiver performance is. This could have an influence on frequency management in the future.

Since the R&TTE Directive does not provide rules on how national spectrum should be regulated, this issue is not in the scope of TCAM, (TCAM is the advisory Committee set up under the RTTE Directive). It is therefore not to

be expected that TCAM clarifies these rules. Furthermore, for the time being, spectrum management in general is not in the Community domain¹. Therefore, on the European Union side, potential rules can only come from either:

- the **Treaty** itself and its accepted interpretations,
- some "side effects" of telecom legislation when its provisions involve spectrum as a substantial element. This is the case in some provisions of the **mobile and licensing directives** mentioned in the **Commission's Note to ERC (ref. ERC/TG2 (99)31)(Attached at Annex I)**.

The Commissions Note mentioned above is a very useful clarification on the relationship between frequency allocation and standardisation. However, this note does not take into account:

- the various contents of standards, in particular whether standards describe a technology or a measurement method
- what parts of a standard, according to their effect or goal, may be imposed or not
- the distinction between general rules imposed *a priori*, and ad-hoc rules designed and imposed at the time of an individual authorisation. The TCAM discussions, though, showed that this split is an important factor for the legal certainty for free circulation of goods and free provision of services.

2.4 The '99 Telecommunications Review and the proposed new regulatory framework

In the course of 1999 the EU Commission carried out a review of the effectiveness of measures, introduced during the previous ten years, in assisting and enabling the liberalisation, harmonisation and increased competition in the telecommunications sector. By the beginning of 1999 the majority of EU Member States had implemented all the relevant measures, and as a result the European telecommunications market had changed dramatically. Apart from the Licensing Directive and RTTE Directive none of those measures had any major impact on radiocommunications, although it should be noted that three frequency Directives for GSM, DECT and ERMES were part of the package (in effect these are the same as the ERC Decisions for those services); and arising out of a Directive on mobile communications there was a requirement for Member States to publish details of their mobile frequency allocations which was implemented by an ERC Decision.

As a result of the Review the Commission put together a package of measures to carry forwards the earlier developments, and also to address future requirements. Separately, the Commission issued a Green Paper on radio spectrum policy; it is recognised that many telecommunications services are dependent on access to spectrum, and also that the technologies used had enabled new services to enter the market so that previous sector splits between e.g. telecommunications and broadcasting were becoming less distinct. Proposals arising out of the Green Paper consultation were incorporated into the Communication from the Commission to the Council entitled "Towards a new framework for electronic communications infrastructure and associated services –the 1999 Review".

The main policy aims of the Review are to promote and sustain an open and competitive European market for communications services, to benefit European consumers, and to consolidate the internal market in a converging environment. The Commission propose that this be carried out by a mix of hard and soft law (e.g. Directives or codes of practice, respectively). The detailed draft regulations have been published **June 2000**, with the intention that the new structures should be in force by 2003.

Many of the new proposals focus on the telecommunications sector, but also have implications for radiocommunications. For example, as part of the package of new measures, the EU Licensing Directive is likely to be revised to allow the use of auctions for allocating licences, to allow secondary trading of spectrum licences, and to make the Directive more relevant to radio. As is currently the case, the aim is for a regime with the least amount of regulation: for example, general authorisations or licence exemption should be used wherever possible, and only requirements necessary for efficient management of the spectrum should be included in licences.

The "hard law" part of the package will be made up of sector specific legislation consisting of a framework Directive identifying general and specific policy objectives, accompanied by four specific Directives on licensing, access and interconnection, universal service, privacy and data protection. The "soft law" part of the package is expected to consist of recommendations, guidelines, codes of conduct and other non-binding measures to fit with and supplement the hard law package. Since the review has taken place in the context of "communications services.... in a converging market", this will no doubt be reflected in the details of the published package.

The Review also proposed the setting up of a "Spectrum Policy Expert Group" to ensure that political and technical considerations drive policy-making in this area; and some new Committee structures are proposed to enhance co-operation between the Commission and national regulators.

¹ Although one can argue that some parts are already included by some pieces of EU legislation, and that the current Review of the EU regulatory framework could result in a broader integration around 2003.

The package consists of 6 draft Directives covering:

- A Framework
- Authorisation
- Universal service and user's rights
- Access and interconnection
- Data protection
- Competition (a Commission Directive which consolidates existing legislation relating to the prohibition of exclusive and special rights).

A draft Decision on spectrum has also been produced which establishes a framework within which harmonisation can take place to take other EU policies in communications, transport and R&D further. It also creates a mechanism for harmonising provisions for the publication of allocation information.

As a result of these new proposals the format and scope of licensing is likely to change. Also the new package in itself has changed its scope from telecommunications to cover all electronic communications. The real effects of these changes are only likely to become known as the package of measures is fully negotiated. It is intended to complete these negotiations by mid-end 2001.

2.5 ICAO and IMO

General

Ship and aeronautical licences contain a mixture of telecommunications and safety issues. It is difficult to say whether e.g. the issuance of maritime mobile service identities is a telecommunications or a safety matter. Another example is the registration of what ships use VHF frequencies, what ships use HF frequencies, DSC equipment etc. There are numerous functions like this, containing both safety and telecommunications related aspects.

Maritime radio equipment

Licensing and use

Maritime radio equipment by its very nature will circulate on a worldwide basis and many of the issues concerning mutual recognition of licences and free circulation have therefore already been addressed. The frequencies used for maritime purposes are to a large extent harmonised on a global or regional basis. International standards also exist for a considerable amount of maritime equipment through the work of IMO (International Maritime Organisation), IEC, CEPT and ETSI.

A ship is legally part of the country where it is registered and the equipment is licensed, and licences are mutually recognised by other countries. The use of equipment for non-public communications is also not usually a problem except in harbour areas, where in general the use of communication equipment is not allowed. The International Arrangement on the use of INMARSAT-terminals on board vessels within territorial waters and in harbours was drawn up on: London, 16 October 1985; twenty-five countries have currently signed this arrangement.

Countries are concerned about by-pass in relation to public communications, but these issues might become less of a problem as regulatory regimes tend to deregulate.

The free circulation and use of equipment to be used on inland waterways is regulated on a more sub regional scale. For instance: in January 1996 in Brussels a regional arrangement concerning the radiotelephony service on inland waterways, RAINWAT, was signed, in which the "Rhine countries" take part (France, the Netherlands, Germany, Belgium, Luxembourg and Switzerland). A similar arrangement existed also between the so-called Danube countries. In the last two years attempts have been made to integrate the two arrangements. These efforts resulted in the so-called "Basle-agreement", signed in Basle 6 April 2000. The agreement came into force 1 August 2000.

Involved authorities

The ITU Radio Regulations contain operational provisions (such as call signs, calling procedures, operator certificates, the use of frequencies, charging and accounting, and technical provisions (such as channelling arrangements, transmitter frequency tolerances, designation of emissions, determination of necessary bandwidth, permitted spurious emission, power levels, technical characteristics of various types of transmitters, distress and safety communications for the GMDSS). In relation to licensing the most important provision is S49.

Some years ago attempts were made to transfer the responsibility for operational maritime radio matters from ITU to IMO (Voluntary Group of Experts and the simplification of radio regulations). If this had happened, the IMO would probably also have played a role in the area of maritime licensing. This did not happen, for various reasons, and therefore the international organisation responsible for licensing is still the ITU.

Nationally the Administrations are responsible for maritime certification, licensing and operational matters for radio equipment on board ships. In some Administrations this responsibility is given to the maritime authority, in others to the telecommunications authority.

Aeronautical Radio Equipment

The situation with regard to aeronautical radio equipment is similar to that of maritime, but in this case the situation with equipment use in harbours and inland waterways are transposed to airports. Again the frequencies for aeronautical use are largely harmonised, and common technical standards exist for the terminal equipment. As with maritime equipment there is no problem with the carrying and use of aeronautical radio equipment on board aircraft, as the aircraft is legally part of the country where it is registered.

Involved authorities

As described under maritime equipment, the ITU Radio Regulations contain operational provisions for aeronautical equipment, the most important one, in relation to licensing, being S39. However, in the case of aeronautical equipment the (International Civil Aviation Organisation) ICAO is more active in aeronautical matters than IMO on the maritime side, and therefore plays a more prominent role.

Article 30² of the ICAO Convention provides for free circulation as well as use of radio equipment.

Nationally Administrations are responsible for aeronautical certification, licensing and operational matters of radio equipment on board aircraft. In some Administrations this responsibility is given to the aeronautical authority, in others to the telecommunications authority.

2.6 The Regional Agreement concerning the Radiotelephone Service on Inland Waterways of April 6, 2000 (RAINWAT Basle-agreement)

In spring 2000 the Administrations of several European countries concluded on an agreement governing the usage of radio equipment on inland waterways in Europe. The agreement covers administrative, technical and operational conditions for the use of radiotelephony on board ships on inland waterways mainly based on ITU regulations.

The agreement virtually falls within the scope of several activities of CEPT ERC (frequency harmonisation, licensing, technical requirements for equipment, certification of personal capabilities for operators). However, it is more specific than most of the ERC deliverables. Furthermore, its legal character is that of a Treaty and thus of a binding nature. Therefore, the Basle-agreement is to be considered as a special binding agreement with priority before general regulation. The application of the Basle-agreement, however, is limited to the special case of radiotelephony on inland waterways in Europe and does not cover any other applications or services. It does not, therefore, need to be taken in account as a basis for the future output of CEPT ERC. However, in any cases where it might be perceived that deliverables of the ERC might conflict with the provisions of the Basle-agreement, there should be a clear statement that the Basle-agreement should not be affected by the deliverables concerned.

² Article 30 of the Convention on Aeronautical Civil Aviation: *Aircraft radio equipment* (a) Aircraft of each contracting State may, in or over the territory of other contracting States, carry radio transmitting apparatus only if a licence to install and operate such apparatus has been issued by the appropriate authorities of the state in which the aircraft is registered. The use of radio transmitting apparatus in the territory of the contracting state whose territory is flown over shall be in accordance with the regulations prescribed by that state. (b) Radio transmitting apparatus may be used only by members of the flight crew who are provided with a special licence for the purpose, issued by the appropriate authorities of the State in which the aircraft is registered.

3 CONSOLIDATION OF PROVISIONS

3.1 WTO rules and EU legislation including the '99 telecommunications review and the proposed new regulatory framework

As regards using standards and licensing conditions in regulations, WTO follows the same line as the EU. Many WTO provisions insist on conditions such as "no more burdensome than necessary", "no more trade restrictive than necessary", etc. The TBT Code of Good Practice for the application of standards states that only the "relevant parts of them" should be used and Art. 2.4 of TBT mentions that international standards may include inappropriate or irrelevant parts, etc.

The European Union developed the concept of "essential requirement" which is currently used in both the New Approach legislation (free circulation of goods) and the legislation related to the free provision of telecommunication services. WTO-TBT uses the expression "legitimate objectives" which seems conceptually very close to EU "essential requirements".

Since they all aim at establishing and/or fostering free circulation of goods and free provision of services, WTO rules and EU rules are very similar. However, EU rules are by and large more precise than those of WTO since much secondary EU legislation and court rulings have refined them. As regards GATS, for instance, "disciplines" (i.e. interpretations) are still to be developed by the Council for Trade in Services. One can assume that GATS clarification by "disciplines" or by solving of conflict will take years.

A simple way to comply with both EU and WTO rules could be to adopt EU principles and to assume this also fulfils WTO commitments.

The '99 telecom review does not really introduce any new principles or ideas that could interfere with the WTO rules. Moreover, by enlarging the field of application to a converging environment (e.g. including infrastructure aspects and transport services for broadcasting), it even goes beyond the field of application of the WTO rules, thus, enlarging the spirit of the TBT and the GATS to new domains. However, the use of "soft regulations" as proposed by the review would have to be analysed.

3.2 EU rules and ITU Radio Regulations

With regard to the ITU no significant development has been identified. The ITU Radio Regulations seem to offer enough freedom for an interpretation that makes them compatible with the EU Regulation.

However, one specific discrepancy between ITU Radio Regulations on the one hand and EU and WTO rules on the other hand has been identified. It concerns **the term "service"**.

Article S1.19 of the Radio Regulations defines a "radiocommunications service" as any transmission, emission and/or reception of radio waves for specific telecommunication purposes.

In the licensing Directive and seemingly in the rest of the EU framework, the concept of "authorisation", and consequently of "authorised service", applies only to transmission on a commercial basis of signals between an operator and a user, i.e. services between legal persons. As a consequence, the EU rules on general authorisations or individual licences apply only to companies providing telecommunications services ("undertakings" of the licensing directive). The same commercial definition may apply for the term of service in the framework of the WTO as this is focused on opening access for commercial entities (providers) to third countries' service markets.

The difference cannot be solved by interpretation.

The '99 telecom review introduces no really new principles or ideas that could interfere with the ITU Radio Regulations. However, the use of "**soft regulations**" as proposed by the review would have to be analysed on a case by case basis in order to make sure that it is compatible with the ITU Regulations.

3.3 ICAO and IMO

Existing regulation with regard to the management and usage of maritime and aeronautical radio frequencies has the status of specialised international law provided for by international Agreements (Treaties) There is no question about the binding character of those provisions and, therefore, no changes to those special provisions are envisaged without changes to the Agreements.

Existing CEPT deliverables have always respected the special nature of maritime and aeronautical communications as well as the obligations resulting from the international agreements in those fields. It is strongly recommended that this should continue in the future.

No special need for additional CEPT regulation in the field of maritime and aeronautical use of radio could be identified. However, CEPT should be aware that when preparing ERC deliverables for other services, it is possible that they might also impact on maritime and aeronautical services or stations.

3.4 RAINWAT Basle-agreement and CEPT ERC deliverables

The assessment of implications of the Basle-agreement to ERC deliverables has already been outlined under chapter 2.6 above:

The application of the Basle-agreement is limited to the special case of radiotelephony on inland waterways in Europe and does not cover any other applications or services. It is, therefore, not to be taken in account as a basis for the future output of CEPT ERC. However, in cases, where deliverables of the ERC might be interpreted as being incompatible with the provisions of the Basle-agreement, there should be a clear statement that the agreement should not be affected by the deliverables concerned.

4 SITUATION OF CEPT ERC OUTPUT

4.1 The categories of output documents of the ERC that are relevant to discuss in this Report are the following:

- The harmonisation of a frequency or a frequency band for a certain application
- A harmonised regime for the exemption of individual licensing for certain radio equipment
- The possibility for free circulation (in the CEPT sense of the carrying along and use of radio equipment by visitors to CEPT countries) of certain radio equipment

Detailed analysis, conclusions and recommendations for relevant existing ERC deliverables can be found in **Annex I** to Doc. **ERC (00)58**. The following sections of Chapter 4 provide a short analysis of the nature of ERC output in the relevant fields.

There are also output documents concerning the adoption of national type approval regulations for certain equipment as well as general regulations on conformity assessment procedures. These items also play a role in the discussions at hand, but they have been discussed extensively in other documents and a way forward has been agreed.

4.2 Output documents concerning harmonised use of frequencies

These documents make available a certain frequency or frequency band for a specific application, such as UMTS, Social Alarm etc. They include the provision that the equipment used has to be in conformity with a specific European Telecommunications Standard.

Future work is needed to find a way forward on how to specify technical regulations, ETSs or others in these documents in order to ensure that they are compatible with the WTO and EU requirements described above. This work should be carried out along the lines described in **Annex II**.

4.3 Output documents concerning licensing

It is one of the policy goals of the ERC, that when the efficiency of the frequency spectrum is not at risk, and as long as harmful interference is unlikely, the installation and use of radio equipment can be exempted from a licence. The ERC developed some harmonised criteria, which have to be fulfilled in order for the equipment to qualify for licence exemption. One of these criteria is that the equipment fulfils the technical regulation of the CEPT Administration in question (see ERC/REC 01-07). In the different output documents exempting equipment from licensing, referring to an ETS with which the equipment should comply covers this criterion. This leads to the same question as was raised under frequency output documents.

Also, the R&TTE Directive indicates in Article 7.2 that use of the equipment can only be restricted for reasons related to the effective and appropriate use of the radio spectrum, avoidance of harmful interference or matters related to public health.

Further consideration should also be given as to how future licence exemption output documents should be structured in order to be compatible with these requirements.

4.4 Output documents concerning free circulation

The ERC has decided that one of its policy goals is to provide for the free circulation of radio equipment within CEPT countries. Free circulation is to be understood as the carrying of equipment with or without use. Carrying of all equipment that is authorised in the country of origin should be allowed without restrictions and use should be possible under certain conditions (see ERC/DEC/(95)01). One of these conditions is that the equipment conforms to common technical standards. These standards are not further specified in the different free circulation Decisions that broaden the scope of ERC/DEC/(95)01.

The R&TTE Directive implies that free circulation of equipment is automatically applicable for equipment that is placed on the market in conformity with RTTE provisions within the countries that have implemented the directive. This means that in those countries separate free circulation Decisions are no longer necessary. Since the Directive does not regulate the carriage and use of equipment from visitors outside of this group of countries, nor the carriage or use of equipment from visitors from R&TTE countries to other CEPT countries, these kinds of Decisions will still be useful and a format needs to be developed that is compatible with the requirements the Directive.

5 IMPLICATIONS OF THIS DEVELOPMENT FOR ACTIVITIES OF CEPT ERC

5.1 Service

The analysis of the term "service" in CEPT showed that in the past it was identical to the ITU definition. There does not appear to be any need to change this in future. However, due account has to be taken of the fact that existing EU-Regulations (e.g. the Licensing Directive) refer to the term "service" as a "commercial offer" only. This is different to the CEPT and ITU definition, and could cause confusion. Notwithstanding the fact that EU terminology lies beyond the influence of CEPT, the ideal solution would be that the EU consider harmonisation with the CEPT and ITU terminology. If such a proposal were followed, it would further the creation of a clear and stable framework within a wider Europe and facilitate transitions and compatibility of treatment between CEPT and EU licensing policies.

Such developments would be particularly beneficial for services, which may be subject to CEPT but not EU deliverables. For example, the application of the licensing concept of the EU to licences of private radio users could possibly benefit their community with simpler and faster proceedings for frequency usage in many cases.

5.2 Convergence

There have been many developments across Europe, which fall under this title. One interpretation is the way in which there are no longer clear differences between the application of some fixed or mobile services. However, the most common effect is the uniting of different services and is seen most clearly in the increased use of digital technology whereby data is communicated: these data can consist of oral, written or visual communication. This has made it possible to create wider scope in the area of communications. From those developments have emerged ideas to provide different types of services within particular frequency allocations: e.g. mixing broadcasting with other communications; or, to explain it from a consumer's point of view, being able to receive TV programmes, the Internet, and telephone services through the same equipment.

Many of these changes are still in the process of development. However, they will have implications for the radio spectrum and how it is used. Long term, there might also be implications for the way in which spectrum is allocated at the global level e.g. the ITU RR split between Services. Inevitably the increased convergence of services will affect the way in which equipment use is defined, as well as how its use is authorised through licensing policies.

5.3 General authorisation vs. Individual license

With the changes in licensing and equipment conformity, which have been emerging around Europe, some Administrations have been updating or otherwise revising their national licensing legislation. There are now more differences than before in the way in which licences are granted, and what they provide for. These include different approaches to licence exemption as well. Some Administrations start from the basis of deregulation and only impose special conditions in relatively few cases; others have complicated structures with many different requirements. Also the subject of licensing varies: some administrations licence the frequency used, while others license the user, the equipment or the service.

These variations in policy and practice suggest that harmonisation of the approach is much needed.

The EU 99 reviews as well as the subsequent draft texts for a future regulatory framework distinguish between:

- a) national measures which are defined and published before the spectrum user starts service and which are:
 - implicitly imposed **a priori** on any use of the related spectrum,
 and/or
 - **systematically** included in individual authorisations
 and
- b) measures defined at the time of individual requests for spectrum use and uniquely included in the individual licence issued.

The above distinction is a simple reuse of the EU licensing Directive concept of splitting authorisations into "general authorisations" (rules which apply to all users within a service) and "individual licences". Notwithstanding the fact that those regulations have been in force for several years for all Member States, considerable differences in interpretation and implementation with regard to the licensing policy still persist in the Community. Therefore, the Commission has made a new attempt to harmonise the situation by more precise definitions. The outline of the new EU drafts have widely been welcomed in this regard in the recent public consultations.

The ERC Report:

- considering the widespread variety of licence practices in CEPT Administrations as well as the importance of the non-commercial use of radio frequencies, and
- noting the differences of approach to the subject of a licence (frequency, station, service . . .) in the CEPT Administrations, as well as
- taking into account that the application of the licensing concept of the EU to licences of private radio users could possibly benefit the industry with simpler and faster proceedings for frequency usage in many cases,

considers that it would be forward looking and beneficial to the further development of harmonisation in CEPT, as well as to simplification of administrative procedures for users, to extend the EU concepts relating to general authorisation and individual licence to the whole range of radio services as defined by CEPT and ITU.

It is suggested that the following set of definitions applicable to spectrum be adopted within CEPT:

- "radiocommunications service" as in ITU-R
- "general authorisation" as in licensing Directive
- "individual licence" as in licensing directive.

With regard to the general nature of the licensing concept of the EU it seems appropriate that ERC develops a catalogue of conditions that would indicate when the delivery of an individual licence is necessary. This would of course make the usual ERC Decisions on the exemption of individual licensing redundant in the longer term. However, such changes could be rather dramatic and may affect other policies at national level. Therefore any proposed changes should be developed and implemented in an evolutionary way.

Much useful work has already been undertaken in the PMR area. Further activities could e.g. be undertaken by developing a whole new general approach to licensing. Another possibility would be to start in a fairly limited area in order to gain the necessary experience. Work could be put in hand to first, focus on the development of a list of criteria that provide for issuing of an individual licence, based on the criteria list that was used in the past for the identification of equipment to be licence exempt (complementary list). A second step could include the development of harmonised application forms, fee calculation schemes and procedural rules for the licensing process. In a third step the mechanisms developed so far could be adapted and transferred to other services where deemed to be useful.

It is suggested that WGRR be the adequate forum to undertake this work in close co-operation with WGFM

5.4 Spectrum designation / spectrum Decisions

The main focus of this Report is to give a direction for future work of CEPT ERC. This is all very necessary but such proposals also need to take account of the current situation. In the case of radiocommunications, spectrum is used for a number of different purposes, many of which are the provision of services to third parties (or customers) of radio networks. In considering any changes it is important to bear this in mind since an otherwise apparently simple small change could have far-reaching consequences.

Changes to licensing policy or licence documentation need to take account of the requirements of the licensee; and they will need to be involved, through consultation, in any major changes because they have a responsibility to Administrations to ensure that they comply with the terms and conditions of their licence.

Likewise any changes relating to requirements for equipment also need to be introduced gradually to ensure that manufacturers are able to meet the new requirements, but also to ensure that new equipment is readily available at relevant costs to end users. If these things do not happen then it is likely that the service will not be taken up and there will be a resultant waste of spectrum.

Industry also needs to be sure that regulatory frameworks are stable. Without this they will be unable to plan marketing and rollout of networks.

Radiocommunications is a rapidly developing market sector. The frequency spectrum can be used for many different purposes and Administrations have a responsibility to users, themselves, and other Administrations to make sure that the spectrum is used effectively and efficiently. As far as possible new services should be introduced on a harmonised basis; and the regulatory provisions governing that service should be as simple and non-bureaucratic as possible within the overall remit of good spectrum management. But perhaps most important is that when harmonised measures are negotiated and agreed, as many Administrations as possible should implement them in the way in which they were drafted. In other words, as far as possible, the national introduction of a service should be compatible with all the relevant CEPT requirements and not in a piecemeal fashion. Implementation undertaken in piecemeal fashion hinders industry, does not assist users, and can increase the likelihood of harmful interference being caused to users.

Linked to these issues is the need to make sure that information about regulatory policies and practices is available; and, even more importantly, kept up to date. As part of the work, which led to this ERC Report a review of all current ERC deliverables has been undertaken and a number of changes required to bring them in line with current requirements have been identified. Administrations too need to undertake similar exercises. This will help to ensure that industry and Administrations have the correct information on which to base their proposals for future development.

In previous sections of Chapter 5, note has been made of the need to make changes in an evolutionary way. This is also relevant to changes of spectrum allocations. As use of the spectrum develops, it is inevitable that allocations for specific services will have to change over time. Barring emergency situations, this needs to be handled carefully and sensitively. Ideally users should be consulted as much as possible and they should be given the opportunity to participate in discussions as to new allocations and technical requirements. They will also be able to provide useful information to Administrations about future needs and assist development of realistic timetables for change.

In many Administrations, recent changes in licence issuing policy have permitted the use of auctions. Where these are used – and also in the case of some other systems where licences are issued by competition, licensees will expect to be given a fixed licence term. This would be expected to provide for a reasonable time in which to roll out the network as well as to get enough customers on to the network to make it profitable for the licensee. Any suggested timescale may be related to the expected life of the equipment to be used. In such cases this is a reasonable request, but it means that Administrations need to take these factors into account when negotiating the spectrum to be allocated for the system; most cases like this are more likely to be of interest at multi-national level and thus negotiation of the spectrum allocation at European level through CEPT would be particularly beneficial. If the regulatory framework for these kinds of system can also be agreed at European level then that would ensure that relevant considerations relating to the need to respect EU, WTO etc. rules such as proportionality, transparency would be easier complied with.

5.5 Use of standards in ERC output

When a standard or a mere technical rule is meant for regulatory use, there is a need to justify each of its provisions by at least one essential requirement/legitimate objective. A reasonable idea is to select among the essential requirements which are either in the R&TTE or in the Licensing directive, and which are pertinent to spectrum matters. A first selection of applicable essential requirements could be the following:

- efficient use of spectrum (licensing directive and RR)
- avoidance of harmful interference (R&TTE, licensing directive and RR)
- public health (R&TTE)
- occasionally other specific requirements in explicitly justified cases (e.g. EU UMTS Decision, interworking as in Art.3.3.a of R&TTE).

Therefore, the question is not so much that of imposing or not imposing a standard, but what the contents of this standard are. Imposing a standard just because ITU or ETSI has produced it is not appropriate. Referencing an ANSI standard can also be seen as inappropriate, even by USA players, if it imposes something unrelated to accept essential requirements/justified objectives.

5.6 Receiver Performance

It is necessary to assume a certain level of receiver performance in the frequency planning process in order to provide an acceptable probability of establishing the expected level of communication without experiencing an unreasonable level of interference. However, receiver parameters cannot be mandated by Administrations. In certain cases receiver parameters may be included in Harmonised Standards (or Notified Bodies may give guidance on receiver performance) provided they can be justified against the essential requirements of the R&TTE Directive.

Particularly in cases where receiver parameters are not specified in Harmonised Standards it will be beneficial for the parameters assumed in the frequency planning process to be published. Whilst authorised users of the radio spectrum are entitled to expect a degree of protection from interference, they should not assume that they will automatically be afforded such protection where the planning assumptions are not met.

6 CONCLUSIONS AND PROPOSALS TO ERC

6.1 Service

It was concluded that the different meanings of the term "service" in the EU legislation and in the ITU and CEPT can be confusing. The EU should consider using the ITU definition in their legislation with regard to radio regulation.

- It is proposed that ERC communicate this with a letter to the Commission.³

6.2 Convergence

It was concluded that it would be beneficial to the development of new technologies and the efficient use of frequencies to define spectrum allocations and designations in a way that permits the transmission of any kind of content (broadcast, telecommunications, commercial and non-commercial) in a given frequency allocation or designation. This would require consequential amendment to existing ERC-deliverables.

- *It is proposed that ERC discuss this issue and decide on the necessary action to be taken.*

6.3 Licensing

It was concluded that it would be forward looking and beneficial to the further development of harmonisation in CEPT, as well as to simplification of administrative procedures for users, to extend the EU concept of general authorisation vs. individual licence for all spectrum usage.

It is proposed that the following set of definitions applicable to spectrum be adopted within ERC:

- "radiocommunications service" as in ITU-R
- "general authorisation" as in licensing Directive
- "individual license" as in licencing directive.

To be in line with the EU licensing concept it was further concluded that ERC should develop a new approach to licensing, e.g. a catalogue of conditions that would indicate in which cases the delivery of an individual licence is necessary, rather than produce further Decisions on licence exemption.

It is proposed that WGRR be tasked to develop a new approach to licensing either by proposing a general new concept or by submitting specific amendments and guidelines in certain areas as e.g. PMR, Amateur Radio, Satellite Services or Radio Relay Services.

6.4 Spectrum designation / spectrum Decisions

It was concluded that it is beneficial to the radio communications sector that ERC continues to designate and forward plan the harmonised use of spectrum, taking due account of the guidelines of WTO as well as the EU legislation with regard to the technology neutral formulation of such designations and plans.

It is proposed that ERC follow the line as described in Annex II.

6.5 Use of standards in ERC deliverables

It was concluded that the reference to standards may cause problems with the WTO rules, as well as with the EU legislation, if not properly justified.

³ ERC concluded on this recommendation that it was premature to take action at the present point in time. The relevant groups of ERC would have to discuss the item internally first.

Therefore there is a need to justify each of its provisions by at least one essential requirement/legitimate objective. A selection among the essential requirements which are either in the R&TTE or in the Licensing directive, and which are pertinent to spectrum matters should be made. The list of essential requirements could be the following:

- efficient use of spectrum (licensing directive and RR)
- avoidance of harmful interference (R&TTE, licensing directive and RR)
- public health (R&TTE)
- occasionally other specific requirements in explicitly justified cases (e.g. EU UMTS Decision, interworking as in Art.3.3.a of R&TTE).

Referencing to one or more specific standard(s) (radio interface) in a frequency decision has to be looked at on a case by case basis.

- The mentioning of a specific standard is obviously not in contradiction to WTOTA as long as no other standard is excluded. The introduction of different radio interfaces (standards) in a frequency band can, however, have a significant impact on the spectrum efficiency. In cases where spectrum efficiency is threatened, the Licensing Directive is justification to prescribe a specific standard (radio interface).

So it is concluded that the prescription of a standard should not preclude the use of other standards, as long as a notified body has determined that the provisions within these other standards satisfy the essential requirements of the R&TTE Directive.

It is proposed that ERC applies the following rules in developing future deliverables:

- Reference to a standard or mere technical rule for regulatory use must be justified for each of its provisions by at least one essential requirement / legitimate objective (i.e. efficient use of spectrum / avoidance of harmful interference / public health / other specific requirements in explicitly justified cases laid down in EU law or national legislation).
- ERC shall co-operate with ETSI in order to ensure that ETSI deliverables provide for an adequate basis for the essential requirements / legitimate objectives.

6.6 Receiver performance

It was concluded that it can not automatically be assumed that receiver performance will be included in Harmonised Standards. Only where justified against the essential requirements of the R&TTE Directive can certain receiver parameters be specified in Harmonised Standards. However, the assumed receiver performance used in the frequency planning process could be considered the benchmark for deciding if a user should expect protection from interference. This assumed performance should be made public (e.g. as an informative part of the Radio Interface Regulations under article 4.1 of the R&TTE Directive). Where appropriate it would be beneficial to agree on common planning assumptions throughout CEPT.

It is proposed that ERC tasks WG SE to develop and publish appropriate receiver performance levels for use in the frequency planning process.

ANNEX I

EUROPEAN COMMISSION
Directorate-General Information Society

Communications Services: Policy and Regulatory Framework
The Director

Brussels,

Mr. Patrick CAREY
Chairman, CEPT/ERC
Office of Telecoms Regulation
Abbey Court – Irish Life Center
Lower Abbey Street
IRL – Dublin 1

Dear Mr. Carey,

Re: Frequency Allocation and Standardisation in the Context of International Obligations and EU Legislation

ERC plays an important role in promoting the necessary conditions for integration of EU markets, in particular through frequency harmonisation. In a number of cases, the possibility for the ERC to allocate certain frequency spectrum bands for specific standardised technologies has raised the issue of the link between standards and harmonised spectrum allocation under international obligations.

The attention of the ERC is drawn to the international obligations resulting from the WTO for the Community and its EU Member States who are at the same time members of the CEPT, as well as to EU legislation.

For that purpose, you will find attached, for consideration by the ERC, a note and a background note entitled “Frequency spectrum allocation and standardisation in the context of international obligations and EU legislation”.

Yours sincerely,

Nicholas Argyris

Enclosure

EUROPEAN COMMISSION
Directorate-General Information Society

Communications Services: Policy and Regulatory Framework

Brussels, 29 October 1999

NOTE FOR THE ATTENTION OF THE ERC

Re: Frequency spectrum allocation and standardisation in the context of international obligations and EU legislation

The co-ordination of action between ETSI and CEPT when making spectrum available for new technologies is welcome.

A co-ordinated frequency allocation within Europe is an important requirement for the achievement of the internal market in the Community.

The link between standards and harmonised spectrum allocation is governed by international obligations as well as –in particular in EU Member States - by Community legislation.

It is therefore necessary to provide proper justification when designating or allocating, on an exclusive basis, frequency bands for specific standardised technologies. Such justification should cover both the exclusivity in itself as well as the choice of the particular standard. This would avoid unnecessarily excluding other similar systems with comparable functionalities and applications. As a general rule, reference to product requirements in terms of performance is preferable to reference to design or descriptive characteristics.

Exclusive reservation of specific frequency bands for a specific standard or system must remain limited to those cases where it is necessary, in particular to ensure the efficient use of the spectrum, pursuant to international obligations and Community legislation.

CEPT Administrations should take the utmost care when drafting, adopting and applying such decisions in order to fully take international and Community obligations into consideration.

These obligations should be reflected in the practice of the CEPT/ERC/ECTRA work in one of the two following ways:

- (1) by introducing, in each draft ERC Decision regarding designation, allocation and harmonisation of frequencies for a specific standard or telecommunications system, an appropriate wording which will clearly provide that the said frequencies are not reserved on an exclusive basis for use by that specific standard or system.

Such could include:

- Addition in the recitals of the following text:

“Considering that Administrations have the right to exercise spectrum/frequency management which may affect the number of service suppliers, in conformity with their international trade obligations and to European Community legislation as far as EU Member States are concerned;

that allocation, assignment and technical co-ordination of frequencies must be done in an objective, timely, impartial, transparent and non-discriminatory manner, and should not be more burdensome than necessary under international rules, in particular, to ensure the efficient use of the frequency spectrum.”

- Addition of the following wording in the text of the decision:

*“to designate the frequency bands [] for the use of [], **without prejudice to the possible use of such frequency bands for other similar systems with similar performance capabilities**”.*

- (2) where an exclusive reservation of those frequencies for a particular standard or system is justified, to add the above-mentioned recitals together with an appropriate justification for such reservation, in conformity with international and Community rules.
-



EUROPEAN COMMISSION

Directorate-General Information Society

Communications Services: Policy and Regulatory Framework

Brussels, 29 October 1999

BACKGROUND NOTE FOR THE ERC

Re: Frequency spectrum allocation and standardisation in the context of international obligations and EU legislation

Introduction

CEPT and ERC play an important role in promoting the necessary conditions for integration of EU markets, in particular through frequency harmonisation.

In a number of cases, the possibility for the ERC to allocate certain frequency spectrum bands for specific standardised technologies has raised the issue of the link between standards and harmonised spectrum allocation under international obligations and whether these frequency bands can be allocated on an exclusive basis.

As counsellor to CEPT, the Commission wishes to draw the attention of the CEPT/ERC to the international obligations resulting from the WTO for the Community and its EU Member States who are at the same time members of the CEPT, as well as to EU legislation.

ERC should ensure, when drafting decisions which would imply or have the effect of an exclusive reservation of specific frequency bands for a specific standard, that such exclusive reservation can be duly justified pursuant to international obligations and Community legislation.

It is for this reason that in the UMTS case, the mandates which were issued to the CEPT pursuant to the UMTS Decision 128/99/EC, provide that the spectrum to be harmonised and the spectrum scheme to be developed for the introduction of UMTS are without prejudice to the possible use of that spectrum by other third generation mobile communications systems.

1 Community and International obligations applicable

Under both international and Community legislation, exclusive spectrum allocation for a specific type of technology can only occur subject to specific conditions and where duly justified pursuant to essential requirements as explained below.

1.1 The Commission Mobile Directive⁴ has abolished most special and exclusive rights for the provision of mobile and personal communications. This includes the following provisions:

- (a) Article 3b of the Mobile Directive provides that “the designation of radio frequencies for specific communications services must be based on objective criteria. Procedures must be transparent and published in an appropriate manner” .

Licensing conditions may not include unjustified technical restrictions. Member States may not, in particular, restrict the offer of different technologies making use of distinct frequencies, where multistandard equipment is available (Article 3a first par. (iii)).

- (1) Article 3a first par. (i) provides that: “*Licensing conditions must not contain conditions other than those justified on the grounds of the essential requirements and, in the case of systems for use by the general public, public service requirements in the form of trade regulation*”. Such requirements relate to conditions of permanence, availability and quality of service.

“Member States may limit the number of licences for mobile and personal communications systems to be issued only on the basis of essential requirements and only where related to the lack of availability of frequency spectrum and justified under the principle of proportionality” (Article 3a, 3rd par.).

⁴ Commission Directive 96/2/EC of 16 January 1996 amending Directive 90/388/EEC with regard to mobile and personal communications, OJ L 20 of 26.1.1996, p.59.

Essential requirements are non-economic reasons in the general interest which may cause a Member State to impose conditions on the establishment and/or operation of telecommunications networks or the provision of telecommunications services. These include interoperability of services and effective use of frequency spectrum and the avoidance of harmful interference between radio-based telecommunications systems and other space-based or terrestrial technical systems (Article 1).

1.2 The Licensing Directive⁵

Similar principles are included in the Licensing Directive. Limitation in the number of individual licences for services and infrastructure is only allowed to the extent required to ensure efficient use of radio frequencies, while maximising benefits for users and facilitating competition development.

1.2.1 The licensing process is subject to procedural guarantees (Article 9).

- (1) As in the Mobile Directive, the Licensing Directive requires national procedures used to grant individual licenses to be open, transparent and non-discriminatory. All applicants must therefore be subject to the same procedures, unless there is an objective reason for differentiation, and decisions must be made within specified deadlines.
- (2) Where there is no limitation on the number of individual licenses, any undertaking which fulfils the conditions decided and published by the Member State concerned is entitled to receive an individual licence (art.9.3.). This will most probably not be the case for UMTS and other 3G systems given the limited frequency spectrum resources available.

1.2.2 Limitation in the number of licenses is subject to specific requirements (art.10)

In addition to procedural obligations for the limitation in the number of licenses, selection criteria must be objective, non-discriminatory, detailed, transparent, proportionate and published in advance. Member States are required to determine the selection criteria and the scope of the licenses they will grant. Their decision will need to be justified.

1.2.3 Limitation in the number of licenses must be properly justified (Article 10).

Article 10 of the Licensing Directive allows Member States to limit the number of individual licences for services and infrastructure establishment and operation only to the extent required to ensure the efficient use of radio frequencies, while giving due weight to the need to maximise benefits for users and to facilitate the development of competition.

2 International Obligations

Allocation and use of frequencies are subject to the legal implications of the commitments taken by the EC and its Member States in the WTO framework communications services. These commitments are predominantly included in the GATS Agreement on Basic Telecommunications Services and in the Technical Barriers to Trade (TBT) Agreement.

2.1 GATS

- (1) Recognising the fact that access to frequencies constitutes a condition *sine qua non* to ensure effective market access for radiocommunications services and that frequency management measures may act as disguised barriers to trade, disciplines and obligations with respect to frequency management have been set in the Basic Telecommunications Agreement.

⁵ Directive 97/13/EC of the European Parliament and the Council of 10 April 1997 on a common framework for general authorisations and individual licenses in the field of telecommunications services, OJ L 117 of 7.5.1997, p.15.

- (2) GATS allows its Members some freedom to allocate and assign frequencies domestically, as appropriate for their domestic environment, provided they act (regarding allocation, assignment, technical co-ordination to prevent interference, *etc.*) in line notably with Art. VI of the GATS. Pursuant to such provision, their measures and decisions:
- must be administered in a “reasonable, objective and impartial manner”⁶; and
 - should not nullify or impair a country’s specific commitments (*i.e.*, they shall be based on objective and transparent criteria, not be more burdensome than necessary to ensure the quality of the service, and not act in themselves as a disguised barrier to trade).
- (3) In addition, the Reference Paper on regulatory principles⁷ requires such allocation to be carried out in an “*objective, timely, transparent and non-discriminatory manner*”.
- (4) Taken together, the two above mentioned provisions forbid any national or regional spectrum allocation or assignment measure which has the purpose or effect of blocking, or unreasonably limiting, **market access** for operators from other WTO Member countries. As a consequence - insofar as a country has undertaken binding market access commitments in a given telecommunications sub-sector - discriminatory, anti-competitive or arbitrary frequency allocation decisions are forbidden by the GATS. On the other hand, the GATS recognises that frequency management policies, if implemented in accordance with these provisions, do not per se constitute a market access barrier.
- (5) As long as CEPT allocation of frequencies follows the above mentioned GATS requirements, in particular requirements of non-discrimination, transparency and objectivity, there should not be any conflict with GATS obligations. These GATS requirements are also reflected in the provisions of EU law – the Mobile and Licensing Directives - applicable to national licensing.
- (6) The WTO Chairman’s Note on Market Access Limitations on Spectrum Availability has indicated that it is legitimate for GATS members to pursue spectrum management policy. Optimising spectrum efficiency is a legitimate objective of spectrum management policy. Pursuant to EC and international law, selection criteria must be reasonable, objective, impartial, transparent and not more burdensome than necessary to ensure the quality of the service.
- (7) The Chairman’s Note on Market Access Limitations on Spectrum Availability⁸ stipulates that “*many Members have entries in the market access column of their schedules indicating that commitments are ‘subject to availability of spectrum/frequency’ or similar wording. In light of the physical nature of spectrum and the constraints inherent in its use, it is understandable that Members may have sought to rely on these words to adequately protect legitimate spectrum management policies. There is, however, doubt that words such as ‘subject to availability of spectrum/frequency’ as listed in the market access column of many Members’ schedules achieve that objective. Spectrum/frequency management is not, per se, a measure which needs to be listed under Article XVI. Furthermore under the GATS each Member has the right to exercise spectrum/frequency management, which may affect the number of service suppliers, provided that this is done in accordance with Article VI and other relevant provisions of the GATS. This includes the ability to allocate frequency bands taking into account existing and future needs*”.
- (8) As to the use of international standards, Art. VI.5.b of GATS requires account to “*be taken of international standards of relevant international organisations applied by that Member*” with a view to determining whether that Member fulfils its obligations. “*Relevant international organisations*” are defined as “*international bodies whose membership is open to the relevant bodies of at least all Members of the WTO*”. This includes ITU.

⁶ Point 3 of Additional Commitment by the European Communities and their Member States

⁷ Which many Members (including the EC and its Member States) have included in their offer as a binding commitment- paragraph 6.

⁸ Which constitutes an interpretative guide, but has no constraining character.

2.2 TBT Agreement

- (1) The purpose of the **Agreement on Technical Barriers to Trade (TBT)** is to ensure that technical regulations and standards⁹, as well as procedures for the assessment of conformity (e.g. testing and certification) do not create unnecessary obstacles to trade in goods. The Agreement requires that Members accord to imported products national and non-discriminatory treatment in relation to technical regulations, standards, and conformity assessment procedures (Art. 2.1).
- (2) In the context of telecommunications, the TBT Agreement concerns only equipment, i.e. the case of barriers to the entry of equipment in the Community. The TBT Agreement does not cover technical regulations or standards that may relate exclusively to a service or to the provision of that service, i.e. which are not related to the equipment involved¹⁰. This Agreement neither applies to requirements applicable on service suppliers (e.g., qualification and selection requirements) nor does it contain other general rules applicable to telecommunications such as competition provisions, pricing or access policies, or universal service requirements.
- (3) Since this Agreement relates to trade in goods, its rules apply to technical requirements and standards for telecommunications equipment.
- (4) The Agreement also contains general criteria for determining whether a measure constitutes an “*unnecessary obstacle*” to international trade (Art. 2.2): “***technical regulations shall not be more trade-restrictive than necessary to fulfil a legitimate objective, taking account of the risks non-fulfilment would create. Such legitimate objectives are, inter alia: national security requirements; the prevention of deceptive practices; protection of human health or safety, animal or plant life or health, or the environment***”. Art. 2.2 further states that “*in assessing such risks, relevant elements of consideration are, inter alia available scientific and technical information, related processing technology or intended end-uses of products*”.
- (5) Art. 2.4 states that “*where technical regulations are required and relevant international standards exist or their completion is imminent, Members shall use them, **or the relevant parts of them**, as a basis for their technical regulations except when such international standards or relevant parts would be an ineffective or inappropriate means for the fulfilment of the legitimate objectives pursued, for instance because of fundamental climatic or geographical factors **or fundamental technological problems***”. WTO Members are required to “***play a full part, within the limits of their resources, in the preparation by appropriate international standardisation bodies of international standards for products for which they either have adopted, or are expected to adopt, technical regulations***” (Art. 2.6).
- (6) Finally, Article 2.8 TBT provides that “*whenever appropriate, Members shall specify technical regulations based on products requirements in terms of performance rather than design or descriptive characteristics*”.

⁹ A technical regulation is defined in Annex 1 of the Agreement as a “document which lays down product characteristics or their related processes and production methods, including the applicable administrative provisions, with which compliance is mandatory.”; a standard is defined as a “document approved by a recognised body, that provides, for common and repeated use, rules and guidelines or characteristics for products or released products and production methods, with which compliance is not mandatory.” (Underlining added)

¹⁰ Examples of some such standards might include those for operating protocols, some types of network interfaces, or certain other types of requirements for inter-operability or interconnection.

2.3 Drafting of CEPT decisions

CEPT as well as its members, in particular the EU Member States, need to comply with Community legislation as well as with international WTO obligations in the drafting of ERC decisions.

- (1) Action between ETSI and CEPT should be co-ordinated in view of allocation of spectrum for use in the Community.
- (2) ERC Decision must be based on non-discriminatory, objective and transparent criteria so that standardisation and frequency allocation exercises are not used to exclusively reserve certain frequencies to specific types of technologies to the detriment of other competing equivalent technologies, unless duly justified under international and Community rules.
- (3) Similar obligations bear upon standardisation bodies, including ETSI, not to use standardisation as a way to establish undue de facto exclusive priority to frequencies for certain technologies, unless duly justified under international and Community rules.

ANNEX II

ERC Decisions for the designation of frequency bands in the light of the WTO Agreement and R&TTE Directive

1 Background

1.1 The WTO Telecommunications Agreement (WTOTA) which was concluded in 1997 implies that the EU and Member States would be committed to maintain open market access and national treatment in telecommunications services (General Agreement on Trade in Services (GATS)) and would have to ensure that technical regulations would not create unnecessary obstacles to international trade (WTO Technical Barriers to Trade Agreement (TBT)).

1.2 In parallel, the R&TTE Directive (R&TTED) has been adopted by the European Parliament to be implemented not later than April 2000. This Directive specifies the essential requirements that radio equipment and terminal telecommunication equipment (radio and non radio) have to fulfil to be granted free circulation within the European Community ; these essential requirements are :

Article 3.1(a): Safety and protection of health ;

Article 3.1(b): EMC ;

Article 3.2: "The effective use of the radio spectrum allocated to terrestrial/space radio communication and orbital resources so as to avoid harmful interference¹¹" ;

Article 3.3: Additional optional requirements that are : Article 3.3(a) Interworking and Portability ; Article 3.3(b) Harm to the network or its functioning ; Article 3.3(c) Personal data and privacy ; Article 3.3(d) Avoidance of fraud ; Article 3.3(e) Emergency services access ; Article 3.3(f) Features for disabled users. The "default" situation is that there will be no additional essential requirements under any of the parts of Article 3.3, this subject will be reviewed by TCAM (see below). ETSI has been mandated by the European Commission to prepare the necessary harmonised standards (HS) that would define the essential requirements for all types of equipment (in principle a limited number of HS covering families of similar equipment should be prepared). After April 2000, the "main" way for manufacturers to demonstrate compliance with the R&TTED, will be to issue a declaration of conformity to the relevant harmonised standard. But the R&TTED provides other ways (e.g. to provide a technical construction file to a Notified Body) to demonstrate presumption of compliance with the essential requirements.

The final approval of the harmonised standards is made through publication of its reference in the OJ of the European Commission; in specific cases TCAM may be consulted, the Committee set by the European Commission to manage the implementation of the R&TTED.

Furthermore, Article 6.4 requires that where equipment is to be placed on the market in frequency band whose use is not harmonised Member States should be notified.

1.3 The existing regime to achieve the free movement of radiocommunication goods and the provision of Europe-wide services for radiocommunications depends on the MoU agreed between ETSI and ERC to provide harmonised technical regulations throughout Europe regarding availability of frequency bands, type approval requirements and border crossing procedures. A basic requirement of this MoU to fulfil these objectives is the Europe-wide implementation of national regulations based on ETSI deliverables.

Through ERC-Decisions CEPT has designated a number of frequency bands for specific applications. According to those ERC-Decisions the equipment to be used has to comply with specific ETSI standards developed in accordance with the MoU between ETSI and ERC.

1.4 Under the regime of the Licensing Directive, Administrations are allowed to specify conditions for the use of radio equipment to ensure efficient use of the spectrum and to avoid interference.

¹¹ Harmful interference is defined in the Radio Regulations as: interference which endangers the functioning of radionavigation service or of other safety services or seriously degrades, obstructs, or repeatedly interrupts a radiocommunication service operating in accordance with Radio Regulations.

2 Discussion

In the light of the provisions described in the background the compatibility of the current concept of ERC-Decisions in accordance with the ETSI/ERC-MoU with the WTO Telecommunications Agreement and the R&TTE Directive would have to be reviewed.

2.1 ETSI in cooperation with CEPT has to interpret the essential requirement of the Directive, to ensure an effective use of the spectrum so as to avoid harmful interference, in terms of physical parameters and appropriate limits to be laid down in harmonised standards, noting compliance with an harmonised standard is not the only possibility to reach compliance with the R&TTE Directive (see section 1.2).

ETSI in co-operation with ERC has already started to develop a comprehensive document (ETSI Guide 201 399) for the future development of harmonised ETSI standards under the regime of the R&TTE Directive with the aim of providing parameters/phenomena for each equipment family which would have to be considered as relevant for the fulfilment of the essential requirements.

2.2 Technical regulations in supplement to the essential requirements of the R&TTE Directive as well as the implementation of national regulations based on specific ETSI-Standards as it is requested by the ETSI/ERC-MoU should be proportionate and reasonable in order to be in line with the requirements of the WTO Telecommunications Agreement and to fulfil the legitimate objectives of the WTO Technical Barriers to Trade Agreement (TBT), as they are necessary to ensure the efficient use and to minimise the potential of interference in a specific frequency band.

2.3 Under the regime of the ETSI/ERC-MoU frequency bands are designated to a specific application/service through an ERC-Decision with reference to specific ETSI-Standards providing harmonised technical regulations throughout Europe.

The advantage of an open, transparent and non-discriminatory development of commonly used ETSI standards provided pan-European services or equipment usable in most European countries in the context of fair and competitive European markets.

3 Questions

As a result of the above discussions the following questions clearly emerge:

3.1 Under which conditions could CEPT continue with the current concept of ERC-Decisions with explicit reference to specific ETSI (voluntary) standards and simultaneously being in compliance with the requirements of the WTOTA and the R&TTE Directive?

3.2 Under which conditions could CEPT specify necessary technical regulations (in addition to the essential requirements) in future ERC-Decisions taking into account the requirements of the WTO Telecommunications Agreement and the R&TTE Directive?

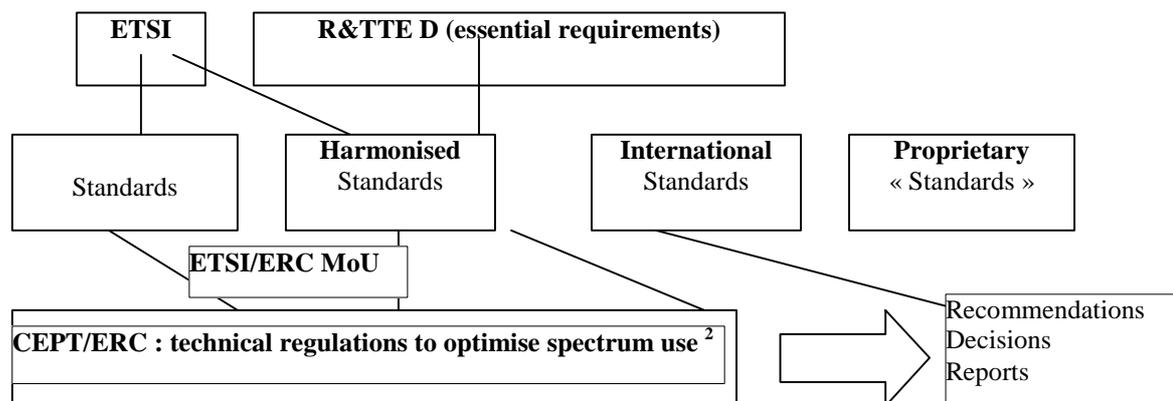
4 CEPT/ERC role under this "new legal" environment

ETSI has been mandated by the EC to prepare the harmonised standards (HS) that will give presumption of conformity to the essential requirements of the R&TTED.

As standards are developed by ETSI in close co-operation with CEPT, these HS should also be developed following the provisions of the ETSI-ERC MoU; in particular CEPT should input comments to ETSI on the draft HS regarding the essential requirement aiming at ensuring "an effective use of the spectrum so as to avoid harmful interference".

In addition to the essential requirements of the R&TTED given in the Harmonised Standards aimed to ensure free circulation of equipment in the European market, CEPT should include in the ERC-Decisions for the designation of frequency bands technical requirements that are necessary to use efficiently the radio spectrum and minimise interference. These additional requirements for the use of equipment would fall under the umbrella of the Licensing Directive.

The following flowchart defines the role of CEPT/ERC and other organisations as it can be foreseen after the introduction of the R&TTE Directive:



² Referring to Radio Regulatory Requirements

5 Future ERC-Decisions for the designation of frequency bands

As it appears from the flowchart, within and in addition to the regulatory framework of the R&TTED, CEPT/ERC has to define technical regulations that will be contained in ERC Decisions or Recommendations to ensure an efficient use of the spectrum and to promote frequency harmonisation throughout Europe.

Considerations in ERC TG2 have led to the following conclusions with regard how to formulate future ERC Decisions on the designation of frequency bands, in particular on the mentioning of standards:

The requirements of the WTOTA agreement are not very clear, nor very prohibitive with regard to regulation how to ensure the efficient use of the spectrum and could be interpreted in different ways.

The reference in ERC-Decisions to harmonised standards of ETSI (essential requirements according to R&TTE) is not against the requirements of the WTOTA. It should allow fair access to the market for equipment developed on the basis of standards of ETSI or of other standardisation organisations with open, fair, transparent and equitable process and rules of procedures as well as other international standards (see figure in section 4).

Referencing to one or more specific standard(s) (radio interface) in a frequency decision has to be looked at on a case by case basis.

- The mentioning of a specific standard is obviously not in contradiction to WTOTA as long as no other standard is excluded. The introduction of different radio interfaces (standards) in a frequency band can, however, have a significant impact on the spectrum efficiency. In cases where spectrum efficiency is threatened, the Licencing Directive is justification to prescribe a specific standard (radio interface).

It is therefore proposed, in line with the current MoU between ERC and ETSI, to designate also in future frequency bands for the use by equipment complying with specific ETSI standards. However, the use of other standards must not be excluded, as long as these are compatible. The conditions of compatibility of different standards within one frequency band are to be studied and decided within CEPT/ERC and may lead to appropriate amendments to the relevant ERC Decision.¹²

¹² It is for example proposed that the format for future Decisions which designate spectrum for a particular application should comprise a basic framework setting out the frequency bands and conditions for use and include annexes to reference relevant standards or radio interfaces that the ERC has agreed are compatible. The use of annexes allows an easy method to update Decisions and follows the procedure used for recent ERC Decisions for satellites.