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**THE WORLD RADIOCOMMUNICATIONS CONFERENCE 1997**

**(WRC-97)**

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## SUMMARY

The radio spectrum is a scarce resource, essential for the provision of radiocommunications services. Spectrum-based technologies are a major contributor to economic growth both directly and by bringing down barriers to trade in a wide range of other economic sectors.<sup>1</sup> Due to an increase in demand for spectrum as a result of economic growth, telecommunications liberalisation, and technical innovations in radio communications, decisions on the cross-border availability of harmonised radio spectrum depend on the level of development of the radiocommunications sector across nations.<sup>2</sup>

The future planning of frequency bands in the Community to a large extent depends on decisions taken at World Radiocommunications Conferences (WRCs) which are organised under the auspices of the International Telecommunication Union (ITU). At WRCs, countries decide upon frequency allocations and sharing arrangements. The next WRC (i.e. WRC-97) will be held in Geneva from 27 October to 21 November 1997.

The implications of the decisions taken at WRCs go beyond the technical requirements for the coordination of radio frequencies at the global level. In fact, decisions on radio frequencies concern issues of public policy regarding the availability and efficient use of an economic scarce resource. **It is therefore essential to relate the technical decisions taken at WRCs to broader policy aspects, for example as concerns telecommunications regulation, competition policy, and trade issues.**

In the context of Community telecommunications policy, Council Directives on GSM (Global System for Mobile communications), DECT (Digital European Cordless Telecommunications), and ERMES (European Radio Messaging System), as well as a Council Decision on S-PCS (Satellite Personal Communications Services) have been adopted which include important binding provisions for the availability and use of radio frequencies for these important second generation mobile technologies. More recently, the Commission adopted a Communication on the further development of mobile and wireless communications (UMTS: Universal Mobile Telecommunications System) which, in the context of the emerging 'wireless information society', addresses key issues, including on frequencies, in order to ensure that the Community's considerable economic stake in radio communications is safeguarded into the next Century. **Decisions on frequencies in the context of WRCs should therefore comply with the *acquis communautaire* in the policy areas mentioned above.**

In the context of the recently concluded agreement on basic telecommunications in the World Trade Organisation (WTO), it was agreed that any national spectrum management measure which has the purpose or effect of blocking, or unreasonably limiting, market access for operators from other WTO Member countries in a discriminatory manner would violate the

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<sup>1</sup> As an example, in the UK the radio sector is estimated to contribute about 1.5% of gross domestic product and 1% of employment.

<sup>2</sup> For example, penetration rates of cellular mobile radiocommunications in the Community, currently at an average level of 14%, have already reached 30% in some countries and it is anticipated that they will rise to 40-50% of the population by 2005.

GATS (General Agreement on Trade in Services), since the GATS outlaws discriminatory, anti-competitive or arbitrary frequency management decisions. WRC decisions may further downstream impact on market access commitments made under the GATS. In this context, **it is important to avoid that certain countries use the ITU or a WRC to reformulate or re-interpret their GATS market access commitments.**

In accordance with the Council's views on the Europe-wide cooperation on radio frequencies, the Member States of the European Union (EU) work out European Common Proposals for WRCs in the CEPT (European Conference of Postal and Telecommunications administrations), the inter-governmental cooperation platform on telecommunications regulation between 43 European countries. The CEPT coordination proved to be reasonably effective at the previous conference in 1995 which adopted nearly all 86 European Common Proposals. However, it should be mentioned that the CEPT coordination focuses on items on the WRC agenda but lacks a mechanism to deal with proposals which are submitted at the conference itself and concern issues for which no coordinated position has been developed. This became evident when a proposal was submitted at the WRC-95 to have frequencies allocated to broadband satellite services (i.e. the so-called Teledesic issue).

The WRC-97 will deal with an extensive agenda of technically detailed issues, for which nearly 160 European Common Proposals have been adopted by the CEPT. For the most part, the WRC-97 agenda items relate to inconclusive results of the WRC-95 on important items which include the mobile satellite and fixed satellite service and are therefore expected once more to become items of major technical and political discussion. In addition, proposals for the agendas of forthcoming WRC conferences in 1999 and 2001 have been formulated. In this respect, and in accordance with the Community policy on the future of wireless communications, the CEPT will propose to have the WRC-99 deal with the frequency requirements of third generation mobile technologies (i.e. UMTS) and a failure to have it become an agenda item at the WRC-99 would have major consequences for the European stakes in the mobile sector.

Against this background, and considering that **the availability of radio frequencies is a *sine qua non* for the further development of the Community's radiocommunications sector**, the purpose of the present Communication is to inform Council and Parliament about the issues at stake at WRCs, to identify how WRC decisions relate to Community policy on radiocommunications, and to propose the following necessary improvements:

- the Community should be more closely involved in the WRC process, in particular as concerns the support for CEPT work, to liaise with industry, to raise political awareness, and to assist in establishing and maintaining contacts with third countries in order to ensure that WRC results are fully compatible with the *acquis communautaire*, telecommunications and other policy objectives;
- the Commission or Member States should call for the establishment of a common Community position:
  - a) in case Member States disagree amongst themselves on proposals submitted to the conference which affect the Community as a whole;
  - b) when Member States disagree with other CEPT countries on such proposals;

c) when CEPT proposals do not comply with Community interests; or

d) when a common Community position can contribute to strengthen the CEPT proposals in discussions with third countries.

- industry at Community level should be more vocal in contributing to the development of positions to be worked out by the CEPT and should participate at WRCs where there is a need for on-the-spot consultation; and
- the positions worked out prior to and at the conference itself are appropriately endorsed by industry and political instances.

## 1. INTRODUCTION

The further development of the radio communications sector in the Community depends to a large extent on national, regional, and international decisions on the availability and usage of radio frequencies. For example, penetration rates of cellular mobile radiocommunications in the Community have already reached 30% in some countries and it is anticipated that they will rise to 40-50% of the population by 2005. In order to meet the demand for such radiocommunications services, frequencies need to be made available.

The future planning of frequency bands in the European Union depends on the decisions taken at World Radiocommunications Conferences (WRCs<sup>3</sup>). These are held every two years under the auspices of the International Telecommunication Union (ITU), the specialised agency of the United Nations for telecommunications. The WRCs decide whether, how, and under what conditions frequency requirements for current and planned radiocommunications systems can be accommodated.

The next WRC will be held in Geneva from 27 October to 21 November 1997.

The implications of the decisions taken at WRCs go beyond the technical requirements for the coordination of radio frequencies at the global level. In fact, decisions on radio frequencies concern issues of public policy regarding the availability and efficient use of an economic scarce resource. It is therefore essential that public policy objectives are taken into account in the technical decisions taken at WRCs, for example as concerns telecommunications regulatory and trade policy.

All 15 Member States of the European Union are full members of the ITU. The European Community has the status of observer within the ITU. On the basis of its existing observership status within the ITU, the Community has participated most recently at the WRCs in 1992 and 1995.

As requested by Council<sup>4</sup>, common European positions in relation to the use of the frequency spectrum concerning international frequency harmonisation, in particular with regard to the ITU and its relevant WRCs, should be worked out by the Member States using mechanisms set up by CEPT (European Conference of Postal and Telecommunications administrations).<sup>5</sup> Within CEPT, the Conference Preparatory Group (CPG) co-ordinates the preparation for WRCs through the adoption of so-called European Common Proposals (ECPs) and provides

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<sup>3</sup> Prior to 1993, these conferences were called World Administrative Radio Conferences (WARCs). The text will however refer to WRCs which does not make a difference of substance.

<sup>4</sup> Council Resolution of 28 June 1990 on the strengthening of the Europe-wide cooperation on radio frequencies, in particular with regard to services with a pan-European dimension, 90/C 166/02, OJ No C166/4, 7.7.90.

<sup>5</sup> CEPT comprises the following 43 European (including all 15 EU) countries: Albania, Andorra, Austria, Belgium, Bulgaria, Bosnia and Herzegovina, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Former Yugoslav Republic of Macedonia, Moldova, Monaco, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, San Marino, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom, Vatican City.

its members with standpoints with briefing material and proposed positions (the so-called CEPT Briefs) which together should ensure European coordination at WRCs.

The Community is represented in the CPG by the Commission which has the status of Counsellor. The Commission ensures that the ECPs to be adopted comply with the *acquis communautaire*, in particular as concerns the frequency directives on GSM, DECT, and ERMES<sup>6</sup>. Compatibility of WRC decisions with the Community's telecommunications regulatory framework and other relevant policies, such as the Community's obligations under the international trade regime, also needs to be ensured.

WRC decisions may influence Community policy on radiocommunications. For example, as a result of WRC decisions on the availability of frequencies for satellite personal communications services (S-PCS), the Council adopted on 6 March 1997 a Decision on S-PCS in order to facilitate the introduction of such services in Europe while, at the international level, a MoU on GMPCS (Global Mobile Personal Communications Services by satellites) is being formalised. On the other hand, the emerging European policy with respect to the transition of second generation, such as GSM and DCS-1800, to third generation mobile technologies, such as UMTS (Universal Mobile Telecommunications System), should include firm action with respect to WRCs in order to secure sufficient frequencies. In this respect, Community policy should result in WRC decisions.

For the last WRC in 1995, 40 of the 43 CPG member countries, including all EU Member States, co-signed 87 ECPs most of which were adopted by the conference and which support the further development of Europe's radiocommunications sector. For the WRC-97, the CPG is expected to adopt around 160 ECPs on virtually all agenda items.

In order to ensure common Community and wider European positions at the WRCs which safeguard the Community's interest in the international arena, the aim of this Communication is, firstly, to:

- inform Council and Parliament about the issues at stake at WRCs,
- identify how WRC decisions relate to Community policy on radiocommunications, and
- describe how Europe is preparing its positions.

Secondly, to propose complementary actions with the aim to:

- raise awareness at the political level and at the level of industry as to the issues and interests at stake at WRCs and to achieve a greater level of involvement and support for the positions worked out; and
- ensure that the decisions taken at WRCs comply with the *acquis communautaire* and relevant Community policies, in particular on telecommunications regulation and trade.

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<sup>6</sup> EU Member States are required under Community law to ensure that international agreements which they enter into, (which would include the WRC), are compatible with Community law.

## 2. BACKGROUND TO SPECTRUM MANAGEMENT AND WORLD RADIOCOMMUNICATIONS CONFERENCES

### 2.1 Why spectrum management is important

The radio spectrum<sup>7</sup> has to be managed and carefully planned in order:

- to ensure the proper functioning of radiocommunications services;
- to avoid transmission interference;
- to ensure a predictable frequency environment which allows for investment in radio equipment; and
- to achieve economies of scale through international coordination of frequencies for cross-border or global networks and services or for services provided in contingent areas.

Spectrum management requires a careful balancing between the interests of existing users and new candidates (e.g. analogue mobile and broadcasting services vs. digital services, terrestrial vs. satellite communications) as well as amongst users (e.g. civil vs. military and other government use, incumbent vs. 'new' operators). This often results in trade-offs between economic interests, national security considerations, and international obligations.

The technical coordination of the radio spectrum was relatively easy as long as enough spectrum was available to accommodate all applicants. However, economic growth, greater competition in telecommunications and broadcasting, and technical innovation have fuelled demand for spectrum. Such demand is particularly acute for private mobile radio, mobile telephony (i.e. GSM, DCS-1800, S-PCS), terrestrial broadcasting, and fixed radio communications links. In the field of satellite communications, the systems which appear to offer great potential in terms of service package, number of subscribers, and geographical coverage concern in particular S-PCS and, more recently, decisions have been made for the use of the higher frequency bands, i.e. 19/29 GHz, by broadband radio communications services, including voice, data, video.

Beyond the technical requirements for the coordination of the radio spectrum, frequency management increasingly also relates to regulatory issues and trade policy.

At the time of the negotiations on Basic Telecommunications Services conducted in the framework of the General Agreement on Trade in Services (GATS) under the auspices of the WTO,<sup>8</sup> it was recognised that, although frequency management is not per se incompatible with the GATS principles, frequency allocation and assignment measures or technical

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<sup>7</sup> The radio spectrum is usually taken to comprise that part of the electromagnetic spectrum between frequencies of 3 kHz and 3000 GHz. Different frequencies have different characteristics that make them suited for particular applications. The limits of use of the radio spectrum are set by propagation factors and other technical criteria.

<sup>8</sup> WTO/GATS Agreement on Basic Telecommunications Services, concluded on 15 February 1997: 69 Member countries of the World Trade Organisation (WTO) -- including the European Community and its Member States -- reached agreement on the liberalisation of the global market for telecommunications, currently estimated to be worth more than 600 billion US dollar.



coordination procedures taken by WTO Member countries for radio-based systems may operate as disguised barriers to trade.

Radiocommunications operators, in particular in the area of satellite communications, would prefer to have exclusive access to certain frequency bands without having to share that spectrum with other (competitive) operators since technical provisions to allow for shared spectrum usage makes service provision significantly more expensive. However, the exclusive assignment of frequencies at the national and international level to a single operator is unlikely for economic, political, and cultural reasons. In other words, the use of radio frequencies is in essence a question of public policy concerning the efficient use of an economic scarce resource. It is therefore essential that technical decisions on the use of radio frequencies are set against wider public policy objectives.

## 2.2 The international regulation of the radio spectrum

WRCs decide upon the future frequency allocations and sharing arrangements which will effect the potential for telecommunications development<sup>9</sup>. All countries at WRCs are therefore pressing claims, often conflicting, upon scarce radio frequencies and orbital positions. WRCs result in a Final Act, embodying a regulation which in principle will be binding on all ITU members<sup>10</sup>. Member countries may, however, make reservations indicating parts of the Final Act which they will not or will only partially implement.

The aim of the ITU regulations<sup>11</sup> is to provide the minimum treaty-level agreements required to permit the existing global telecommunications system to function, and to facilitate the development and application of new technologies. As radio waves cannot be contained within national boundaries, it is essential that governments agree at both a global and regional level on which radiocommunications services will use which frequencies, as well as on the rules and procedures to avoid harmful interference, for example between terrestrial radio stations and earth orbiting satellites.

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<sup>9</sup> How systems eventually enter the market through a series of international, regional, and national agreements can be illustrated with DCS-1800. At the WRC-92, decisions were made concerning the future global use of the radio spectrum by terrestrial mobile communications and satellite based communications systems. Consequently, decisions were made at the European level in the CEPT framework to allocate certain frequency bands to DCS-1800. At the level of the EU, DCS-1800 is considered to pave the way for the provision of personal communications services in the emerging Information Society and Member States have been required by Directive 96/2/EC to allocate licenses for the deployment of such systems. At the national level, certain Member States have in fact assigned spectrum to DCS-1800 operators while in other Member States the identified bands first need to be cleared since they are still in use by incumbent telecommunications organisations or the military.

<sup>10</sup> Currently, the ITU has 186 members, including all CEPT member countries.

<sup>11</sup> The basic instrument of the ITU is the International Telecommunication Convention, which has international treaty status when ratified. Regulations and plans for spectrum allocation and usage, known as the ITU Radio Regulations, are agreed through World Radiocommunications Conferences (WRCs), which are organised on a biannual basis. The frequency allocations in the ITU Radio Regulations for satellite communications services are divided amongst their technical transmission (and not regulatory) characteristics, the most important being the fixed, mobile, broadcasting, and radiodetermination satellite services.

The ITU Radio Regulations embody these agreements.

Examples of issues discussed at WRCs include:

- To what extent are (additional) frequency allocations required for new or existing radiocommunications systems, such as mobile and satellite communications and broadcasting?
- In which part of the frequency spectrum can new allocations be accommodated?
- What impact do frequency allocations have on existing or planned systems in terms of interference and sharing possibilities and which system should have priority over the other in the use of the spectrum?

The Community has the status of observer within the ITU but its participation is limited to the attendance of WRCs and meetings of the ITU study groups. On the basis of its existing observership status, the Community has most recently participated at the WRCs in 1992 and 1995.

National frequency allocation<sup>12</sup> tables are based on the ITU Radio Regulations, although minor national variations may sometimes occur. Rather, the national tables usually clarify the user (or users) to whom the bands are allocated. In the Member States of the EU, it is the radio communications department of the National Regulatory Authority for telecommunications (NRA) which manages nearly all the civil radio spectrum and is responsible for spectrum allocated for military use and certain other government departments and bodies. These “radio authorities” are responsible for enforcement against illegal transmitters, ensuring compliance with license conditions, and resolving complaints about interference; they usually also represent the national interests in international fora such as the CEPT and ITU.

### 2.3 The European approach towards WRCs

Beyond the global allocation of frequency bands, agreement at regional level (in Europe within the CEPT) is equally important on the precise identification of frequency ranges within the globally established bands which particular services and systems will use. This ensures both avoidance of interference between different systems, and, in a European Community context, that Europe-wide service provision and operation, supported by roaming, is enabled.

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<sup>12</sup> *Allocation* (of a frequency band): entry in the Table of Frequency Allocations of a given frequency band for the purpose of its use by one or more terrestrial or space radiocommunication services or the radio astronomy service under specified conditions. *Allotment* (of a radio frequency or radio frequency channel): entry of a designated frequency channel in an agreed plan, adopted by a competent conference, for use by one or more administrations for a terrestrial or space radiocommunication service in one or more identified countries or geographical areas and under specified conditions. *Assignment* (of a radio frequency or radio frequency channel): authorisation given by an administration for a radio station to use a radio frequency or radio frequency channel under specified conditions. It is important to note that national administrations, and not the ITU or WRCs, actually determine which operators may use certain radio frequencies or radio frequency channels.

In accordance with Council Resolutions 90/C 166/02<sup>13</sup>, 92/C 318/01<sup>14</sup>, and the Council Conclusions of 7 December 1993<sup>15</sup>, the Commission is required to give full consideration to the mechanism of decisions of the European Radiocommunications Committee (ERC) of the CEPT (European Conference of Postal and Telecommunications Administrations) as the primary method of ensuring the provision of the necessary frequencies for new Europe-wide radio services.

As to the international dimension of the regulation of the radio spectrum, Council Resolution 90/C 166/02 considers as a major policy goal developing common European positions in relation to the use of the frequency spectrum concerning international frequency harmonisation, in particular with regard to the ITU and its relevant WRCs, using mechanisms set up by CEPT.

These common European positions are developed within the Conference Preparatory Group (CPG) of the CEPT. It co-ordinates the preparation for WRCs through the adoption of so-called European Common Proposals (ECPs), which are co-signed by the individual CPG administrations, and the CEPT Brief which gives the CEPT line on each agenda item, together with background information and, where appropriate, comments on proposals from other countries. This is intended to ensure that Europe speaks with one voice in negotiating its interests in radiocommunications at WRCs.

Taking into account that WRCs take place every two years, the CEPT established in 1994 the CPG as a permanent autonomous working group to coordinate the preparations for WRCs. The preparation of ECPs is of a highly technical nature carried out by several hundreds of frequency experts of the CPG member countries. It not only requires in-depth knowledge of the current and planned use of the frequency spectrum at the European level but also at the global level in order to formulate positions on third country proposals.

The Commission represents the Community in the CPG as Counsellor, though the EU Member States participate in their own right. It ensures that the common positions to be adopted comply with the *acquis communautaire* and are in accordance with Community policies on, in particular, telecommunications and trade. The Commission also closely scrutinises the balance to be struck between representation of the interests of the Community in the formulation of positions to be defended by the CPG which comprises 43 countries with very differing levels of radiocommunications development.

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<sup>13</sup> Council Resolution of 28 June 1990 on the strengthening of the Europe-wide cooperation on radio frequencies, in particular with regard to services with a pan-European dimension, 90/C 166/02, OJ No C166/4, 7.7.90.

<sup>14</sup> Council Resolution of 19 November 1992 on the implementation in the Community of the European Radiocommunications Committee Decisions, 92/C 318/01, OJ No C318/1, 4.12.92.

<sup>15</sup> See Council press release 10910/93 224-G.

### 3. WRC DECISIONS IN THE CONTEXT OF COMMUNITY POLICIES

#### 3.1 Radio frequencies and Community policies on radiocommunications

The objectives of Community policy with regard to radio frequencies<sup>16</sup> are:

- to secure required radiocommunications frequencies for the implementation and operation, as far as possible in competition, of Community-wide and Europe-wide trans-European systems and services to foster the creation of an internal market for radiocommunications equipment and services. The adoption of Council Directives on GSM<sup>17</sup>, DECT<sup>18</sup>, and ERMES<sup>19</sup> were inspired by this objective.
- to achieve Community-wide markets in order to allow economies of scale for the introduction of new equipment, in particular equipment produced according to European standards worked out by the European standardisation system. This objective will be essential in many cases if the Community wants to make full use of the work undertaken in the European Telecommunications Standards Institute (ETSI).
- to ensure common Community and wider European positions at the WRCs, in order to safeguard the Community's interest in the international arena.

As stated above, and at the request of the Council, these common European positions are worked out in the framework of the CPG and not at the level of the Community. However, considering that the availability of frequencies is a *sine qua non* for the further development of Europe's radiocommunications sector, the Community's political weight should be employed to its full extent in order to ensure that the relevant policies are taken into account in the deliberations at the level of the CPG and WRCs.

In addition to the availability of frequency bands, the development of mobile, satellite and wireless services in the Community should be seen in a wider context and also depends on, *inter alia*:

- the *liberalisation* of telecommunications markets in the Community by 1 January 1998 which is stimulating the *demand for spectrum* (e.g. considerable growth of mobile

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<sup>16</sup> A New Approach to the co-ordination of radio frequencies in the Community, Communication from the Commission concerning a proposal for a Council Decision on the implementation by the Member States of measures concerning radio frequencies, COM(93) 382 final, 10.9.93.

<sup>17</sup> Council Directive of 25 June 1987 on the frequency bands to be reserved for the co-ordinated introduction of public pan-European cellular digital land-based mobile communications in the European Community (GSM), (87/372/EEC; OJ L 196/85, 17.07.1987).

<sup>18</sup> Council Directive of 3 June 1991 on the frequency bands designated for the co-ordinated introduction of digital European cordless telecommunications into the Community (DECT), (91/287/EEC; OJ L 144/45, 08.06.1991).

<sup>19</sup> Council Directive of 9 October 1990 on the frequency bands designated for the co-ordinated introduction of pan-European land-based public radio paging in the Community (ERMES), (90/544/EEC; OJ L 310/28, 09.11.1990).

networks such as GSM and DCS-1800 in terms of subscribers, network providers, and coverage);

- the degree to which industry develops *new radiocommunications systems* in order to meet the requirements for communications in the emerging Information Society (e.g. the development of so-called third generation mobile systems such as UMTS and S-PCS);
- the Community's policy with respect to the *cross-border provision and mutual recognition of telecommunications and radiocommunications equipment* (e.g. standardisation and CE marking policies);
- social and cultural *policies with respect to the dissemination of information and broadcasting services* (e.g. data protection and cross-border television policies); and
- *the Community's trade relations* with third countries in terms of market access commitments in view of its obligations under the international trade regime (e.g. the WTO Agreement).

Taking into account that the availability of harmonised spectrum across the Community and more widely throughout the CEPT countries is a prerequisite for the pan-European provision of mobile, fixed, and satellite radiocommunications services and related equipment, it is essential to ensure that the decisions to be taken by WRCs are in accordance with Europe's interests in the radiocommunications sector.

### 3.2 Frequencies in relation to other Community policies

Community policy on radiocommunications is both influenced by WRC decisions and should aim at obtaining results at WRCs which are consistent with those policy objectives. This means that in approaching frequency issues, the Community must look beyond the Member States obligations to ensure timely implementation of frequency decisions taken at WRCs, in order to establish clear objectives for the Community at WRCs. Those objectives will be established in the light of current policy priorities<sup>20</sup>.

#### *Community policy on S-PCS*

Following frequency allocations by the WRC-92, satellite personal communications services (S-PCS) have been licensed in the United States and launch programmes are underway. These services be soon commercially available and have the potential to offer voice telephony on a world-wide basis with a hand-held terminal. On the basis of a Communication on S-PCS<sup>21</sup>, Council adopted in December 1993 a Resolution<sup>22</sup> emphasising the importance of

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<sup>20</sup> Including but not limited to policies related to: second generation and third generation mobile communications systems and satellite communications (GSM, DECT, ERMES, DCS-1800, UMTS, S-PCS), broadcasting, radionavigation and positioning, Earth observation applications.

<sup>21</sup> Communication from the Commission on satellite personal communications, COM(93) 171 final, 27.04.93.

<sup>22</sup> Council Resolution of 7 December 1993 on the introduction of satellite personal communications services in the Community (93/C 339/01; 16.12.93).

developing a Community policy in this area and inviting the Commission, *inter alia*, to investigate the significance of satellite personal communications in the formulation of Union policies for telecommunications, space, trade, industry, regional development, and, where necessary, to propose appropriate measures and/or actions. As proposed by the Commission<sup>23</sup>, Council adopted on 6 March 1997 a Decision with the aim of establishing by July of 1997 a common selection of satellite systems for such services and the adoption of harmonised conditions for services, equipment, interconnection, numbering, and gateway access operating in determined frequency bands.<sup>24</sup>

Furthermore, since S-PCS services will be global, it was decided at the ITU World Policy Forum of 1996 to set up a MoU (i.e. GMPCS MoU) to address international regulatory issues, such as type approval and marking, terminal licensing, access to traffic data, and customs issues.

S-PCS is again on the agenda of the WRC-97. It is important to ensure that any new WRC decisions regarding S-PCS comply with the Community policy established thus far.

### *Community policy on UMTS*

The Commission Green Paper on mobile and personal communications<sup>25</sup> identified the continued support for the evolution towards personal communications and the need to ensure a smooth transition towards UMTS as important pre-requisites for providing Europe with a long-term perspective for the telecommunications sector. Today, broad consensus exists as to the important role of UMTS in establishing global information infrastructures. It should be noted that the WRC in 1992 identified frequency bands for FPLMTS (Future Public Land Mobile Telecommunications Systems)<sup>26</sup>, whose European version is UMTS. As was the case with the introduction of GSM in the 1980s, important regulatory issues (e.g. licensing, numbering, and frequency band allocation) for UMTS need to be addressed in the near future in order to create the conditions for investment and a predictable environment for the alliances likely to emerge to develop UMTS.

To this end, the Commission has initiated the set-up of a UMTS Forum, the objective of which is to contribute to the elaboration of a European policy for the transition towards the UMTS environment. The UMTS Forum will provide its recommendations, including on frequency requirements for UMTS, in the summer of 1997. In parallel, the Commission has

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<sup>23</sup> Proposal for a European Parliament and Council Decision on an action in the field of satellite personal communications services in the European Union, COM(95) 529 final, OJ C 15/6, 20.1.96.

<sup>24</sup> Decision No 710/97/EC of the European Parliament and of the Council on a coordinated authorisation approach in the field of satellite personal-communications services in the Community, OJ L105, 23.4.97.

<sup>25</sup> Towards the personal communications environment: Green Paper on a common approach to mobile and personal communications in the European Union, COM(94) 145 final, 27.04.94.

<sup>26</sup> Recently, the ITU changed the acronym FPLMTS into IMT-2000 (International Mobile Telecommunications with 2000 referring to the year IMT is likely to be implemented).

initiated the political debate on the possible need for further regulatory action as regards UMTS in a Communication<sup>27</sup> which outlines the regulatory and strategic issues at stake.

The frequency bands identified at the WRC-92 for UMTS are likely to be insufficient to accommodate the requirements in Europe in the longer term. It is therefore important to ensure that Europe formulates its position with regard to frequency requirements for UMTS as a matter of urgency in order to seek additional frequency allocations at forthcoming WRCs.

### *Community policy with respect to Research and Technological Development*

The Commission proposal for the Fifth Framework Programme of the EC for RTD Activities (1998-2002)<sup>28</sup> includes research activities on the development of generic earth observation technologies, notably satellite technologies for environmental monitoring and resources, and ecosystem management which are closely related to other Community policies, such as agriculture, fisheries, environmental, etc.. R&D activities on earth observation are also called upon in the broader context of the Communication to the Council and the European Parliament on the European Union and Space: Fostering Applications, Markets and Industrial Competitiveness<sup>29</sup>.

At this critical stage of the further opening up of the potential of space research and earth observation, it is important that the WRC negotiations closely follow the potential development of these initiatives, and do not act as a detriment to stakeholders in their successful application (industry, users, research organisations, and international agencies, such as ESA and EUMETSAT). It is particularly important to identify the necessary frequencies for this use of general interest and to avoid possible impediments restricting such optimum use.

### *Community competition policy*

Directive 96/2/EC on mobile and personal communications<sup>30</sup> has set out the basic framework regarding the attribution of frequencies. Under this Directive, Member States must publish every year or make available on request, the allocation scheme of frequencies reserved for mobile and personal communications services, according to the scheme set out in the annex of the Directive. Furthermore, Directive 96/19/EC on the implementation of full competition in telecommunications markets<sup>31</sup> states the obligation of the Member States not to refuse licenses as far as frequencies are available. The Treaty competition rules do not distinguish between mobile systems based on standards developed by European bodies, such as ETSI, or

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<sup>27</sup> Communication to the European Parliament and the Council on the further development of mobile and wireless communications in Europe -- challenges and choices, COM(97)217 final, 29.05.97.

<sup>28</sup> COM(97)142, 30.04.97.

<sup>29</sup> COM(96)617, 04.12.96.

<sup>30</sup> Commission Directive of 16 January 1996 amending Directive 90/388/EEC with regard to mobile and personal communications, 96/2/EC, OJ L 20/59, 26.01.96.

<sup>31</sup> Commission Directive of 13 March 1996 amending Commission Directive 90/388/EEC with regard to the implementation of full competition in telecommunications markets, 96/19/EC, OJ L 74/13, 22.03.96.

other systems. Priority to European Standards must be given only where provided for in Community legislation.

The aim of the competition rules as regards frequency allocation is to ensure that choices in this area do not privilege technical solutions at the expense of competing technologies, which could better match the needs of the users in the Community where such an allocation would limit production, output or technical development in the sense of Article 86(c).

### *Community policy with respect to trade*

The GATS WTO GBT agreement will open up national markets to foreign competition, allow foreign participation in national telecommunications companies, and provides for an international framework of regulations.

It should be noted that the GATS obligations apply to the processes of domestic frequency management and licensing. As stipulated in the GATS context<sup>32</sup>, the sovereign right of every WTO Member to manage frequencies should be administered in an objective, transparent, not discriminatory and not more burdensome than necessary manner.<sup>33</sup> Furthermore, most countries have committed themselves explicitly to manage frequencies in an objective, timely, transparent, and not-discriminatory manner and to make publicly available the current state of allocated frequency bands.<sup>34</sup> Therefore, any national spectrum management measure which has the purpose or effect of blocking, or unreasonably limiting, market access for operators from other WTO Member countries in a discriminatory manner would violate the GATS, since the GATS outlaws discriminatory, anti-competitive or arbitrary frequency management decisions.<sup>35</sup> Nevertheless the GATS recognises that frequency management policies, if implemented in accordance with these provisions, do not *per se* constitute a disguised barrier to trade.

As a result, frequency allocations to radiocommunications services within the ITU and WRC context should be distinguished from market access commitments under the GATS. However, the GATS obligations do apply to regional and national frequency management procedures, -- i.e. to the process by which countries license and assign spectrum to radiocommunications operators --, as well as to the technical stage of getting a satellite or satellite system fully coordinated at the international level. WRC decisions may further downstream impact on market access commitments made under the GATS. In this context, it is important to avoid that certain countries use the ITU or a WRC to reformulate or re-interpret their GATS market access commitments. At the same time, WRC decisions should take into account the impact such decisions eventually may have on market access commitments under the GATS.

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32 See: Chairman's Note on market access limitations on spectrum availability.

33 See Article VI (Domestic Regulation) of the GATS.

34 See Reference Paper on regulatory principles as attached for instance to the EC schedule of commitments on basic telecommunications services.

35 See: Reference Paper on regulatory principles; most countries have included these principles in their offer as a binding commitment, and Article VI (Domestic Regulation) of the GATS.



#### 4.1 Analysis of current approach and proposals for improvement

##### *The CPG coordination*

At the WRC-95, on the basis of a last-minute proposal which became to be known as the Teledesic issue, the conference was requested to allocate frequencies to the non-geostationary fixed-satellite service (NGSO FSS i.e. basically satellite broadband services) which was not on the agreed agenda and for which the CPG had not formulated a position. The CPG argued that time was needed to examine which impact allocations to NGSO FSS would have on existing and planned networks in Europe and that therefore WRC-95 should postpone the discussion until 1997. However, the CPG countries were outvoted by the majority of WRC delegations and had to co-operate in facilitating the introduction of NGSO FSS.<sup>36</sup>

It should be noted, however, that the mechanism of the coordination of national positions in the CPG proved to be reasonably effective at the WRC-95: 40 member administrations of the CPG<sup>37</sup>, including all EU Member States, negotiated during the WRC conference on the basis of 87 specific ECPs covering all agenda items. Most of these ECPs were adopted by the conference, a fact that will further strengthen the development of Europe's radiocommunications sector.

There are several advantages for the European Community to co-ordinate positions within the framework of the CPG:

- the fact that the CPG comprises 43 European countries has the potential that the use of frequencies is harmonised beyond the level of the Community;
- the technical expertise as regards the use of frequencies in Europe lies primarily in the national administrations which are represented in the CPG and which has the political support of the Member States;
- the coordinated point of view at WRCs of potentially 43 European countries adds value to the position of the Community or of individual CPG member countries alone (i.e. strength in numbers);

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<sup>36</sup> Eventually, detailed negotiations with in particular the US and Japan led to a reduction of the requested amount of frequencies for NGSO FSS and to make these allocations provisional pending sharing studies. WRC-97 would then have to decide on actual allocations in the light of these sharing studies. Furthermore, a number of CPG members took reservations on this issue which were included in the Final Acts of the conference.

<sup>37</sup> Only Albania, Bosnia-Herzegovina and Russia did not sign the ECPs.

- the radiocommunications industry, which increasingly aims for the European rather than the Community market, is invited to be involved in the preparation of common positions by the CPG.

However, it appears on the basis of experience that a number of improvements should be introduced in order to ensure appropriate representation of Europe's interests in radiocommunications vis-à-vis WRCs.

### *Raising political awareness*

The fact that the agenda for WRCs appears to deal with technical issues alone may explain the rather low level of interest from the part of political instances of the CEPT members, which normally refer to their technical frequency departments to deal with these issues, both in preparing for and negotiating at WRCs.

In the context of the WRC-95, the impression at the political level on in particular NGSO FSS/Teledesic issue was given that, on the one hand, the CPG delegations were obstructing frequency allocations to a new radiocommunications systems and that, on the other hand, the European interests were not adequately secured.

As mentioned, the CPG had not developed a position on NGSO FSS since it was not included on the agenda. For this reason, it appears that the extent to which Europe's industry would be affected by allocations to NGSO FSS had not been discussed with the telecommunications ministries. Political awareness on the issue was only raised after the telecommunications ministries were contacted by NGSO FSS proponents who requested a more favourable attitude by the European delegations towards the proposal.

This illustrates the need to ensure that decisions on frequency are not confined to a technical level, but that full information is provided at a political level about the European positions to be negotiated and the possible consequences of WRC decisions for telecommunications regulation and trade policy. A cohesive and pro-active approach towards WRCs should be put in place which not only appropriately secures Europe's own interests in radiocommunications but which is also capable of adequately responding to issues other negotiating parties attach importance to. In this context, it is equally important for strategic reasons to ensure a common Community position to proposals which are of less importance to the Community. This is essential to obtain the necessary political support on issues of priority to the Community and to facilitate trade-offs with third countries in areas of lesser importance to the Community.

### *Involvement of industry*

The current arrangements for preparing for WRCs could be further strengthened by mobilising industry to express its current and planned priorities for radiocommunications and, consequently, to cooperate in the formulation of common positions with respect to expected frequency requirements. This should result in articulated support by industry for any common positions worked out, both at and following WRCs.

Industry is not in a position to endorse the ECPs which are developed, nor is its participation in national delegations to WRCs sufficient for on-the-spot consultations. In order to consult industry on the preparations for the WRC-97, the Commission Services has organised two

consultation meetings in the run-up to the WRC-97 from which the following conclusions can be drawn:

- industry believes that the preparatory work carried out by the CPG is useful;
- individual companies participate in the development of ECPs but only when the issue is of direct concern;
- industry sees a need for further political support to the positions worked out by the CPG;
- industry believes that the preparatory lobby of third countries by the United States has been an important factor in their success at WRCs; European action in this respect needs improvement;
- industry sees advantages in participating at WRCs but does not have the resources;
- no industry platform exists which could rapidly assess the positions worked out by the CPG or the development of negotiations at WRCs.

### *Relations with third countries*

Within the CPG, it was agreed that Europe should take the initiative at the WRC-97 rather than being forced on the defensive by having to react to other countries' proposals. Therefore, initiatives should be developed to identify their positions on the various agenda items and to ensure that full awareness exists as to the issues at stake. The promotion of innovative technologies, in particular by the European radiocommunications industry, should avoid that WRC decisions lead to the introduction of distortions towards technologies in the market. Regarding developing countries, the exchanges in this field would be considered in the general framework of existing cooperation activities.

For this purpose, a number of informal contact groups have been established to ensure a dialogue between negotiating parties on their preparations for the WRC-97. The participants will exchange information on the development of their proposals, provide each other with comments and take account of such comments in the further development of their proposals. With this process it is hoped that a certain level of approximation of the proposals can be achieved already before the conference, and that the number of contentious issues to be resolved at the conference can be minimised.

It should be mentioned that contacts with third countries require levels of resources which can constitute a considerable burden for administrations and industry alike.

### *Involvement of the Community*

Despite the relevance of WRCs for Community policy, and due to a lack of legal instruments and political support, the involvement of the Community in advance of and at WRCs has been rather limited. Nevertheless, the Community could and should play a role of importance, in particular:

- to support the CPG in the working out of common positions and to assess these in the context of Community policies;
- to be instrumental in mobilising industry for the WRC process;

- to raise political awareness and support regarding the issues at stake and the objectives to be reached;
- to ensure Community coordination with respect to the common positions to be worked out prior to and at the WRCs;
- to assist and participate in contacts with third countries.

### *Proposals for improvement*

Against the background sketched above, a number of recommendations can be made:

- It would be appropriate to enhance political awareness and raise the necessary backing for the positions worked out on the basis of the agreed agenda items.
- Industry should be more vocal in its support for the positions worked out by the CPG and should participate at WRCs where there is a need for on-the-spot consultation.
- Preparatory activities of third countries with respect to WRCs should be closely monitored, for example in order to minimise the risk of surprise at the conference itself (i.e. in case of last-minute proposals or the emergence of non-agreed agenda items).
- Finally, the Community should be more closely involved in the WRC process, in particular as concerns the support for CPG work, to liaise with industry, to raise political awareness, and to assist in establishing and maintaining contacts with third countries. Also, Community coordination will be essential in order to formulate a Community position in areas where the views of EU Member States may initially diverge (e.g. last-minute proposals by third countries), are not in agreement with other CPG countries, or are not fully aware of the potential impact on Community policies.

## 4.2 The WRC-97 agenda

### *Agenda overview*

During the four week period of the WRC-97, the negotiating countries will have to deal with an extensive agenda comprising of a large number of technically detailed issues, such as:

- simplification of the Radio Regulations;
- High Frequency broadcasting service;
- maritime mobile and maritime mobile-satellite service;
- global maritime distress and safety system;
- aeronautical mobile service;
- mobile satellite and fixed satellite services;
- Earth exploration-satellite service;

- space research service;
- fixed service for high-density applications.

An overview of main issues at the agenda<sup>38</sup> of the WRC-97 is provided in Annex I.

For the most part, these issues do not concern new telecommunications services, but rather services whose frequency requirements of which may have altered over time or as to which the sharing criteria with other services need to be refined.

The CPG has developed 160 ECPs on virtually all the agenda items at WRC-97 and it is expected that, as was the case in 1995, the majority of member countries of the CPG will co-sign these ECPs. At the industry consultation meetings, industry involvement in the formulation of some of those positions was noted. It should therefore be assumed that, under the current arrangements, both the CPG member administrations as well as industry will support the common positions developed.

These common positions are developed on the basis of the agreed agenda and do not cover any issues which other negotiating parties may put forward at the conference itself. At this point in time, however, no information is available which indicates that other major issues will be raised at the last minute; nevertheless continuous monitoring of third country preparations is required.

#### *Recurring issues in relation to the WRC-97 agenda*

The WRC-97 will discuss two issues which have caused considerable debate at the previous conferences.

Plans exist for the provision of NGSO FSS, such as proposed by the US-based Teledesic consortium. These networks are presented as the satellite equivalent to fibre-optic cable for rural and remote areas which do not have access to terrestrial broadband facilities. Europe, however, has several thousands terrestrial wireless fixed links operate in the frequency bands (19/29 GHz) identified for NGSO FSS. It is unclear whether sharing of the bands is feasible. Furthermore, the possibility of sharing between NGSO FSS and geostationary orbit fixed satellite services (GSO FSS), in which Europe has considerable current and planned interests, is also unclear. On the basis of sharing studies which have been carried out at the national level and in the ITU study groups, WRC-97 has now to decide on actual frequency allocations.

Another technical innovation in the area of radio communications concerns the provision of voice telephony services via so-called Big LEO systems for hand-held, mobile, ubiquitous telephone services. The mobile satellite service (MSS in ITU terminology) is better known in Europe as Satellite Personal Communications Service (S-PCS). WRC-92 already made spectrum available for MSS between 1-3 GHz, but additional world-wide frequency allocations are likely to be requested to WRC-97 by geographically large-scale countries outside Europe. Considering that several global proposals are currently set-up (not to count

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<sup>38</sup> A prioritisation of the issues at stake at the WRC-97 cannot be derived on the basis of the agenda alone since it merely lists the detailed technical issues to be dealt with.

numerous others which have at least been notified to the ITU in view of requesting spectrum) and when projecting demands of various S-PCS MSS operators with concrete intentions to provide service in Europe, there may be insufficient spectrum available. Spectrum requirements for MSS may clash with those of second generation (e.g. DCS-1800, DECT) or third generation (e.g. UMTS) terrestrial mobile services which are expected to provide a more ubiquitous and complete service in most parts of Europe for mobile communications than MSS satellite systems are probably capable of providing. For this reason, deployment of UMTS may also well serve the radiocommunications needs of third countries, as was the case with GSM, and may offer opportunities to further enhance Europe's export position in mobile technologies.

In both cases, the challenge to the international radiocommunications sector would be to secure its current and planned interests regarding, e.g., terrestrial fixed links, GSO networks, and UMTS while at the same time facilitating the introduction and operation of S-PCS and NGSO FSS.

#### 4.3 Issues for forthcoming WRCs

The general scope of the agenda of a WRC should be established four years in advance and the final agenda preferably two years before the conference. The final agenda is normally established on the basis of a Resolution by the previous WRC and needs to be confirmed by the Administrative Council of the ITU.

The agenda of forthcoming WRCs may include frequency requirements for systems which are not yet in operation or constructed. For example, WRC-92 and WRC-95 (provisionally) allocated frequency bands to S-PCS and NGSO FSS even though such systems only existed on paper at that time. However, considering that radiocommunications systems are designed and developed to operate at certain frequencies, the availability of frequencies needs to be secured at an early stage. It is therefore important that WRCs take decisions on frequencies in order to allow industry to make investment decisions for the development and operation of new systems.

As regards the agenda for the WRC-99, the CPG will propose to WRC-97 to include the following issues:

- examination of the adequacy of frequency allocations for High Frequency (HF) Broadcasting from about 4 to 10 MHz;
- additional frequency allocations for Satellite Radionavigation<sup>39</sup>;
- additional frequency allocations to UMTS;

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<sup>39</sup> New allocations in the range 1-10 GHz are required to support future second generation global navigation satellite systems (GNSS). Work is currently in progress to develop a European Navigation Satellite System (ENSS) which is supported by various entities including the European Space Agency, EUROCONTROL, and the European Commission.

- HIPERLANs (wireless Local Area Networks supporting advanced features, such as mobile computer and multi media applications).

### *Ensuring spectrum for systems under development*

Even though the availability of spectrum in Europe for the deployment of terrestrial radiocommunications networks has been sufficient, a proactive approach towards WRCs is required in order to ensure that the transition to UMTS is not hindered by a lack of available frequency. Such an approach should seek additional frequency allocations to (terrestrial) UMTS while facilitating the operation of S-PCS networks, which compete for the use of the same frequency bands.

Even though the WRC-92 identified frequency bands for UMTS, it is likely that these bands are insufficient to accommodate the requirements in Europe in the longer term. For this reason, the CPG will submit a proposal to the WRC-97 with the aim to have frequency requirements for UMTS included on the agenda of the WRC-99. Taking into account that WRCs normally adhere to the agreed agenda, the adoption by the WRC-97 of the CPG proposal on UMTS is essential to provide industry with the prospect of sufficient frequency availability for UMTS in the medium term on the basis of which UMTS applications and equipment can be further developed. A failure to do so would practically mean that the proposal would have to be resubmitted at the WRC-99 for consideration by the WRC-2001 which would cause significant delays in the development of this strategic element of the “wireless information society”.

## 5. CONCLUSIONS

### *Objectives:*

Taking into account that the decisions on frequencies taken at WRCs go beyond mere technical considerations and in fact have a major impact on the telecommunications regulatory framework and competitive position of the radiocommunications sector in the Community and in the CEPT countries, concerted action is called for in order to ensure:

- that common Community and, more widely, common European positions at the WRCs are adopted, in order to safeguard the Community’s interests in the international arena with respect to frequency allocations
- that WRC negotiations on frequency allocations are set against other telecommunications regulatory and policy objectives while taking due account of commitments under the international trade regime;
- that the results of the WRC-97 which impact on Community interests are fully compatible with the *acquis communautaire*;
- that at the time of identification of Community interests of particular importance at the WRC-97, technical, economic and political considerations can be brought to bear on the negotiations, where appropriate;

*Conditions to be met:*

In order to reach these objectives, the following conditions must be met:

- that early agreement on frequency requirements at the European level is established regarding existing and planned radiocommunications systems in order to formulate corresponding positions vis-à-vis WRCs;
- that a concerted and coordinated approach towards the WRC-97 and forthcoming conferences is worked out, building on existing working arrangements, which comprises the technical expertise of the CPG in frequency matters, and appropriate input and participation from the part of industry as concerns Europe's industrial interests in radiocommunications, and from the Community in terms of telecommunications regulation and other relevant policies;
- that such a concerted approach is supported by the Member States at the highest political level, both in the process of establishing ECPs and during the WRC-97 negotiations.

*Appropriate measures:*

Appropriate procedures must be put in place in order to ensure efficient representation of Community interests; this involves in particular:

- that the Commission or Member States should call for the establishment of a common Community position:
  - a) in case Member States disagree amongst themselves on proposals submitted to the conference which affect the Community as a whole;
  - b) when Member States disagree with other CEPT countries on such proposals;
  - c) when CEPT proposals do not comply with Community interests; or
  - d) when a common Community position can contribute to strengthen the CEPT proposals in discussions with third countries.
- that an appropriate mechanism is established with the European industry to ensure that the adoption of European Common Proposals (ECPs) by the CEPT do reflect Europe's industrial needs in the radiocommunications sector; and that such a mechanism can be rapidly utilised during the WRC to obtain industry reaction, where appropriate.



## ANNEX I

### MAIN ISSUES ON THE WRC-97 AGENDA<sup>40</sup>

Agenda item	Issue	Background
1.1	Deletion country footnotes	Administrations may add country footnotes to allocations, specifying national situations. The aim is to reduce the number of national divergencies.
1.2	Simplification of the Radio Regulations (RR).	The RR are technically very complex and require detailed coordination procedures. The aim is to simplify this.
1.3	Earth station frequency coordination relating to the Fixed Service (FS) and Fixed Satellite Service (FSS).	Due to technical and commercial developments, the coordination of frequencies for small fixed and hand-held Earth stations needs to be improved.
1.4	Planning procedures for High Frequency Broadcasting Communications (HFBC).	Consideration of a flexible, simplified planning procedure, developed in the ITU Radiocommunication Sector.
1.6	Global Maritime Distress and Safety Communications (GMDSS).	To allow administrations to release stations in the international maritime service from the listening watch at certain frequencies after 1 February 1999. To ensure the overall safety of life at sea.
1.6	Frequencies for stations in the Maritime Mobile Service: to offer administrations more flexibility to relieve present congestion in the maritime band.	New (digital) technologies will be implemented in the VHF-band with additional frequency requirements.
1.6	Order of priority of communications of the maritime mobile service and the maritime mobile satellite service (in the same frequency bands).	Level of priority should be redefined.
1.6	Use of new digital technology in the maritime radiotelephony channels.	Identification of suitable characteristics of digital systems to replace existing analogue technology.
1.8	Use of the band 136-137 MHz by services other than the Aeronautical Mobile Service.	To ensure that no harmful interference will be caused to the aeronautical service (used for safety, regulation of flights).
1.9	MSS below 1 GHz.	Concerns frequency requirements for "Little LEOs" (providing world-wide data communications services) and the feasibility of sharing with other services.
1.9	MSS between 1-3 GHz.	Feasibility of sharing between MSS ("Big LEOs", providing world-wide voice communications services) and other services (e.g. Met-Sat, FS, radio astronomy, Earth exploration satellite service).
1.9	20/30 GHz bands - NGSO FSS	Frequency requirements and sharing scenarios of digital broadband radiocommunications services.
1.9	NGSO MSS feeder links	Allocation of frequencies to the fixed-satellite service for feeder links of non-geostationary satellite networks in the MSS
agenda items 2-8 mainly concern standard agenda items of a mainly administrative nature		
8.2	Agenda for WRC-99 and WRC-2001	Deciding on the preliminary agenda of the forthcoming two WRCs.

<sup>40</sup> Note that the list of issues is not exhaustive. For the complete agenda, see: Resolution GT PLEN-3: Agenda for the 1997 World Radiocommunication Conference.

## ANNEX II

### GLOSSARY

<b>CEPT</b>	European Conference of Postal and Telecommunications Administrations
<b>CPG</b>	Conference Preparatory Group (of the CEPT)
<b>DCS-1800</b>	Digital Communications Services in the 1800 MHz range
<b>DECT</b>	Digital European Cordless Telecommunications
<b>ECP</b>	European Common Proposal (prepared by CPG)
<b>ERC</b>	European Radiocommunications Committee (of the CEPT)
<b>ERMES</b>	European Radio Messaging System
<b>ETSI</b>	European Telecommunications Standards Institute
<b>EU</b>	European Union
<b>FPLMTS</b>	Future Public Land Mobile Telecommunications Systems
<b>GATS</b>	General Agreement on Trade in Services
<b>GMPCS</b>	Global Mobile Personal Communications Services
<b>GSM</b>	Global System for Mobile Communications
<b>GSO FSS</b>	Geostationary Orbit Fixed Satellite Service
<b>ITU</b>	International Telecommunication Union
<b>MSS</b>	Mobile Satellite Service
<b>NGSO FSS</b>	Non-Geostationary Orbit Fixed Satellite Service
<b>NRA</b>	National Regulatory Authority
<b>S-PCS</b>	Satellite Personal Communications Services
<b>WRC</b>	World Radiocommunications Conference
<b>WTO</b>	World Trade Organisation
<b>UMTS</b>	Universal Mobile Telecommunications System

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