

EUROPEAN RADIOCOMMUNICATIONS COMMITTEE

ERC Decision
of 30 June 1997
on transitional arrangements for the Fixed Service
and the Mobile-Satellite Service in the bands
1980-2010 MHz and 2170-2200 MHz
in order to facilitate the harmonised
introduction and development
of Satellite Personal Communications Services

(ERC/DEC/(97)04)



EXPLANATORY MEMORANDUM

1. INTRODUCTION

Within Europe, there is an increasing interest in public mobile communications. The use of public mobile communications has dramatically increased and the market prospects are excellent for the years to come. However, there are areas in Europe as well as elsewhere around the globe that will never be covered by terrestrial systems such as GSM. The Mobile-Satellite Service (MSS) is capable of providing that service: "a phone to be used everywhere". Hence there is a need for supplementary services like Satellite Personal Communications Services (S-PCS), which are to be accommodated in the frequency bands allocated to MSS. However, the frequency bands where these services are to be introduced are currently used by terrestrial fixed services, which are incompatible with S-PCS.

2. BACKGROUND

From a users point of view S-PCS is rather similar to GSM (however with limited indoor use) providing voice and data communication (including facsimile). The obvious difference is that the "base station is moving in space" and interference is likely to occur when the satellite is in line of sight of a Fixed Service (FS) antenna. Therefore frequency sharing between the MSS and the FS is difficult, especially in the uplink band 1980-2010 MHz. Nevertheless, in the Table of Frequency Allocations contained in Article S5 of the Radio Regulations of the International Telecommunication Union the MSS and FS are allocated on a co-primary basis.

By its nature the operation of S-PCS should not be limited on a national basis and it also requires common frequency blocks to be made available in adjacent geographical areas. Therefore, in order to facilitate the harmonised introduction and development of S-PCS, transitional arrangements are required for the transfer of fixed services from the affected frequency bands.

3. Requirement for an ERC Decision

The allocation of radio frequencies in CEPT member countries is laid down by law, regulation or administrative action. For the successful introduction of S-PCS throughout the world, manufacturers and operators must be given the confidence to make the necessary investment in this new radiocommunications service. A commitment by CEPT member countries to implement an ERC Decision will provide a clear indication that the required frequency bands will be made available on time at least on a European-wide basis.

In order for Europe to keep up with the pace of terrestrial mobile and now to take a position in the generic mobile market, it is necessary to provide an adequate environment for development of mobile satellite systems driven by market forces. With an ERC Decision on transitional arrangements for the Fixed Service and the Mobile-Satellite Service in the 2 GHz bands to facilitate the harmonised introduction and development of S-PCS a clear sign on the development of public mobile communications in Europe has been given and another step forward in European mobility has been taken.

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The European Conference of Postal and Telecommunications Administrations,

considering:

- a) that the WRC-95 adopted a date of entry into force of 1 January 2000 in Regions 1 and 3 for the Mobile-Satellite Service (MSS) allocations in the frequency bands 1980-2010 MHz (Earth-to-space) and 2170-2200 MHz (space-to-Earth);
- b) that the use of the above bands by the MSS is subject to coordination under Resolution 46 (WRC-95) and to the provisions of Resolution COM5-10 (WRC-95);
- c) that ERC Report 25 suggests that the introduction of MSS in the 2 GHz region from the year 2000 could be accommodated in the bands 1996-2010 MHz and 2186-2200 MHz, primarily because this part of the spectrum corresponds to the common go/return gap in the ITU-R Recommendation F.283-5 on radio-frequency channel arrangements for the Fixed Service (FS) which is in use in many European countries;
- d) that the above frequency bands are also intended for use by the satellite component of International Mobile Telecommunications (IMT-2000) (normally referred to in Europe as Universal Mobile Telecommunications System (UMTS));
- e) that in general sharing between the MSS and the FS in these bands, especially in the medium to longer term will become progressively more difficult and, in particular, co-channel sharing between the MSS and the FS in those frequency bands used by the MSS in the Earth-to-space direction is extremely difficult due to the potentially high aggregate interference levels from multiple FS emissions which could be received at MSS satellites;
- f) that following WARC-92 many European Administrations established a moratorium on new FS networks in the 2 GHz bands allocated to the MSS. The moratorium was associated with plans to vacate these bands of existing FS networks by around the year 2005;
- g) that CEPT/ERC Recommendation T/R 13-01 and ITU-R Recommendation F.1098 specify new channel arrangements for the Fixed Service which should be used for new 2 GHz FS networks in order to avoid overlap with the 2 GHz MSS allocations;
- h) that the viable operation of S-PCS systems requires common frequency blocks to be made available in adjacent geographical areas and that common harmonised frequency solutions are required in Europe;
- i) that in order to provide S-PCS space segment operators with the opportunity to coordinate their spectrum usage in a compatible manner with multiple European countries, harmonised frequency bands, to the extent practicable, should be made available;
- j) that to assist Administrations in re-planning their 2 GHz FS networks with a view to accommodating planned S-PCS systems, a harmonised approach is required to prioritise the transition of existing FS networks from the affected frequency bands;

- k) that there are areas in Europe which will remain uncovered by terrestrial public mobile communications and which will hence need a supplementary service like S-PCS;
- l) that a set of ERC Decisions has been adopted in order to facilitate the harmonised introduction of S-PCS in Europe:
 - ERC/DEC/(97)03 on harmonised use of spectrum for S-PCS operating within the bands 1.6/2.5 GHz and 1.9/2.1 GHz;
 - ERC/DEC/(97)05 on free circulation, use and licensing of MES of S-PCS;
- m) that ECTRA has adopted a Decision ECTRA/DEC(97)02 on harmonisation of authorisation conditions and co-ordination of procedures in the field of S-PCS in Europe;
- n) that the milestone criteria as identified in ECTRA Decision ECTRA/DEC(97)02 and ERC Decision ERC/DEC/(97)03 will provide the assurance that the spectrum to be vacated by the existing services will be taken up in a timely way by the S-PCS systems;
- o) that European Parliament and Council Decision 710/97 IEEC on a co-ordinated authorisation approach in the field of S-PCS in the European Union (EU) has been adopted.

DECIDES

1. to designate the frequency bands 1980-2010 MHz and 2170-2200 MHz for use by mobile satellite systems providing the S-PCS and/or the satellite component of the UMTS/IMT-2000;
2. that Administrations should facilitate coordination under Resolution 46 (Rev. WRC-95) and Resolution 716 for the timely introduction and development of planned MSS satellite systems in the frequency bands listed in Decides 1, whilst protecting existing FS networks to the extent necessary;
3. to identify the frequency bands 1995-2010 / 2185-2200 MHz as the initial preferred harmonised bands within which Administrations are strongly urged to facilitate the coordination of planned MSS satellite systems intending to provide S-PCS from 1 January 2000 onwards, with appropriate national transitional arrangements for the FS;
4. that new 2 GHz FS networks shall only be implemented in bands not overlapping with the MSS allocations in the bands 1980-2010 / 2170-2200 MHz;
5. that Administrations should undertake the progressive transfer of existing FS networks operating in the bands 1980-2010 MHz and 2170-2200 MHz to other bands which do not overlap with the MSS allocations;
6. that Administrations shall prioritise the above referred transitions of channels of existing Fixed Service systems operating in the 1980-2010 MHz band in order to vacate at least 15 MHz within the 1990-2010 MHz range by 1 January 2000 and at least 25 MHz within the 1980-2010 MHz range by 1 January 2005 should the Milestone Review Committee determine that an S-PCS system has fulfilled milestones 1 to 6 inclusive of the Annex 2 of ERC Decision ERC/DEC/(97)03;
7. that Administrations shall transfer by 1 January 2000 troposcatter FS systems with occupied bandwidths which overlap with the band 1980-2010 MHz to other bands which do not overlap with the above 2 GHz MSS allocations;
8. that this Decision should be reviewed taking into account the development of 2 GHz MSS satellite systems, the development of UMTS/IMT-2000 service deployment plans and progress in national 2 GHz Fixed Service transitional arrangements;
9. that this Decision shall enter into force on 1 October 1997;
10. that CEPT Member Administrations shall communicate the national measures implementing this Decision to the ERC Chairman and the ERO when the Decision is nationally implemented.

Note:

Please check the ERO web site (www.ero.dk) under “Documentation / Implementation” for the up to date position on the implementation of this and other ERC Decisions.