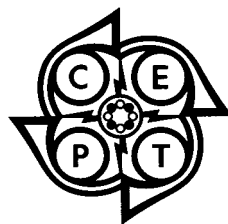


**EUROPEAN RADIOCOMMUNICATIONS COMMITTEE**

ERC Decision  
of 24th October 1994  
on the frequency bands to be designated for the coordinated  
introduction of the  
GSM digital pan-European communications system  
(ERC/DEC/(94)01)





## EXPLANATORY MEMORANDUM

### 1. INTRODUCTION

Global system for Mobile communications (GSM) is a pan-European cellular digital land-based mobile communications system.

GSM originally took its name from Groupe Spécial Mobile, the name of its CEPT standardisation committee. It was seen by the European Community as the first of a series of pan-European telecommunications developments which will offer services across the single market.

For an international mobile communications system to operate successfully, it is important to ensure that there are recognised frequency bands within which it can operate. Within Europe, it is the responsibility of the European Radiocommunications Committee (ERC) to designate frequency bands.

### 2. BACKGROUND

Mobile communications is one of the most rapidly expanding sectors of telecommunications and this is particularly true of cellular radiotelephones. However, in the 1980's, this growth was catered for by a number of incompatible analogue standards leading to a situation where the service was generally limited to national territories and economies of scale were not fully realised. It was this situation which gave rise to the development of the single standard GSM pan-European digital cellular system.

The WARC 79 allocated the band 862-960 MHz to the mobile service. In 1982, the CEPT agreed Recommendation T/R 75-02 which identified parts of this band for various land and maritime mobile systems, including 890-915 MHz and 935-960 MHz for a future integrated land- and maritime-mobile system. This Recommendation was revised in 1988 and 1990 and these revisions included redefining the 890-915 MHz and 935-960 MHz for GSM. In 1989, Recommendation T/R 20-08 covering the frequency planning and coordination for GSM was agreed.

In 1987, the Council of the European Communities, seeing that the anticipated changeover from analogue to digital systems would provide an opportunity for establishing a truly pan-European service and recognising the CEPT recommendations already in existence on mobile communications in the 900 MHz band, adopted a Directive<sup>1</sup> requiring Member States to:

- a) ensure that the 905-914 MHz and 950-959 MHz bands or equivalent parts of the bands mentioned in b) be reserved for a pan-European cellular digital mobile communications system by 1 January 1991 and
- b) ensure that plans are prepared for this system to be able to occupy the whole of 890-915 MHz and 935-960 MHz bands according to commercial demand as quickly as possible.

### 3. REQUIREMENT FOR AN ERC DECISION

The allocation or designation of a frequency band for its use by a service or system under specified conditions in CEPT member countries is laid down by law, regulation or administrative action. The ERC recognises that for GSM to be introduced successfully throughout Europe, manufacturers and operators must be given the confidence to make the necessary investment in this new pan-European radiocommunication system and service. Therefore ERC believes it is necessary to designate a frequency band to be used by the GSM system under specified conditions. 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 and on a Europe-wide basis.

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<sup>1</sup> Council Directive on the frequency bands to be reserved for the coordinated introduction of public pan-European cellular digital land-based mobile communications in the Community. (87/372/EEC)

**ERC Decision  
of 24th October 1994**

**on the frequency bands to be designated for the coordinated introduction of the  
GSM Digital pan-European communications System  
(ERC/DEC/(94)01)**

The European Conference of Postal and Telecommunications Administrations,

*considering*

- a) that current analogue cellular radio systems in use in Europe and the frequency bands they operate in, vary widely and may not allow the benefits of Europe-wide services or benefit from the economies of scale associated with a truly European market,
- b) that the European implementation of GSM provides an important opportunity to establish truly European digital cellular radio facilities,
- c) that the European Telecommunications Standard Institute (ETSI) is developing European Telecommunications Standards for GSM operating in the 900 MHz frequency band,
- d) that the ETS takes account of the need for Europe-wide interoperability and enables users provided with a service based on GSM technology in one country to gain access to the service in any other country, where appropriate,
- e) that market studies have indicated that the establishment of GSM on a Europe-wide basis will require considerably larger frequency bands in some areas such as urban areas, than in more sparsely populated areas,
- f) that on a national basis parts of the sub-bands 880-888 MHz paired with 925-933 MHz may be used for the expansion of the GSM system in the future when the bands 890 - 915 MHz and 935 - 960 MHz are fully utilised for the GSM system. However, on an interim basis the expansion bands may be utilised to enable the phasing out of existing national systems in the GSM bands,
- g) that the frequency bands designated for GSM should be made available progressively in order to satisfy commercial demand,
- h) that the frequency bands 914 - 915 MHz and 959 - 960 MHz are also designated for cordless telephones (CT1) in Europe,
- i) that the frequency bands 890-905 MHz and 935-950 MHz are also designated for early public analogue cellular systems in Europe,
- j) that Member States of the European Union have implemented the Council Directive 87/372/EEC and Council Recommendation 87/371/EEC,
- k) that several non-EEA countries have become associate members of the European Union and have expressed their intention to implement the existing EU legislation,

*recognising*

- a) that there are existing bi-lateral and multi-lateral coordination agreements covering the frequency bands 890-915 MHz and 935-960 MHz,

DECIDES

1. that for the purpose of this Decision the "Global System for Mobile communications (GSM)" shall mean equipment complying with European Telecommunications Standards for GSM operating in the 900 MHz band,
2. to designate the frequency bands 890 - 915 MHz and 935 - 960 MHz to GSM as from 24th October 1994,
3. that at least 2x9 MHz within the designated frequency bands shall be reserved for the introduction of GSM,
4. that within the designated frequency bands on channels selected for GSM to satisfy commercial demand, GSM shall have priority over other radio systems within the national territory, and shall be protected,
5. that after the date of designation of the frequency bands for GSM, existing radio systems may continue in the designated bands providing that they do not interfere with GSM.

Note:

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

ANNEX 1

COUNCIL DIRECTIVE

of 25 June 1987

**on the frequency bands to be reserved for the coordinated introduction of public  
pan-European cellular digital land-based mobile communications in the  
Community**

(87/372/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 100 thereof;

Having regard to the proposal from the Commission <sup>(1)</sup>;

Having regard to the opinion of the European Parliament <sup>(2)</sup>;

Whereas Recommendation 84/549/EEC <sup>(3)</sup> calls for the introduction of services on the basis of a common harmonised approach in the field of telecommunications;

Whereas the resources offered by modern telecommunications networks should be utilised to the full for the economic development of the Community;

Whereas mobile radio services are the only means of contacting users on the move and the most efficient means for those users to be connected to public telecommunications networks;

Whereas mobile communications depend on the allocation and availability of frequency bands in order to transmit and receive between fixed-base stations and mobile stations;

Whereas the frequencies and land-based mobile communications systems currently in use in the Community vary widely and do not allow all users on the move in vehicles, boats, trains, or on foot throughout the Community, including on inland or coastal waters, to reap the benefits of European-wide services and European-wide markets;

Whereas the change-over to the second generation cellular digital mobile communications system will provide a unique opportunity of establishing truly pan-European mobile communications;

Whereas the European Conference of Postal and Telecommunications Administrations (CEPT) has recommended that frequencies 890-915 and 935-690 MHz be allocated to such a system, in accordance with the International Telecommunication Union (ITU) Radio Regulations allocating such frequencies to mobile radio services use as well;

<sup>(1)</sup> OJ No C 69, 17.3.1987, p. 9.

<sup>(2)</sup> OJ No C 125, 11.5.1987, p. 159.

<sup>(3)</sup> OJ No L 298, 16.11.1984, p. 49.

Whereas parts of these frequency bands are being used or are intended for use by certain Member States for interim systems and other radio services;

Whereas the progressive availability of the full range of the frequency bands set out above will be indispensable for the establishment of truly pan-European mobile communications;

Whereas the implementation of Council Recommendation 87/371/EEC of 25 June 1987 on the coordinated introduction of public pan-European cellular digital land-based mobile communications in the Community <sup>(4)</sup>, aiming at starting a pan-European system by 1991 at the latest, will allow the speedy specification of the radio transmission path;

Whereas on the basis of present technological and market trends it would appear to be realistic to envisage the exclusive occupation of the 890-915 and 935-960 MHz frequency bands by the pan-European system within 10 years of 1 January 1991;

Whereas Council Directive 86/361/EEC of 24 July 1986 on the initial stage of the mutual recognition of type approval for telecommunications terminal equipment <sup>(5)</sup> will allow the rapid establishment of common conformity specifications for the pan-European cellular digital mobile communications system;

Whereas the report on public mobile communications drawn up by the Analysis and Forecasting Group (GAP) for the Senior Officials Group on Telecommunications (SOG-T) has drawn attention to the necessity for the availability of adequate frequencies as a vital pre-condition for pan-European cellular digital mobile communications;

Whereas favourable opinions on this report have been delivered by the telecommunications administrations, by the European Conference of Postal and Telecommunications Administrations (CEPT) and the telecommunications equipment manufacturers in the Member States.

<sup>(4)</sup> See page 81 of this Official Journal

<sup>(5)</sup> OJ No L 217.5.1986, p. 21.

HAS ADOPTED THIS DIRECTIVE:

*Article 1*

1. Member States shall ensure that the 905-914 and 950-959 MHz frequency bands or equivalent parts of the bands mentioned in paragraph 2 are reserved exclusively <sup>(1)</sup> for a public pan-European cellular digital mobile communications service by 1 January 1991.
2. Member States shall ensure that the necessary plans are prepared for the public pan-European cellular digital mobile communications service to be able to occupy the whole of the 890-915 and 935-960 MHz bands according to commercial demand as quickly as possible.

*Article 2*

The Commission shall report to the Council on the implementation of the Directive not later than the end of 1996.

*Article 3*

For the purposes of this Directive, a public pan-European cellular digital land-based mobile communications service shall mean a public cellular radio service provided in each of the Member States to a common specification, which includes the feature that all voice signals are encoded into binary digits prior to radio transmission, and where users provided with a service in one Member State can also gain access to the service in any other Member State.

*Article 4*

1. Member States shall bring into force the provisions necessary to comply with this Directive within 18 months of its notification <sup>(2)</sup>. They shall forthwith inform the Commission thereof.
2. Member States shall communicate to the Commission the text of the provisions of national law which they adopt in the field governed by this Directive.

*Article 5*

This Directive is addressed to the Member States.

Done at Luxembourg, 25 June 1987.

*For the Council*

*The President*

H. DE CROO