



COMMISSION OF THE EUROPEAN COMMUNITIES

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2007/0126 (COD)

Proposal for a

**DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**

**repealing Council Directive 87/372/EEC on the frequency bands to be reserved for the coordinated introduction of public pan-European cellular digital land-based mobile communications in the Community**

(presented by the Commission)

## EXPLANATORY MEMORANDUM

### 1) CONTEXT OF THE PROPOSAL

- **Grounds for and objectives of the proposal**

This proposal aims at repealing Council Directive 87/372/EEC 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* (hereinafter GSM Directive) in order to allow the use of such bands by systems capable of providing electronic communication services not limited to GSM.

The objective is to allow a larger choice of services and technologies and thereby to maximise competition in the use of the bands so far covered by the GSM Directive, while ensuring that services remain coordinated and protecting the continued operation of GSM. To do so, the use of this spectrum would be allowed, besides for GSM, also for pan-European electronic communication services other than GSM. As a first step, this would include UMTS. This requires new harmonised technical conditions for the spectrum band in question which would be defined pursuant to a Commission Decision to be adopted based on Decision 676/2002/EC *of the European Parliament and the Council of 7 March 2002 on a regulatory framework for radio spectrum policy in the European Community* (hereinafter Radio Spectrum Decision).

- **General context**

The GSM Directive presently requires Member States to reserve the whole 890-915 MHz and 935-960 MHz bands for GSM. This constraint prevents the bands from being used by pan-European systems other than GSM, capable of providing advanced interoperable voice, data and multimedia services with a high delivery bandwidth. These new pan-European systems, such as the UMTS system, offer capabilities beyond the GSM system and have since the adoption of the GSM Directive 20 years ago become viable thanks to technological developments. Moreover, there is a clear market for related services.

As the 900 MHz band covered by the GSM Directive has propagation characteristics which allow coverage at lower cost of large areas, it is better suited to cover less densely populated and rural areas than higher frequency bands.

A repeal of the GSM Directive would allow overcoming the present limitation of spectrum usage to GSM, but must be complemented by appropriate technical harmonisation measures to preserve the present harmonised status of the band, and to guarantee the protection of the GSM services currently using the bands. As a result, technical conditions allowing for a coexistence of new systems for which the 900 MHz band is to be opened, alongside with GSM systems must be legally established.

In line with the policy of better regulation, the Radio Spectrum Decision offers the legal means for adopting such harmonising measures. It foresees a mechanism allowing comparatively rapid reactions to technical evolution and the adoption at EU level of binding technical harmonisation measures in the form of Commission Decisions which provide legal certainty to the harmonised use of the band.

As foreseen by Article 4(2) of the Radio Spectrum Decision, the Commission issued on 5 July 2006 in the present case a Mandate to the European Conference of Postal and Telecommunications Administrations (hereinafter CEPT) covering the 900 MHz (as well as the 1800 MHz bands). To start with, CEPT examined whether it was possible to introduce UMTS throughout the EC in the 900 and 1800 MHz bands in urban, sub-urban and rural areas in co-existence with GSM networks, and defined technical conditions ensuring sufficient carrier separation to this extent. Further technical conditions for the coexistence in this band of GSM with other systems with pan-European coverage capabilities will be defined at a later stage as such systems are technically defined.

While the 900 MHz band is being opened for additional systems, the current use of GSM in that band should remain protected in the whole Community as long as there is a reasonable demand for the service, considering the high importance of GSM services for electronic communications policy in the Community.

The Commission also considers it essential that appropriate protection be ensured for existing users in neighbouring bands and that prospective systems for aviation communications above 960 MHz, which play a role to fulfil EC policy objectives in this sector, are taken into account. In the context of the mandate, CEPT gave technical advice in this respect.

Finally, in order to offer a maximum of flexibility in using the bands, Member States would also remain free to introduce in the 900 MHz (and 1800 MHz) bands at national level additional systems alongside GSM and other recognised terrestrial systems capable of providing pan-European electronic communications services, but provided that such additional systems can coexist with these pan-European systems.

- **Existing provisions in the area of the proposal**

The use of the frequency bands in question is governed by the GSM Directive which is to be repealed; a Decision prepared pursuant to the Radio Spectrum Decision and establishing the new harmonised spectrum usage conditions is to be adopted by the Commission to enter into force when the GSM Directive is effectively repealed.

- **Consistency with other policies and objectives of the Union**

Radio Spectrum Policy must cope with the growing and evolving variety of radio access platforms for public wireless communications and ensure compliance with the overall policy goal to develop the EU internal market and European competitiveness, by ensuring an innovation-friendly regulatory environment leading to the provision of a wide variety of mobile services and applications.

The achievement of this overall objective will be fostered by the introduction of more flexibility in the management of spectrum resources for wireless electronic communications, while maintaining harmonisation where necessary. Least restrictive technical conditions should generally apply to the use of frequency bands, based on the WAPECS approach (Wireless Access Policy for Electronic Communications Services) which was described by the Radio Spectrum Policy Group (hereinafter RSPG) in its Opinion of 23 November 2005 as setting technological neutrality and service neutrality as policy goals to achieve a more flexible and efficient use of spectrum. These goals

would be introduced in a gradual manner to avoid disruption of the market.

The Commission also insisted on a more flexible use of spectrum in its Communication on "*Rapid access to spectrum for wireless electronic communications services through more flexibility*"<sup>1</sup>, and on the need for a consistent and proportionate solution regarding the introduction of a more flexible spectrum use for electronic communications services with regard to second (GSM) and third generation (UMTS e.g.) communications.

## 2) CONSULTATION OF INTERESTED PARTIES AND IMPACT ASSESSMENT

- **Consultation of interested parties**

*Consultation methods, main sectors targeted and general profile of respondents*

The use of the 900 MHz band, the development of IMT-2000 systems including UMTS and the evolution of spectrum use towards more flexibility have been under constant review by the Commission.

On 21 February 2006 in Brussels, a workshop was organised on WAPECS.

Based on a Mandate of 5 July 2006 from the Commission, several studies have been conducted by CEPT and its Electronic Communications Committee's (hereinafter ECC) and transmitted to the Radio Spectrum Committee (hereinafter RSC) and the Commission; these include ECC Report 82 on Compatibility of UMTS operating in the GSM 900 and GSM 1800 frequency bands (May 2006), and ECC Report 96 on compatibility between UMTS 900/1800 and systems operating in adjacent bands (March 2007). These reports have been subject to public consultation under the auspices of the ECC.

ECC has conducted studies and adopted a series of reports since 1997 regarding the implementation of UMTS and has enquired on the current and future uses of the 900 MHz band. CEPT has liaised with standardisation instances dealing with IMT-2000 family of standards (including UMTS), such as the 3rd Generation Partnership Project (3GPP) which groups the telecommunications standards bodies from different regions (ARIB, CCSA, ETSI, ATIS, TTA, and TTC) and in which industry is represented to develop system specifications. Based on this information, ECC studied the possibility to insert UMTS channels in bands used by GSM without creating interference with respect to adjacent GSM channels. Studies continue to cover other systems which are part of the ITU IMT-2000 family.

Studies have also been carried out to examine the potential impact on services and systems operating in adjacent bands. National authorities, the European Telecommunications Standardisation Institute (ETSI), industry, user groups and other interested parties have taken part in a dedicated project team (PT1) of ECC, where information on adjacent band systems was collated and studied.

A public consultation has been organised by ECC in 2006 prior to the adoption of ECC decision ECC/DEC/(06)13 which recommends opening the 900 and 1800 MHz bands to systems other than GSM.

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<sup>1</sup> COM(2007)50

Summary of responses and how they have been taken into account

The ECC reports conclude that UMTS networks can be deployed in urban, sub-urban and rural areas in co-existence with GSM900/1800 networks by using appropriate values for carrier separation.

The first new system to be introduced in the 900 MHz band is therefore UMTS which is relevant from both a technical and EC policy point of view as it would allow the further deployment of pan-European electronic communications services, so that the same or equivalent services in terms of functionality should be accessible to all consumers throughout the Community.

The public consultation conducted by the ECC for the Commission on Reports 82 and 96 have shown that there is extensive support from the mobile industry for an opening of the frequency bands formerly reserved for GSM systems with clear benefits for the industry and consumers. Some of the users in adjacent frequency bands initially raised concerns about possible interference, but these concerns were dealt with in the relevant CEPT Report 96 and through the explicit protection provided to GSM by Article 3 of the future Commission Decision replacing the GSM Directive.

- **Collection and use of expertise**

Scientific/expertise domains concerned

Spectrum management, electronic communications; technical expertise of CEPT as well as of standardisation bodies.

Methodology used

As foreseen in the Radio Spectrum Decision, the Commission issued a Mandate to CEPT which produced a report that the Commission, assisted by the Radio Spectrum Committee, has examined. The opinions of users in neighbouring bands were also taken into consideration. On the basis of Article 4.4 of the Radio Spectrum Decision, the Commission has also considered it necessary to ensure that new systems give appropriate protection to existing systems in adjacent bands, as well as eventually take into account prospective aeronautical communications systems operating above 960 MHz which are in support of European transport policy.

Main organisations/experts consulted

National authorities, ETSI, GSM and third-generation users, communications operators, manufacturers and other interested parties.

Summary of advice received and used

Existence of potentially serious risks with irreversible consequences has not been mentioned.

Commission noted from the ECC reports that use of the band for GSM could be shared with UMTS as another pan-European communications system, to meet EC electronic communications policy objectives.

To use the 900 MHz band more efficiently, GSM Directive should be repealed and a new harmonised plan be introduced by Commission decision.

Means used to make the expert advice publicly available

CEPT reports are available at:

<http://www.ero.dk/documentation/docs/docfiles.asp?docid=2168&wd=N>  
<http://www.ero.dk/documentation/docs/docfiles.asp?docid=2201&wd=N>.

and Reports to the RSC:

[http://ec.europa.eu/information\\_society/policy/radio\\_spectrum/docs/ref\\_docs/rsc18\\_public\\_docs/rsc06\\_99\\_ecc\\_int\\_rep\\_wapecs.pdf](http://ec.europa.eu/information_society/policy/radio_spectrum/docs/ref_docs/rsc18_public_docs/rsc06_99_ecc_int_rep_wapecs.pdf).

- **Impact assessment**

As self or co-regulation or regulation by national authorities could not repeal the GSM Directive to ensure a timely and harmonised introduction of a new plan to meet EC policy objectives, a Council and EP Directive is necessary to repeal the GSM Directive. Upon such repeal, a Commission Decision based prepared according to the provisions of the Radio Spectrum Decision is consequently to be adopted to put in place a new harmonisation measure prepared by the Commission with CEPT technical expertise, and assisted by the RSC.

The new plan would benefit the whole electronic communications sector and consumers. It is important for the internal market that the conditions of use of the 900 MHz band are both open and harmonised at EU level so as to facilitate the introduction of pan-European services and to offer consumers as much freedom in the choice of services, and spectrum users in the choice of technologies, as possible. Availability of radio spectrum will contribute in ensuring the achievement of the Lisbon agenda and the i2010 initiative– *A European Information Society for growth and employment<sup>2</sup> to harness the potential of the digital economy to deliver growth, jobs and widespread availability of modern services.*

In particular, the measure would benefit European citizens by reducing significantly the hurdles to the deployment of advanced mobile communication services and overcoming the geographical digital divide. Systems other than GSM are expected to develop and spread throughout Europe more rapidly geographically, especially in rural areas. New high-performing wireless data and multimedia services (e.g. internet browsing and mobile TV) need access networks such as 3G mobile networks using UMTS technology that offer higher data rates than GSM.

The measure would also increase the quality of services and lower the cost for the consumer. 3G mobile networks are currently confined to higher frequencies which offer less favorable propagation characteristics than the 900 MHz band, and therefore

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<sup>2</sup> Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, COM(2005) 229 final.

create higher network deployment costs. Furthermore, the use of higher frequency is less suited to penetrate buildings, to the detriment of service quality and consumer prices.

Finally, it would contribute to the economic development of the sector by facilitating the deployment of advanced mobile communication services. It will open new revenue streams to operators and increase the demand for equipment (network infrastructure, new generations of terminals).

The measure would have a positive impact on the environment as it would reduce the number of necessary base stations through the use of lower frequencies; it would also reduce the risk of disputes over suitable base station locations.

Concerning the environmental impact, the need to ensure continuous protection of health against electromagnetic emissions is not affected by the proposed measures. This issue is covered by Directive 2004/40/EC of the European Parliament and the Council of 29 April 2004 *on the minimum health and safety requirements regarding the exposure of workers to the risks arising from physical agents (electromagnetic fields)*, and Council Recommendation 1999/519/EC of 12 July 1999 *on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)*. Health protection for radio equipment is ensured by conformity of such equipment to the essential requirements pursuant to Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 *on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity (the R&TTE Directive)*.

The Commission is keeping the health effects of electromagnetic fields under constant review; in this respect, its Scientific Committee on emerging and newly identified health risk (SCENIHR) has recently undertaken a comprehensive review of new scientific data emerging from recent studies.

### 3) LEGAL ELEMENTS OF THE PROPOSAL

- **Summary of the proposed action**

In order to allow the usage of the 900 MHz and 1800 MHz band in line with EC policy objectives and with market demand for mobile communications, it is proposed to repeal Directive 87/372/EEC and to adopt a Commission Decision pursuant to the Radio Spectrum Decision which would harmonise the new usage conditions for the bands in question allowing additional more advanced pan-European mobile communications services.

- **Legal basis**

Article 95 EC Treaty.

- **Subsidiarity principle**

The subsidiarity principle applies insofar as the proposal does not fall under the exclusive competence of EC.

The objectives of the proposal cannot be sufficiently achieved by Member States for reasons as follows.

Ensuring harmonised use of the 900 MHz band to fulfil EC policy needs cannot be done satisfactorily by Member States acting individually and can be better achieved at EC level by internal market measures adopted under the Radio Spectrum Decision. However, the adoption of new plan requires repeal of GSM Directive.

The repeal of the GSM Directive can only be done at EC level by a Directive. The new harmonised technical conditions for the use of 900 MHz need to be adopted at EC level so as to ensure that EC policy objectives are met in a timely and harmonised way.

EC action will better achieve the proposal objectives for the following reasons.

Repeal of GSM Directive and adoption of coexistence conditions for GSM and UMTS by a binding EC harmonisation measure are necessary to ensure timely and harmonised introduction of the new spectrum usage conditions in Member States. Without such an EC measure, no harmonised and timely solution can be guaranteed.

The GSM Directive prevents the use of the 900 MHz band by other pan-European systems, such as UMTS, and therefore acts as a hurdle to the deployment of information society in the EU. A harmonised use of the 900 MHz band may support additional applications fulfilling current EC policy objectives.

The proposal therefore complies with the subsidiarity principle.

- **Proportionality principle**

The proposal complies with the proportionality principle for the following reasons.

The GSM Directive will be repealed and new technical conditions for the 900 MHz band will be introduced by the Commission acting with the assistance of the RSC, while preserving the operation of GSM services. The proposed measures are limited to spectrum bands relevant to electronic communications services for pan-European applications. Considering the evolution of technology and consumers needs, these bands would be kept under review so that additional pan-European systems could also be introduced and coexist with GSM and UMTS.

The measure does not cover the issuance by Member States of the rights to use the spectrum.

Where possible, Member States will be able to also introduce additional systems in the band provided that these can co-exist with GSM systems and other pan-European systems listed in the Annex – starting with UMTS - on their own territory as well as in neighbouring Member States.

The new technical conditions were elaborated with CEPT technical expertise and national experts without causing new unnecessary financial or administrative burden at EC, national or regional levels. They will allow the offering of additional economies of scale, better coverage of rural areas as well as additional and more effective services in EC to operators and users.

- **Choice of instruments**

Proposed instruments: directive under Article 95 EC.

Other means would not be adequate for the following reason(s).

Only a directive can repeal the GSM Directive which was adopted on the basis of Article (old) 100 EC. While GSM operation which was made possible by this Directive will remain protected, the decision will ensure that other pan-European systems, including in a first step UMTS, can coexist with GSM in the 900 MHz band.

#### 4) **BUDGETARY IMPLICATION**

The proposal has no implication for EC budget.

#### 5) **ADDITIONAL INFORMATION**

- **Simplification**

The proposal provides for better regulation and simplification of legislation, of administrative procedures for public authorities (EU or national), and of administrative procedures for private parties. The GSM Directive to be repealed poses an obstacle for technological progress and deprives industry and consumers from appropriate spectrum for new advanced services.

The repealing of the Directive and the adoption of a harmonisation measure specifying the new usage conditions constitute a change of regulatory approach which is commensurate with the intention of the Radio Spectrum Decision to anchor technical work on spectrum management at the level of implementing measures thereby relieving the European Parliament and Council from detailed technical considerations.

Spectrum harmonisation will ease the task of and meets the expectations of national authorities.

The harmonised spectrum usage conditions will open new opportunities for mobile communications operators and for mobile users, in particular in rural areas.

The proposal is included in the Commission's rolling programme for up-date and simplification of the *acquis communautaire*.

- **Repeal of existing legislation**

Adoption of the proposal will lead to repeal of existing legislation.

- **European Economic Area**

The proposed act concerns an EEA matter and should therefore extend to the European Economic Area.

Proposal for a

**DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**

**repealing Council Directive 87/372/EEC on the frequency bands to be reserved for the coordinated introduction of public pan-European cellular digital land-based mobile communications in the Community**

**(Text with EEA relevance)**

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 95 thereof,

Having regard to the proposal from the Commission<sup>3</sup>,

Having regard to the opinion of the European Economic and Social Committee<sup>4</sup>,

Having regard to the opinion of the Committee of the Regions<sup>5</sup>,

Acting in accordance with the procedure laid down in Article 251 of the Treaty<sup>6</sup>,

Whereas:

- (1) The 890-915 and 935-960 MHz frequency bands (the 900 MHz band) were reserved and were to be occupied for the public pan-European cellular digital mobile communications service, provided in each of the Member States to a common specification, identified by Council Directive 87/372/EEC 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<sup>7</sup>, complemented by Council recommendation of 25 June 1987 on the coordinated introduction of public pan-European cellular digital land-based mobile communications in the Community<sup>8</sup> and by Council Resolution of 14 December 1990 on the final stage of the coordinated introduction of pan-European land-based public digital mobile cellular communications in the Community (GSM)<sup>9</sup>.

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<sup>3</sup> O.L.C. , , p. .

<sup>4</sup> O.J.C. , , p. .

<sup>5</sup> O.J.C. , , p. .

<sup>6</sup> O.J.C. , , p. .

<sup>7</sup> O.J.L 196, 17.7.1987, p.85.

<sup>8</sup> O.J.L 196, 17.7.1987, p.81.

<sup>9</sup> O.J.C 329, 31.12.1990, p.25.

- (2) To contribute to the objectives of the i2010 initiative "A European Information Society for growth and employment"<sup>10</sup> and the internal market and to maximise competition, the use of the 900 MHz band should be opened as much as possible to additional types of technologies provided that it remains coordinated to introduce compatible pan-European services while allowing users as much freedom in the choice of services and technologies as possible.
- (3) Market developments have led to a general support from industry to remove the reservation of the 900 MHz band for GSM, so that new digital technologies capable of providing innovative pan-European services and coexisting with GSM can be deployed in the 890-915 and 935-960 MHz frequency bands. These bands offer propagation characteristics, which allow coverage of larger distances than higher frequency bands, with the effect that modern voice, data and multimedia services can be transported into less densely populated and rural areas.
- (4) Decision n° 676/2002/EC of the European Parliament and the Council of 7 March 2002 on a regulatory framework for radio spectrum policy in the European Community (Radio Spectrum Decision)<sup>11</sup> established a Community policy and legal framework to ensure coordination of policy approaches and, where appropriate, harmonised conditions with regard to availability and efficient use of the radio spectrum band necessary for the establishment and functioning of the internal market . That Decision allows the Commission to adopt technical implementing measures to ensure harmonised conditions for the availability and efficient use of the radio spectrum band.
- (5) In accordance with the principles and objectives of the Radio Spectrum Decision, the Commission issued to the European Conference of Postal and Telecommunications Administrations (hereinafter the CEPT) an initial mandate to develop least restrictive technical conditions for frequency bands including in the 900 MHz band.
- (6) As mandated, the CEPT produced technical conditions for coexistence of UMTS in the 900 MHz with GSM operating in the same band based on the principle that since the 900 MHz band has been allocated to and is widely used for GSM systems in the Community, such coexistence should ensure full compatibility between GSM and UMTS to protect the current use of 900 MHz band by GSM in the whole Community as long as there is a demand.
- (7) In order to remove the reservation of the 900 MHz band for GSM so that new digital technologies can be deployed in that band in coexistence with GSM systems, Directive 87/372/EEC should be repealed.

HAVE ADOPTED THIS DIRECTIVE:

#### *Article 1*

Council Directive 87/372/EEC is repealed with effect from ...

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<sup>10</sup> Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, COM(2005) 229 final.

<sup>11</sup> OJ L 108, 24.4.2002, p.1.

*Article 2*

This Directive shall enter into force on the day of its publication in the Official Journal of the European Union.

*Article 3*

This Directive is addressed to the Member States.

Done at Brussels,

*For the European Parliament*  
*The President*

*For the Council*  
*The President*