



Commission for  
Communications Regulation

**Ofcom**  
OFFICE OF COMMUNICATIONS

**MEMORANDUM OF UNDERSTANDING ON  
FREQUENCY CO-ORDINATION BETWEEN  
THE REPUBLIC OF IRELAND  
AND  
THE UNITED KINGDOM  
IN THE FREQUENCY BANDS  
880 – 915 MHz PAIRED WITH 925 to 960 MHz  
AND  
1710-1785 MHz PAIRED WITH 1805 – 1880 MHz**

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## 1. INTRODUCTION

- 1.1. This Memorandum of Understanding (MoU) describes the procedures for the co-ordination of civil radio services between the Republic of Ireland (RoI) and the United Kingdom (UK) in the frequency bands 880 – 915 MHz paired with 925 to 960 MHz and 1710-1785 MHz paired with 1805 – 1880 MHz.
- 1.2. In Ireland and the UK the frequency bands 880 – 915 MHz, 925 MHz to 960 MHz, 1710-1785 MHz and 1805 – 1880 MHz are currently allocated to GSM. They will in due course be liberalised in line with the Commission Decision (as amended from time to time) on the liberalisation of frequencies in the 900MHz and 1800MHz bands to allow them to be used for different mobile telephony technologies <sup>2</sup>.
- 1.3. Ofcom is the Administration of the United Kingdom responsible for all relations with the RoI concerning this MoU.
- 1.4. The Commission for Communications Regulation (ComReg) is the Administration of the RoI responsible for all relations with the UK concerning this MoU.
- 1.5. Accordingly, the Administrations of the UK and the RoI have agreed the co-ordination procedures in this MoU.
- 1.6. This MoU applies in the territories of The Republic of Ireland and the United Kingdom.
- 1.7. The co-ordination procedure is based on the principle of equitable access to the spectrum resource.
- 1.8. Coordination of IMT/UMTS (FDD) services is based on the protection requirements for non preferential frequency blocks given in Par 2.2 of annex 2 (08)02 <sup>1</sup>

## 2. COMMITMENT OF THE ADMINISTRATIONS

The Administrations of the ROI and the UK are committed to ensuring that the radio-communication stations operating in the frequency band covered by this MoU, respect the limits for establishment of base stations without co-ordination given at paragraph 3, unless the stations are specifically exempt from the co-ordination procedure in accordance with paragraph 4.

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<sup>1</sup> ECC Recommendation (08)02 Frequency Planning and Frequency Co-ordination for the GSM 900 (Including E-GSM) /UMTS 900, GSM 1800/UMTS 1800 Land Mobile Systems

### 3. CRITERIA FOR CO-ORDINATION

- 3.1. Stations using the GSM technology will be coordinated according to <sup>2, 3, 4</sup>
- 3.2. Stations using technologies from the IMT family will be coordinated according to par 3.3 and 3.4 in line with paragraph 2.2 of ECC recommendation (08)02.
- 3.3. Stations using IMT/UMTS (FDD) technologies may be used without coordination with a neighbouring country if the mean field strength of each carrier produced by the base station does not exceed a value of:
  - a. In the frequency band 925-960 MHz: 59 dB $\mu$ V/m/5MHz at a height of 3m above ground at the border line between two countries and 31 dB $\mu$ V/m/5MHz at a height of 3 m above ground at a distance of 6 km inside the neighbouring country.

Or

  - b. In the frequency band 1805-1880 MHz: 65 dB $\mu$ V/m/5MHz at a height of 3m above ground at the border line between two countries and 37 dB $\mu$ V/m/5MHz at a height of 3 m above ground at a distance of 6 km inside the neighbouring country.
- 3.4. Radiocommunication stations for which the predicted field strength exceeds the values given in par 3.3 must be co-ordinated in accordance with paragraph 7, except where stations are listed in paragraph 6 or an arrangement exists between operators as described in paragraph 4.
- 3.5. To establish the predicted field strength produced by a station, the methodology set out at paragraph 5 shall be employed.
- 3.6. In the case of non-continuous transmission, the interference power shall be the power emitted, during the active part of the signal, in the stated bandwidth.

### 4. ARRANGEMENTS BETWEEN OPERATORS

- 4.1. To facilitate reasonable and timely development of their systems, licensees are encouraged to develop Bilateral and Multilateral Arrangements.
- 4.2. Licensees holding rights, in each of the neighbouring countries, to use the frequencies of operation of a Radiocommunication station may mutually agree conditions in which that station can exceed the predicted field strengths set out at paragraph 3.3.

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<sup>2</sup> Memorandum of understanding on frequency co-ordination between Ireland and the United Kingdom in the frequency bands 880-890 MHz and 925-925 MHz designated for EGSM. In force 1 December 2005.

<sup>3</sup> Memorandum of understanding on frequency co-ordination between Ireland and the United Kingdom in the frequency bands 890-915 MHz and 935-960 MHz designated for the global system for mobile communication (GSM) in force 1 January 2001

<sup>4</sup> Memorandum of understanding concluded between the administrations of the United Kingdom and Ireland on co-ordination in the 1710-1785 and 1805-1880 MHz frequency bands in force 1 September 1999

- 4.3. Where licensees have reached such a mutual agreement, co-ordination of the corresponding station in accordance with paragraph 7 is not required, subject to the terms of the agreement between the licensees and subject to the agreement being lawful. It is the responsibility of the licensees to ensure that the agreement is lawful. It is also the responsibility of the licensees to ensure that an appropriate agreement is reached with all licensees in the neighbour country authorised to use frequencies at which the predicted field strength may exceed the thresholds set out at paragraph 3.3.
- 4.4. In order to facilitate operator co-ordination, each Administration will provide names and point of contact information for the relevant licensees, subject to the agreement of the licensees.

## 5. PREDICTION OF PROPAGATION

The field prediction method shall be according to the latest version of Recommendation ITU-R P. 1546 5:

- 10% of the time
- 50% of locations
- Height of the receiver antenna 3m

Taking account of:

- Terrain profile for the base station in all main directions
- Type of terrain (e.g. land, sea, mixed path)
- Effective radiated field strength
- Antenna tilt and azimuth

Including model components:

- Mixed land/sea paths
- Receiving/mobile antenna height
- Terrain clearance angle

And standard value:  $\Delta N = 40$  (N0m-N1000m)



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<sup>5</sup> Recommendation ITU-R P.1546, Method for point-to-area predictions for terrestrial services in the Frequency range 30 MHz to 3 000 MHz

## 6. CO-ORDINATED STATIONS

The stations listed below have been agreed by both Administrations to be coordinated. Any subsequent change in the parameters given in the table shall void any acceptance of co-ordination for the corresponding station or stations.

Name	Individual Channel bandwidth	Modulation	Centre Frequency	Lat	Long	East	North	Ground H AMSL (m)	H AGL (m)	EIRP dBm	Antenna Manufacturer reference	Pol	3dB BW Dega	Az Dega E of N.

## **7. CO-ORDINATION PROCEDURE**

- 7.1. Exchanges of information for co-ordination/notification purposes shall be in the format set out in the HCM agreement Annex 2A (revised at Vilnius 2005)<sup>6</sup>
- 7.2. In the event of interference between authorised users of the frequency bands 925 MHz to 960 MHz, and 1805 – 1880 MHz in the ROI and the UK, the affected users shall exchange information between themselves with a view to resolving the interference by mutual agreement. A report of the interference and the details of the information exchanged shall be sent to both Administrations. The Administrations of the ROI and the UK agree to facilitate the exchange of information between authorised users of the band.
- 7.3. Co-ordination request should be sent by the licensee through the administration responsible for its authorisation.

## **8. REVIEW OF MoU**

- 8.1. The co-ordination threshold and prediction methods defined in this MoU may be reviewed in the light of new technologies, experience of operation of networks in both countries and future prediction developments.
- 8.2. This MoU explicitly covers co-ordination of GSM and IMT(FDD) services between the UK and the RoI, and may need to be reviewed if other technologies are to be considered.

## **9. TERMINATION OF THE MEMORANDUM OF UNDERSTANDING**

Either Administration may withdraw from this Memorandum of Understanding subject to 6 months notice.

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<sup>6</sup> Agreement between the Administrations of ... on the Co-ordination of frequencies between 29.7 MHz and 39.5 GHz for fixed service and land mobile service (HCM Agreement) Vilnius, 2005  
[http://hcm.bundesnetzagentur.de/http/englisch/verwaltung/index\\_europakarte.htm](http://hcm.bundesnetzagentur.de/http/englisch/verwaltung/index_europakarte.htm)

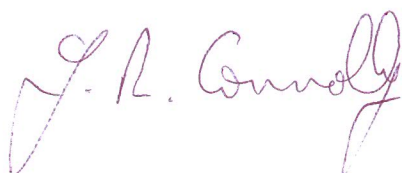
**10. DATE OF ENTRY INTO FORCE**

This Memorandum of Understanding shall enter into force on 1 May 2011.

Signed on .

JIM CONNOLLY

For the administration of The Republic of Ireland



Signed on 5 April 2011 .

RAY MCCONNELL

For the UNITED KINGDOM administration

