Agence Nationale des Fréquences

Ofcom
OFFICE OF COMMUNICATIONS

# MEMORANDUM OF UNDERSTANDING CONCLUDED BETWEEN FRANCE AND THE UNITED KINGDOM FOR FREQUENCY CO-ORDINATION IN THE 880 – 915 MHz AND 925 – 960 MHz FREQUENCY BANDS TO BE APPLIED IN THE AREA INCLUDING FRANCE AND THE CHANNEL ISLANDS (E-GSM and GSM bands)

## 1- INTRODUCTION

*1.1* Within France and the United Kingdom, the frequency bands 880 - 890 MHz and 925 – 935 MHz are designated to be used for E-GSM [1] and the frequency bands 890 - 915 and 935 - 960 MHz are designated to be used for GSM [2].

*1.2* Within this MoU, unless stated otherwise, the term GSM includes E-GSM and GSM.

*1.3* In order to minimise problems of interference between the systems operating in neighbouring countries, it is necessary to establish agreements for regulatory and technical procedures for frequency co-ordination. These agreements should be designed to reduce the administrative procedures and permit a rapid deployment of GSM in the frequency bands in the countries concerned.

*1.4* The Administration of United Kingdom is responsible for all relations with France concerning this agreement.

*1.5* The Administrations of the United Kingdom and the Channel Islands plan to licence operators in the E-GSM frequency bands in the Channel Islands.

*1.6* In France, the frequency bands 880 - 890 MHz and 925 - 935 MHz are also used by the Ministry of Defence for tactical radio relay. This band should be progressively allocated to operators by the end of 2004.

1.7 This MoU abrogates the previous MoUs between France and United Kingdom for Channel Islands, for the GSM and E-GSM frequency bands, respectively dated 20 April 2000 and 9 January 2003.

*1.8* Accordingly, the Administrations of the United Kingdom and France have agreed the following co-ordination procedures.

## 2- TECHNICAL PROVISIONS

*2.1* *Preferential frequencies*

The co-ordination procedure shall be based on the concept of preferential frequencies. The bands 880 - 915 MHz and 925 - 960 MHz shall be divided into groups of frequencies which shall be assigned between the two countries as "preferential bands".

*2.2* *Trigger values*

For the preferential and non-preferential bands, "trigger values" shall be defined as follows:

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[1] ERC Decision (97) 02 of 21 March 1997 on the extended frequency bands to be used for the GSM Digital Pan-European Communications System.

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

| | |
|---|---|
| Preferential frequencies | 32 dBμV/m |
| Non-preferential frequencies | 19 dBμV/m |

2.3 *Field strength prediction*

The field strength shall be predicted by the method given in paragraph 2.6 below and shall take into account the percentage of time for which that field strength is expected to be exceeded.

2.4 *Use of the preferential bands*

A base station may be established without co-ordination in a preferential band allocated to a country, provided that the predicted field strength at all points on the coastline of the other country does not exceed the higher of the trigger values given in the table of paragraph 2.2.

2.5 *Use of the non-preferential bands*

A base station may be established without co-ordination on a frequency outside the preferential bands allocated to a country, provided that the predicted field strength at all points on the coastline of the other country does not exceed the lower of the trigger values. Neither such a base station, nor the mobiles served by it, may claim protection from interference caused by a station of the neighbouring country respecting the conditions of paragraph 2.4 above.

2.6 *Propagation prediction method*

The field prediction method shall be according to Recommendation ITU-R P.1546[3] which shall be applied as follows:

For preferential channels:

50% of the time and 50% of locations for land

50% of the time and 50% of locations for cold sea

[3] Recommendation ITU-R P.1546, Method for point-to-area predictions for terrestrial services in the frequency range 30 MHz to 3 000 MHz

For non-preferential channels:

10% of the time and 50% of locations for land

10% of the time and 50% of locations for cold sea

Taking account of:

height of the mobile receiver antenna set at 3 m
(The conversion factor from 10 m to 3 m shall be –10dB)
average terrain height for the base station in all main directions
type of terrain (e.g. land, sea, mixed path)
effective radiated power
Antenna tilt and azimuth
Terrain clearance angle.

## 3- ARRANGEMENTS FOR PLANNING AT AN OPERATIONAL LEVEL

An MoU between the administrations of France and the United Kingdom which enables co-ordination between operators, subject to agreement of the Administrations, was signed on the 13th October 1999[4].

## 4- TACTICAL RADIO RELAY

Until the planned migration of radio relay links is completed by the end of 2004, base and mobile stations in the Channel Islands using the frequency bands 880 - 885 MHz and 925 - 930 MHz, shall not claim protection from the tactical radio relay in France.

## 5 - EXCHANGE OF INFORMATION

Exchanges of information for co-ordination purposes shall be in the format set out in the "Agreement 2003 (Berlin, November 2003)" in force and in accordance with the procedures described therein.

## 6- REVIEW AND FOLLOW UP OF THE MEMORANDUM OF UNDERSTANDING

This agreement shall be reviewed two years after date of entry into force. Either Administration may request a review of this MoU. Any part of this MoU may be revised in the light of future developments and experience in the operation of the networks covered by the MoU.

[4] Agreement between the administrations of France and the United Kingdom concerning the approval of planning arrangements between mobile radio communications network operators. 13 October 1999.

## 7- TERMINATION OF THE MEMORANDUM OF UNDERSTANDING

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

## 8- LANGUAGE OF THE MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding is drafted in the French and English languages, both languages having equal authority.

The original version in English is laid down with Ofcom in London, the original version in French is laid down with the Agence Nationale des Fréquences in Maisons-Alfort.

## 9- DATE OF ENTRY INTO FORCE

This Memorandum of Understanding will enter into force on 2nd January 2005.

Done at Jersey on 23rd June 2004.

For **FRANCE**

A. RIGOLE

For the **UNITED KINGDOM**

B. LAST

ANNEX 1

DIVISION INTO PREFERENTIAL FREQUENCIES

| Channel | Mobile Transmit (MHz) | Base Transmit (MHz) | Country |
|---|---|---|---|
| 975 | 880.2 | 925.2 | Channel Islands |
| 976 | 880.4 | 925.4 | Channel Islands |
| 977 | 880.6 | 925.6 | Channel Islands |
| 978 | 880.8 | 925.8 | Channel Islands |
| 979 | 881.0 | 926.0 | Channel Islands |
| 980 | 881.2 | 926.2 | Channel Islands |
| 981 | 881.4 | 926.4 | Channel Islands |
| 982 | 881.6 | 926.6 | Channel Islands |
| 983 | 881.8 | 926.8 | Channel Islands |
| 984 | 882.0 | 927.0 | Channel Islands |
| 985 | 882.2 | 927.2 | France |
| 986 | 882.4 | 927.4 | France |
| 987 | 882.6 | 927.6 | France |
| 988 | 882.8 | 927.8 | France |
| 989 | 883.0 | 928.0 | France |
| 990 | 883.2 | 928.2 | France |
| 991 | 883.4 | 928.4 | France |
| 992 | 883.6 | 928.6 | France |
| 993 | 883.8 | 928.8 | France |
| 994 | 884.0 | 929.0 | France |
| 995 | 884.2 | 929.2 | France |
| 996 | 884.4 | 929.4 | France |
| 997 | 884.6 | 929.6 | France |
| 998 | 884.8 | 929.8 | France |
| 999 | 885.0 | 930.0 | France |
| 1000 | 885.2 | 930.2 | France |
| 1001 | 885.4 | 930.4 | France |
| 1002 | 885.6 | 930.6 | France |
| 1003 | 885.8 | 930.8 | France |
| 1004 | 886.0 | 931.0 | France |
| 1005 | 886.2 | 931.2 | France |
| 1006 | 886.4 | 931.4 | France |
| 1007 | 886.6 | 931.6 | France |

| | | | |
|---|---|---|---|
| 1008 | 886.8 | 931.8 | France |
| 1009 | 887.0 | 932.0 | France |
| 1010 | 887.2 | 932.2 | France |
| 1011 | 887.4 | 932.4 | France |
| 1012 | 887.6 | 932.6 | France |
| 1013 | 887.8 | 932.8 | France |
| 1014 | 888.0 | 933.0 | France |
| 1015 | 888.2 | 933.2 | Channel Islands |
| 1016 | 888.4 | 933.4 | Channel Islands |
| 1017 | 888.6 | 933.6 | Channel Islands |
| 1018 | 888.8 | 933.8 | Channel Islands |
| 1019 | 889.0 | 934.0 | Channel Islands |
| 1020 | 889.2 | 934.2 | Channel Islands |
| 1021 | 889.4 | 934.4 | Channel Islands |
| 1022 | 889.6 | 934.6 | Channel Islands |
| 1023 | 889.8 | 934.8 | Channel Islands |
| 1024 | 890.0 | 935.0 | Channel Islands |
| | | | |
| 1 | 890.2 | 935.2 | France |
| 2 | 890.4 | 935.4 | France |
| 3 | 890.6 | 935.6 | France |
| 4 | 890.8 | 935.8 | France |
| 5 | 891.0 | 936.0 | France |
| 6 | 891.2 | 936.2 | France |
| 7 | 891.4 | 936.4 | France |
| 8 | 891.6 | 936.6 | France |
| 9 | 891.8 | 936.8 | France |
| 10 | 892.0 | 937.0 | France |
| 11 | 892.2 | 937.2 | France |
| 12 | 892.4 | 937.4 | France |
| 13 | 892.6 | 937.6 | France |
| 14 | 892.8 | 937.8 | France |
| 15 | 893.0 | 938.0 | France |
| 16 | 893.2 | 938.2 | France |
| 17 | 893.4 | 938.4 | France |
| 18 | 893.6 | 938.6 | France |
| 19 | 893.8 | 938.8 | France |
| 20 | 894.0 | 939.0 | France |

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|---|---|---|---|
| 21 | 894.2 | 939.2 | France |
| 22 | 894.4 | 939.4 | France |
| 23 | 894.6 | 939.6 | France |
| 24 | 894.8 | 939.8 | France |
| 25 | 895.0 | 940.0 | France |
| 26 | 895.2 | 940.2 | France |
| 27 | 895.4 | 940.4 | France |
| 28 | 895.6 | 940.6 | France |
| 29 | 895.8 | 940.8 | France |
| 30 | 896.0 | 941.0 | France |
| 31 | 896.2 | 941.2 | France |
| 32 | 896.4 | 941.4 | France |
| 33 | 896.6 | 941.6 | France |
| 34 | 896.8 | 941.8 | France |
| 35 | 897.0 | 942.0 | France |
| 36 | 897.2 | 942.2 | France |
| 37 | 897.4 | 942.4 | France |
| 38 | 897.6 | 942.6 | France |
| 39 | 897.8 | 942.8 | Channel Islands |
| 40 | 898.0 | 943.0 | Channel Islands |
| 41 | 898.2 | 943.2 | Channel Islands |
| 42 | 898.4 | 943.4 | Channel Islands |
| 43 | 898.6 | 943.6 | Channel Islands |
| 44 | 898.8 | 943.8 | Channel Islands |
| 45 | 899.0 | 944.0 | Channel Islands |
| 46 | 899.2 | 944.2 | Channel Islands |
| 47 | 899.4 | 944.4 | Channel Islands |
| 48 | 899.6 | 944.6 | Channel Islands |
| 49 | 899.8 | 944.8 | Channel Islands |
| 50 | 900.0 | 945.0 | Channel Islands |
| 51 | 900.2 | 945.2 | Channel Islands |
| 52 | 900.4 | 945.4 | Channel Islands |
| 53 | 900.6 | 945.6 | Channel Islands |
| 54 | 900.8 | 945.8 | Channel Islands |
| 55 | 901.0 | 946.0 | Channel Islands |
| 56 | 901.2 | 946.2 | Channel Islands |
| 57 | 901.4 | 946.4 | Channel Islands |
| 58 | 901.6 | 946.6 | Channel Islands |

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|---|---|---|---|
| 59 | 901.8 | 946.8 | Channel Islands |
| 60 | 902.0 | 947.0 | Channel Islands |
| 61 | 902.2 | 947.2 | Channel Islands |
| 62 | 902.4 | 947.4 | Channel Islands |
| 63 | 902.6 | 947.6 | Channel Islands |
| 64 | 902.8 | 947.8 | Channel Islands |
| 65 | 903.0 | 948.0 | Channel Islands |
| 66 | 903.2 | 948.2 | Channel Islands |
| 67 | 903.4 | 948.4 | Channel Islands |
| 68 | 903.6 | 948.6 | Channel Islands |
| 69 | 903.8 | 948.8 | Channel Islands |
| 70 | 904.0 | 949.0 | Channel Islands |
| 71 | 904.2 | 949.2 | Channel Islands |
| 72 | 904.4 | 949.4 | Channel Islands |
| 73 | 904.6 | 949.6 | Channel Islands |
| 74 | 904.8 | 949.8 | Channel Islands |
| 75 | 905.0 | 950.0 | Channel Islands |
| 76 | 905.2 | 950.2 | Channel Islands |
| 77 | 905.4 | 950.4 | Channel Islands |
| 78 | 905.6 | 950.6 | Channel Islands |
| 79 | 905.8 | 950.8 | Channel Islands |
| 80 | 906.0 | 951.0 | Channel Islands |
| 81 | 906.2 | 951.2 | Channel Islands |
| 82 | 906.4 | 951.4 | Channel Islands |
| 83 | 906.6 | 951.6 | Channel Islands |
| 84 | 906.8 | 951.8 | Channel Islands |
| 85 | 907.0 | 952.0 | Channel Islands |
| 86 | 907.2 | 952.2 | Channel Islands |
| 87 | 907.4 | 952.4 | France |
| 88 | 907.6 | 952.6 | France |
| 89 | 907.8 | 952.8 | France |
| 90 | 908.0 | 953.0 | France |
| 91 | 908.2 | 953.2 | France |
| 92 | 908.4 | 953.4 | France |
| 93 | 908.6 | 953.6 | France |
| 94 | 908.8 | 953.8 | France |
| 95 | 909.0 | 954.0 | France |
| 96 | 909.2 | 954.2 | France |

| | | | |
|---|---|---|---|
| 97 | 909.4 | 954.4 | France |
| 98 | 909.6 | 954.6 | France |
| 99 | 909.8 | 954.8 | France |
| 100 | 910.0 | 955.0 | France |
| 101 | 910.2 | 955.2 | France |
| 102 | 910.4 | 955.4 | France |
| 103 | 910.6 | 955.6 | France |
| 104 | 910.8 | 955.8 | France |
| 105 | 911.0 | 956.0 | France |
| 106 | 911.2 | 956.2 | France |
| 107 | 911.4 | 956.4 | France |
| 108 | 911.6 | 956.6 | France |
| 109 | 911.8 | 956.8 | France |
| 110 | 912.0 | 957.0 | France |
| 111 | 912.2 | 957.2 | France |
| 112 | 912.4 | 957.4 | France |
| 113 | 912.6 | 957.6 | France |
| 114 | 912.8 | 957.8 | France |
| 115 | 913.0 | 958.0 | France |
| 116 | 913.2 | 958.2 | France |
| 117 | 913.4 | 958.4 | France |
| 118 | 913.6 | 958.6 | France |
| 119 | 913.8 | 958.8 | France |
| 120 | 914.0 | 959.0 | France |
| 121 | 914.2 | 959.2 | France |
| 122 | 914.4 | 959.4 | France |
| 123 | 914.6 | 959.6 | France |
| 124 | 914.8 | 959.8 | France |