MEMORANDUM OF UNDERSTANDING ON FREQUENCY CO-ORDINATION BETWEEN FRANCE AND THE UNITED KINGDOM IN THE FREQUENCY BANDS 410 TO 430 MHz
1. INTRODUCTION

1.1. This Memorandum of Understanding ("MoU") describes the procedures for the coordination of radio services between France and the United Kingdom (UK) in the frequency bands 410 to 430MHz.

1.2. This MoU abrogates and replaces the previous MoU dated 12 October 1999. \(^1\)

1.3. The current use of the frequency band 410 to 430 MHz in France and the UK is shown in the diagram below.

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1.4. In the UK the frequency bands 410 to 412 MHz paired with 420 to 422 MHz and the frequency bands 414 to 415 MHz paired with 424 to 425 MHz are designated for Government use and will be used by the Emergency Services. The frequency bands 412 to 414 MHz paired with 422 to 424 MHz has been awarded on a technology neutral basis, in October 2006. \(^2\)

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\(^1\) Memorandum of understanding concluded between France and the United Kingdom concerning the coordination of frequencies in the frequency band 410-430MHz. Done at London 12 October 1999.

\(^2\) [Website Link] \(\text{http://www.ofcom.org.uk/radiocomms/spectrumawards/completedawards/award_412/}\)
1.5. In France the frequency bands 410 to 414.5 MHz paired with 420 to 424.5 MHz are designated for Government use; the frequency bands 414.5 to 420 MHz paired with 414.5 to 420 MHz are shared between Government and Civil users.

1.6. Ofcom is the Administration of the UK responsible for all relations with France concerning this agreement. ANFR is the Administration of France responsible for all relations with UK concerning this agreement.

1.7. Accordingly, the Administrations of France and the UK have agreed the following co-ordination procedures.

2. **PROCEDURE FOR COORDINATION**

2.1. The Administrations of France and the UK have developed this co-ordination procedure on the principle of securing equitable access to the radio spectrum.

2.2. Within the preferential frequency bands, a station may be established without co-ordination provided that the predicted total field strength produced by the station does not exceed the co-ordination threshold level for the percentage of time and locations given in paragraph 3 below.

2.3. Within the non preferential frequency bands, a station may be established without co-ordination provided that the predicted total field strength produced by the station does not exceed the co-ordination threshold level for the percentage of time and locations given in paragraph 3 below.

2.4. The Administrations of France and the UK are committed to ensuring that, as far as possible, stations covered by this MoU do not exceed the co-ordination threshold given in the Section 4 of the MoU. When stations are planned that will exceed the co-ordination threshold, either Administration may seek co-ordination according to the procedure described in paragraph 6 below.

3. **COORDINATION THRESHOLD**

3.1. For preferential frequencies the co-ordination threshold is -140 dBW (equivalent to 20 dBμV/m) in a bandwidth of 25 kHz at 40 km inland from the coast of the neighbouring country at a height of 10m above the ground.

3.2. For non preferential frequencies the co-ordination threshold is -140 dBW (equivalent to 20 dBμV/m) in a bandwidth of 25 kHz at the coast of the neighbouring country at a height of 10m above the ground.
4. **DIVISION OF PREFERENTIAL AND NON PREFERENTIAL FREQUENCIES**

The division of preferential and non preferential frequencies shall be as follows:

<table>
<thead>
<tr>
<th>Preferential</th>
<th>Non Preferential</th>
<th>Ms Transmit</th>
<th>Number of channels</th>
<th>Bs Transmit</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>UK</td>
<td>410 - 411.75</td>
<td>70</td>
<td>420 - 421.75</td>
</tr>
<tr>
<td>UK</td>
<td>France</td>
<td>411.75 - 414</td>
<td>90</td>
<td>421.75 - 424</td>
</tr>
<tr>
<td>France</td>
<td>UK</td>
<td>414 - 414.575</td>
<td>23</td>
<td>424 - 424.575</td>
</tr>
<tr>
<td>UK</td>
<td>France</td>
<td>414.575 - 414.7</td>
<td>5</td>
<td>424.575 - 424.7</td>
</tr>
<tr>
<td>France</td>
<td>UK</td>
<td>414.7 - 414.8</td>
<td>4</td>
<td>424.7 - 424.8</td>
</tr>
<tr>
<td>UK</td>
<td>France</td>
<td>414.8 - 414.9</td>
<td>4</td>
<td>424.8 - 424.9</td>
</tr>
<tr>
<td>France</td>
<td>UK</td>
<td>414.9 - 415</td>
<td>4</td>
<td>424.9 - 425</td>
</tr>
<tr>
<td>UK</td>
<td>France</td>
<td>415 - 416.5</td>
<td>60</td>
<td>425 - 426.5</td>
</tr>
<tr>
<td>France</td>
<td>UK</td>
<td>416.5 - 418.975</td>
<td>99</td>
<td>426.5 - 428.975</td>
</tr>
<tr>
<td>UK</td>
<td>France</td>
<td>418.975 - 420</td>
<td>41</td>
<td>428.975 - 430</td>
</tr>
</tbody>
</table>

5. **PREDICTION OF PROPAGATION**

The field strength prediction method shall be Recommendation ITU-R P.1546 ³ which shall be applied as follows:

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 a mobile receiver antenna at 10m above ground level;
Average terrain height for a base station in all main directions;
Type of terrain (e.g. land, sea, mixed path);
Equivalent isotropic radiated power and field strength;
Antenna tilt and azimuth; and
Terrain clearance angle.

6. **EXCHANGE OF INFORMATION**

6.1. 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 This principle shall be extended to operators of systems for the frequency bands identified in this MOU.

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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

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
6.2. In the event of interference the affected parties shall exchange information with a view to resolving the dispute by mutual agreement. A report of the interference and the details of the information exchanged shall be sent to both administrations. The Administrations of France and UK agree to facilitate the exchange of information between operators.

6.3. An Administration wishing to bring a station into service or wishing to modify the characteristics of a station, such that the signal exceeds the coordination threshold given in paragraph 3, must submit a request for co-ordination with the other Administration by way of notice.

6.4. Exchanges of information for coordination/notification purposes shall be in the format set out in the HCM agreement Appendix 2A (revised at Vilnius 2005).

6.5. The coordination procedure shall follow the one described in the HCM Agreement.

7. REVIEW ARRANGEMENTS

The limits and prediction methods defined in this Memorandum of Understanding may be reviewed in the light of experience of operation of networks in both countries and future prediction developments.

8. TERMINATION OF THE MEMORANDUM OF UNDERSTANDING

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

9. DATE OF ENTRY INTO FORCE

This Memorandum of Understanding shall enter into force on 1st March 2008.

For the UNITED KINGDOM administration

P BURY

12/2/08

For the administration of FRANCE

A RIGOLE

22/01/08