

**AGREEMENT  
BETWEEN THE ADMINISTRATIONS OF  
BELGIUM, FRANCE, GERMANY, LUXEMBOURG,  
THE NETHERLANDS AND SWITZERLAND**

**ON FREQUENCY PLANNING AND FREQUENCY  
COORDINATION AT BORDER AREAS FOR  
TERRESTRIAL SYSTEMS CAPABLE OF  
PROVIDING ELECTRONIC COMMUNICATIONS  
SERVICES**

**IN THE FREQUENCY BAND  
2500-2690 MHz**

**Brussels, 11<sup>th</sup> October 2011**

Handwritten signatures in blue ink, including a large 'M' and other illegible marks.

## 1. INTRODUCTION

The frequency band 2500 - 2690 MHz is designated for terrestrial systems capable of providing electronic communications services according to

- for Belgium, France, Germany, Luxembourg and The Netherlands, according to the Decision of the European Commission 2008/477/EC of 13 June 2008 on the harmonisation of the 2500 - 2690 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Community.
- for Switzerland according to the national table of frequency allocations as approved by the Federal Council

The Administrations of Belgium, France, Germany, Luxembourg, The Netherlands and Switzerland have agreed on the following coordination procedures.

## 2. PRINCIPLES OF FREQUENCY PLANNING AND FREQUENCY COORDINATION AT BORDER AREAS

Frequency coordination at border areas is necessary to ensure efficient spectrum use and equal access to spectrum in the border areas. This Agreement is based on the principles of frequency planning and frequency coordination as laid down in ECC Recommendation (11)05.

The following principles apply:

- Frequency coordination with a neighbouring country is not necessary if the mean field strength does not exceed the field strength limits provided in paragraph 3. Coordination of stations exceeding the specified mean field strength as defined in paragraph 3 would disturb the equal access and is therefore not desirable.
- Field strength values are defined within a reference frequency block of 5 MHz.

## 3. PROVISIONS FOR COORDINATION

### 3.1. Maximum field strength for FDD and TDD systems

FDD and TDD systems should have the same right to cover the border area.

Therefore FDD and TDD Base stations may be operated if the produced mean field strength at a height of 3 m above ground does not exceed the value of 65 dB $\mu$ V/m in the reference bandwidth of 5 MHz at the border line, and does not exceed the value of 49 dB $\mu$ V/m in the reference bandwidth of 5 MHz at a line of 6 km beyond the border.

Nevertheless for a TDD Base station the above mentioned limit values are only applicable in the 2 following cases:

- If all involved networks are TDD networks and these networks are synchronized

or

- If one involved network is an FDD system and the TDD system is operating in the frequency band 2620-2690 MHz

For all other cases, the TDD system may be operated if the produced mean field strength at a height of 3 m above ground does not exceed the value of 21 dB $\mu$ V/m in the reference bandwidth of 5 MHz at the border line. In the special case that there is no TDD system involved in the other countries, the level of 21 dB $\mu$ V/m can be subject to additional bilateral agreements between concerned administrations.

### **3.2. The use of LTE systems in border areas**

In order to ensure the optimum network performance between LTE systems deployed in the border areas, the administrations shall encourage operators to coordinate the use of PCI code groups and other radio parameters, in accordance with ECC Recommendation (11)05, for LTE signals using the same centre frequency in border areas.

## **4. PROTECTION RADIO ASTRONOMY SYSTEMS**

Under consideration of the Recommendation ITU-R RA.769-2 and of out of band emissions of the terrestrial systems capable of providing electronic communications services (see block edge mask) it must be guaranteed that an interfering radiation density of -247 dBW/(m<sup>2</sup>Hz) is not exceeded above 2690 MHz at the radio astronomy locations Effelsberg (6°E53'01", 50°N31'30") and Westerbork (6°E36'15", 52°N55'01").

## **5. OPERATOR ARRANGEMENTS**

The establishment of arrangements between operators shall be allowed to the extent possible, according to the provisions laid down in the "Agreement between the administrations of Belgium, France, Germany, Luxembourg, the Netherlands and Switzerland concerning the approval of arrangements between operators of mobile radio communication networks" done at Brussels on 11<sup>th</sup> October 2011.

## **6. FIELD STRENGTH PREDICTION**

For the field strength calculations the tool of the latest version of the HCM Agreement shall be applied. Time probability in all calculations is 10 %.

## **7. REVISION OF THE AGREEMENT**

This Agreement may be modified at the request of one of the Signatory Administrations where such a modification becomes necessary in the light of administrative, regulatory or technical developments.

The technical characteristics may be reviewed in the light of practical experience of its





application and of the operation of terrestrial systems capable of providing electronic communications services in general.

## **8. WITHDRAWAL FROM THE AGREEMENT**

Any Administration may withdraw from this Agreement subject to six months notice.


## **9. LANGUAGE OF THE AGREEMENT**

This Agreement has been concluded in English.

One original version of this Agreement is handed over to each Signatory Administration and a copy is submitted to the Managing Administration of the HCM Agreement.

## **10. DATE OF ENTRY INTO FORCE**

The date of entry into force is the date of signature.

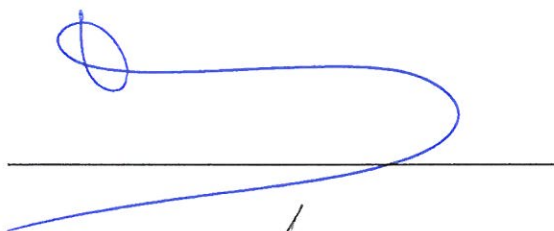
Handwritten signatures in blue ink, appearing to be initials or names, located in the bottom right corner of the page.

Done at Brussels on 11<sup>th</sup> October 2011

For BELGIUM

Belgian Institute for Postal services  
and Telecommunications

On behalf of the BIPT Council,  
Michael Vandroogenbroek



For FRANCE

Agence nationale des fréquences

Antoine Rigole



For GERMANY

Bundesnetzagentur

Heinz Hönnekes



For LUXEMBOURG

For the Institut Luxembourgeois  
de Régulation

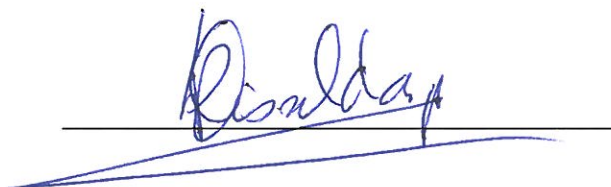
Roland Thurmes



For THE NETHERLANDS

Agentschap Telecom

Peter Disseldorp



For SWITZERLAND

Federal Office of Communications

Konrad Vonlanthen



