

# **AGREEMENT**

**between the administrations of**

**Belgium, France, Germany, Luxembourg,  
the Netherlands and Switzerland**

**on frequency usage and frequency coordination in  
border areas for terrestrial systems capable of  
providing electronic communications services in the  
frequency band 3400-3800 MHz**

**Brussels, 22 November 2017**

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## 1. Introduction

The frequency band 3400-3800 MHz is designated for terrestrial systems capable of providing wireless broadband electronic communications services

- for Belgium, France, Germany, Luxembourg and The Netherlands according to the Commission Decision 2008/411/EC of 21 May 2008 *on the harmonisation of the 3 400-3 800 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Community*, as amended by the Commission Implementing Decision 2014/276/EU of 2 May 2014.
- for Switzerland according to the national frequency allocation plan as approved by the Federal Council<sup>1</sup>.

The administrations of Belgium, France, Germany, Luxembourg, The Netherlands and Switzerland have agreed on the following frequency usage and cross-border frequency coordination procedures.

## 2. Principles of frequency usage and frequency coordination in border areas

The concept of equal access probability is a frequency planning principle enabling equitable coverage for two or more networks using the same frequency band with the same or different digital technologies in geographically adjacent areas without coordination. Operation of stations in the respective border area exceeding the specified field strength values after performing traditional frequency coordination would disturb the balance in the respective area and is therefore not desirable.

Furthermore this agreement is based on the principles of frequency usage and frequency coordination according to Recommendation ECC/REC(15)01 (see [www.erodocdb.dk](http://www.erodocdb.dk)).

The field strength values refer to the mean field strength of each cell produced by the base station and are defined inside a reference frequency block of 5 MHz

In cases of other frequency block sizes  $10 \times \log_{10}$  (frequency block size / 5 MHz) should be added to the field strength values.

## 3. Technical provisions

3.1 The TDD mode of operation is considered.

3.2 Base stations in border areas may be operated without coordination with the neighbouring country if the produced field strength at a height of 3 m above ground does not exceed 32 dB $\mu$ V/m/5 MHz at the border line.

3.3 When TDD systems are synchronised across the border or deployed as downlink only on both sides of the border, base stations may be operated without coordination with the neighbouring country if the produced field strength at a height of 3 m above ground does not exceed:

- a) Usage of preferential PCI<sup>2</sup> or equivalent<sup>3</sup>:

<sup>1</sup> Except the sub-band 3400-3410 MHz.

<sup>2</sup> As defined in ECC/REC(15)01.

<sup>3</sup> Future systems (e.g. 5G).

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67 dB $\mu$ V/m/5 MHz at the border line  
49 dB $\mu$ V/m/5 MHz at a distance of 6 km beyond the border

b) Usage of non-preferential PCI or equivalent:  
49 dB $\mu$ V/m/5 MHz at the border line

3.4 In order to improve performance between LTE or future systems (e.g. 5G) deployed in border areas the administration shall encourage operators to apply PCI coordination or equivalent parameters and arrange other radio parameters in accordance with the relevant annexes of ECC/REC(15)01 especially in the case where centre frequencies of LTE signals in border areas are aligned.

3.5 When TDD systems are synchronised across the border or deployed as downlink only on both sides of the border, and if centre frequencies of signals are not aligned, base stations may be operated without coordination with the neighbouring country if the produced field strength at a height of 3 m above ground does not exceed 3.3.a) values for all PCI or equivalent.

#### **4. Operators arrangements**

The conclusion 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 terrestrial systems capable of providing electronic communications services" done at Brussels on 11<sup>th</sup> October 2011. Operators arrangements could contain provisions for the cross-border synchronisation.

#### **5. Prediction of propagation**

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

#### **6. Revision of the agreement**

This agreement may be modified at a request of any of the signatory administrations where such a modification becomes necessary in the light of administrative, regulatory or technical development.

#### **7. Withdrawal from the agreement**

Any signatory administration may withdraw from this agreement subject to six months notice.

#### **8. Language of the agreement**

This agreement has been concluded in English language.

One original version of this agreement is handed over to each signatory administration.

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## 9. Abrogation of the Agreement of 14 December 2001

The Agreement between the administrations of Belgium, France, Germany, Luxembourg and The Netherlands on the frequency co-ordination for systems for fixed wireless access (FWA) in the bands 3410-3500 MHz and 3500-3600 MHz of 14 December 2001 is abrogated.

## 10. Date of entry into force

The date of entry into force of this agreement is subject to individual confirmations for the whole or parts of the band sent to the signing administrations of this agreement.

The application of this agreement is valid between the administrations which both have confirmed the date of entry into force.

Administrations may need to conclude bilateral agreements, additional or transitional, to ensure the compatibility between mobile and other radiocommunication services.

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## 11. Signature of the agreement

Done at Brussels, 22 November 2017.

For BELGIUM

Belgian Institute for Postal  
services and Telecommunications

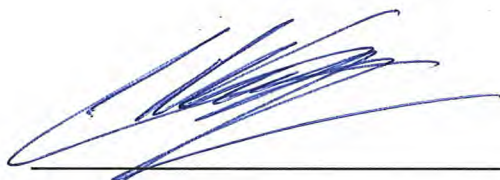
On behalf of the BIPT Council  
Michael Vandroogenbroek



For FRANCE

Agence Nationale des Fréquences

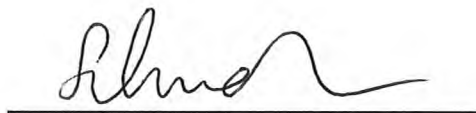
Cédric Perros



For GERMANY

Federal Network Agency

Tobias Schnetzer



For LUXEMBOURG

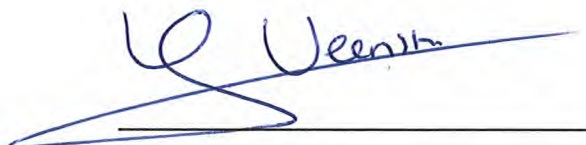
For the Institut Luxembourgeois  
de Régulation

Jean Gompelmann



For THE NETHERLANDS

Agentschap Telecom  
Yvonne Ueenstra



For SWITZERLAND

Federal Office of Communications

Konrad Vonlanthen

