

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 bands 1920-1980 / 2110-2170 MHz**

Brussels, 22 November 2017

1. Introduction

The frequency bands 1920-1980 / 2110-2170 MHz are designated for terrestrial systems capable of providing electronic communications services

- for Belgium, France, Germany, Luxembourg and The Netherlands according to the Commission Implementing Decision (EU) 2012/688 of 5 November 2012 on the harmonisation of the frequency bands 1920-1980 and 2110-2170 MHz for terrestrial systems capable of providing electronic communications services in the Union
- for Switzerland according to the national frequency allocation plan as approved by the Federal Council.

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(01)01 (see www.erodocdb.dk).

The field strength values refer to the predicted 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 FDD (frequency division duplex) mode of operation is considered with the following arrangement: The duplex spacing shall be 190 MHz with base station transmission (downlink) located in the upper part of the band (2110-2170 MHz) and terminal station transmission (uplink) located in the lower part of the band (1920-1980 MHz)¹.

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 the following values:

- a) Usage of preferential codes / PCI²:
65 dB μ V/m/5 MHz at the border line³

¹ In case of carrier aggregation, the frequency band for the transmission of terminal station may be different.

² As defined in ECC REC(01)01

³ This limit does not apply between Switzerland and Germany

37 dB μ V/m/5 MHz at a distance of 6 km beyond the border

- b) Usage of non-preferential codes / PCI:
37 dB μ V/m/5 MHz at and beyond the border line

- 3.3 In order to improve performance between broadband systems deployed in border areas the administration shall encourage operators to apply code groups / PCI coordination and arrange other radio parameters in accordance with the relevant annexes of ECC/REC(01)01 especially in the case where centre frequencies of broadband signals in border areas are aligned.
- 3.4 If centre frequencies of signals are not aligned or different technologies are used on both sides of the border, mobile operators can use the field strength values of 3.2.a) for all codes/PCI.

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 11th October 2011.

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.

9. Date of entry into force

The date of entry into force of this agreement is subject to individual signature of this agreement.

The application of this agreement is valid between the administrations which both have signed the agreement.

10. Abrogation of the Agreement of 4 February 2010

The Agreement between the administrations of Belgium, France, Germany, Luxembourg and The Netherlands of 4 February 2010 is abrogated.

Existing stations in line with the previous agreement may continue to operate until their switch-off.

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

Date of signature: 22 November 2017

For FRANCE

Agence nationale des fréquences
Cédric Perros

Date of signature: 22 November 2017

For GERMANY

Federal Network Agency
Tobias Schnetzer

Date of signature: 22 November 2017

For LUXEMBOURG

For the Institut Luxembourgeois
de Régulation
Jean Gompelmann

Date of signature:

For THE NETHERLANDS

Agentschap Telecom
Yvonne Veenstra-Knop

Date of signature:

For SWITZERLAND

Federal Office of Communications
Konrad Vonlanthen

Date of signature: 22 November 2017