Technical criteria and principles

agreed between the Electronic Communications Office of the Republic of Latvia and the State Supervisory Department for Telecommunications of the Republic of Belarus of Ministry of Communications and Informatization concerning the use of the frequency band 3400-3800 MHz by terrestrial stations in border areas

Minsk, 20 June 2019

Preamble

According to Article 6 of the ITU Radio Regulations, representatives of the Electronic Communications Office of the Republic of Latvia and the State Supervisory Department for Telecommunications of the Republic of Belarus of Ministry of Communications and Informatization (hereinafter referred to as the Parties) have concluded these technical criteria and principles (hereinafter referred to as the Document) concerning the use of the 3400-3800 MHz frequency band by terrestrial stations for mobile/fixed communications networks (MFCN)[1] in the land mobile and fixed services in border[2] areas with the aim of optimizing the use of the frequency band avoiding mutual interference and facilitating cross border frequency coordination.

This Document cancels and replaces the "Arrangement between the State Supervisory Department for Telecommunications of the Republic of Belarus and the Electronic Communications Office of the Republic of Latvia on frequency coordination for broadband wireless access (BWA) systems in the border area in the 3410-3600 MHz and 3600-3800 MHz frequency bands" (signed by correspondence, 22 January 2010).

1. Principles

1.1. This Document covers the coordination of the land mobile and fixed service stations.

1.2. This Document is based on the concept of coordination field strength levels for base stations, allocation of preferential and non-preferential Physical Cell Identifiers (PCI) for LTE systems as described in ECC Recommendation (15)01 of 13th February 2015 (amended 5 February 2016) "Cross-border coordination for mobile/fixed communications networks (MFCN) in the frequency bands: 694-790 MHz, 1452-1492 MHz, 3400-3600 MHz and 3600-3800 MHz" (hereinafter referred to as ECC/REC/(15)01) and on the principle of the equal access to spectrum by both Parties.

1.3. The following frequency arrangement for terrestrial MFCN systems presumes: TDD[3] mode is used in the frequency band 3400-3800 MHz. The frequency arrangement conform to ECC Decision (11)06 of 9th December 2011 (amended in 26th October 2018) "Harmonised frequency arrangements and least restrictive technical conditions (LRTC) for mobile/fixed communications networks (MFCN) operating in the band 3400-3800 MHz".

1.4. Field strength values in this Document are based on a receiving antenna height of 3 m above ground for 10 % of time and 50 % of locations.

1.5. This Document covers coordination of base stations. Parties agree that coordination of mobile stations in mobile and fixed services is not necessary for 3400-3800 MHz frequency band.

2. Use of frequencies

2.1. Each Party may use the 3400-3800 MHz frequency band for MFCN unsynchronised systems in TDD mode without coordination with the other Party if the predicted mean field strength produced by the cell (all transmitters within the base station sector) does not exceed the value of 32 dBμV/m/5MHz at the border.

2.2. Each Party may use the 3400-3800 MHz frequency band for MFCN synchronised systems in TDD mode without coordination with the other Party if the predicted mean field strength

[1] Mobile/fixed communications networks (MFCN) include IMT and other communications networks in the mobile and fixed services.

[2] In the context of this Document the term "border" is understood as the international borderline between the countries of the Parties.

[3] TDD - Time Division Duplex.

produced by the cell (all transmitters within the base station sector) does not exceed the value of 49 dBμV/m/5MHz at the border.

2.3. For LTE systems in border areas each Party shall use PCI sets according to the Annex of this Document.

2.4. The Parties agree that MFCN stations producing a field strength value not exceeding the criteria of item 2.1, 2.2 do not require coordination with the Fixed Satellite Service Earth stations.

2.5. If frequency block size is other than 5 MHz, a correction, calculated by the formula $10 \times \log_{10}$ (frequency block size, MHz / 5), dB, shall be added to the field strength value indicated in item 2.1, 2.2.

3. Procedure

3.1. If the predicted mean field strength value of any cell produced by the base station exceeds the level indicated in item 2.1, 2.2 the frequency assignment shall be coordinated with the other Party.

3.2. The period of coordination shall not exceed 45 days from the date of receiving the request and 20 days after the reminder. If no reply is received within 65 days the frequency assignment shall be considered as coordinated. The exchange of coordination information shall take place by e-mail or other electronic means.

3.3. Coordination requests shall be drawn up according to Annex 3 of ECC/REC/(15)01 in the appropriate ITU electronic formats.

3.4. Complaints of harmful interference shall be based on the median value of measurements of field strength, performed at a receiving antenna height of 3 m above ground at least in two different points over a distance of at least 100 m along the border.

3.5. Reports of harmful interference shall be presented in accordance to Appendix 10 of the ITU Radio Regulations and processed according to Article 15 of the ITU Radio Regulations. The Parties shall take all possible measures in order to eliminate harmful interference.

3.6. For field strength calculations the Parties shall use the latest version of Recommendation ITU-R P.1546 "Method for point-to-area predictions for terrestrial services in the frequency range 30 MHz to 3000 MHz".

4. Operators arrangement

4.1. Operators concerned may agree on synchronisation of concerned networks by mutual consent, concluding an arrangement between operators with the consent of the Parties. Such operators arrangements shall only be valid as long as all participating operators hold exclusive rights of use of concerned frequencies.

5. Revision and cancellation

5.1. This Document may be revised at any time on the initiative of any Party with the consent of the other Party.

5.2. This Document may be cancelled by a mutual decision of both Parties on terms and conditions adopted by the Parties or by a decision of one Party notifying the other Party on its intention at least one year before.

6. Entry into force

6.1. This Document shall come into force on the date of signing it by both Parties.

6.2. This Document has been drawn in two identical copies, one for the Republic of Latvia and one for the Republic of Belarus.

Minsk, 20 June 2019.

On behalf of the Electronic Communications Office of the Republic of Latvia	On behalf of the State Supervisory Department for Telecommunications of the Republic of Belarus of Ministry of Communications and Informatization
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Annex

Allocation of preferential Physical Cell Identifiers (PCI) for LTE systems in the 3400-3800 MHz frequency band between the Republic of Latvia and the Republic of Belarus[4]

Set	**A**	**B**	**C**	**D**	**E**	**F**
PCI	0...83	84...167	168...251	252...335	336...419	420...503
Set preferential to	LVA[5]	LVA	BLR[6]	BLR	LVA	BLR

[4] According to Annex 4 of ECC/REC/(15)01.
[5] LVA – the Republic of Latvia.
[6] BLR – the Republic of Belarus.