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 2500-2690 MHz for terrestrial systems for Mobile/Fixed Communications Networks (MFCN) 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 the present technical criteria and principles (hereinafter referred to as the Document) concerning the use of the 2500-2690 MHz frequency band by terrestrial systems for mobile/fixed communications networks (MFCN)[1] in border areas with the aim of optimizing the use of the frequency band and avoiding mutual interference in on a mutually coordinated basis.

The Document cancels and replaces the „Technical criteria and principles agreed between the Electronic Communications Office of the Republic of Latvia and the State Supervisory Department for Telecommunications of the Ministry of Telecommunications and Informatization of the Republic of Belarus concerning the use of the frequency band 2500-2690 MHz for terrestrial systems for Mobile/Fixed Communication Networks (MFCN) in border areas" (Riga, 14th November 2012).

1. Principles

1.1. This Document is based on the concept of coordination threshold levels for base stations, allocation of preferential and non-preferential Physical Cell Identifiers (PCI) for LTE systems as described in ECC Recommendation (11)05 of 26 May 2011 "Cross-border Coordination for Mobile/Fixed Communications Networks (MFCN) in the frequency band 2500-2690 MHz" (amended 3 February 2017) (hereinafter referred to as ECC/REC/(11)05) and on the principle of equal access to spectrum by both Parties.

1.2. The following frequency arrangement for MFCN systems presumes: FDD[2] mobile stations (user equipment or terminals) transmit and receive respectively in the bands 2500-2570 MHz / 2620-2690 MHz, FDD base stations transmit and receive respectively in the bands 2620-2690 MHz / 2500-2570 MHz and TDD[3] mode is used in the frequency band 2570-2620 MHz. This conforms to ECC Decision (05)05 of 18 March 2005 "Harmonised utilization of spectrum for Mobile/Fixed Communications Networks (MFCN) operating within the band 2500-2690 MHz" (amended 3 July 2015).

1.3. Allocation of preferential and non-preferential Physical Cell Identifiers (PCI) for LTE systems between Parties is given in Annex of this Document.

1.4. The 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.

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

2. Use of frequencies and PCI

2.1. Each Party may use the 2500-2570 MHz / 2620-2690 MHz frequency bands for LTE stations in the FDD mode using its preferential PCIs without coordination with the other Party if the predicted mean field strength produced by the base station cell does not exceed the value of 65 dBμV/m/5 MHz at the border and does not exceed the value of 49 dBμV/m/5 MHz at a distance of 6 km from the border inside the neighbouring country.

2.2. For LTE systems each Party may use all PCIs available in the 2500-2570 MHz / 2620-2690 MHz frequency bands if the predicted mean field strength produced by the base station cell does not exceed the value of 49 dBμV/m/ 5 MHz at the border. If the predicted mean field strength produced by the base station cell of LTE systems exceeds the value of

[1] Mobile/fixed communications networks (MFCN) includes IMT and other communications networks in the mobile and fixed services.
[2] FDD - Frequency Division Duplex.
[3] TDD - Time Division Duplex.

49 dBμV/m/ 5 MHz at the border each Party shall use only their own preferential PCIs according to the Annex to this Document.

2.3. Each Party may use the 2570-2620 MHz frequency band for stations in the TDD mode using its preferential PCIs without coordination with the other Party if the predicted mean field strength produced by the base station cell does not exceed the value of 30 dBμV/m/5 MHz at the border.

2.4. For LTE systems each Party may use all PCIs available in the 2570-2620 MHz frequency band if the predicted mean field strength produced by the base station cell does not exceed the value of 21 dBμV/m/5 MHz at the border. If the predicted mean field strength produced by the base station cell of LTE systems exceeds the value of 21 dBμV/m/5 MHz at the border each Party shall use only their own preferential PCIs according to the Annex of this Document.

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 values indicated in items 2.1, 2.2, 2.3 and 2.4.

3. Procedure

3.1. If the predicted mean field strength value produced by the base station exceeds the levels indicated in items 2.1 and 2.3 the frequency assignment shall be coordinated with the other Party.

3.2. The period of coordination shall not exceed 50 days from the date of receiving the request and 25 days after the reminder. If no reply is received within 75 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 4 of ECC/REC/(11)05 in the appropriate ITU electronic format.

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 to deviate from field strength levels in items 2.1, 2.3 by mutual consent, concluding an arrangement between operators with the consent of the Parties concerned. Such operator arrangement 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 six months 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 up in two identical copies, one for 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
Maris Aleksandrovs	Yury Siamashka

Annex

Allocation of preferential Physical Cell Identifiers (PCI) for LTE systems in the 2500-2690 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 5 of ECC/REC/(11)05.
[5] LVA – the Republic of Latvia.
[6] BLR – the Republic of Belarus.