

## **ARRANGEMENT**

**between the Electronic Communications Office of the Republic  
of Latvia and the Consumer Protection and Technical  
Regulatory Authority of the Republic of Estonia  
concerning the use of the frequency bands 1920-1980  
MHz / 2110-2170 MHz for terrestrial systems for Mobile/Fixed  
Communications Networks (MFCN) in border areas**

**Riga, 24 April 2019**

## Preamble

According to Article 6 of the ITU Radio Regulations, representatives of the Electronic Communications Office of the Republic of Latvia and the Consumer Protection and Technical Regulatory Authority of the Republic of Estonia (hereinafter referred to as the Parties) have concluded this Arrangement concerning the use of the 1920-1980 MHz / 2110-2170 MHz frequency bands for terrestrial systems for mobile/fixed communications networks (MFCN)<sup>1</sup> in border areas (hereinafter referred to as the Arrangement) with the aim of optimizing the use of the frequency bands and avoiding mutual interference on a mutually coordinated basis.

This Arrangement cancels and replaces the „Arrangement between the Electronic Communications Office of the Republic of Latvia and the Estonian Technical Regulatory Authority concerning the use of the frequency bands 1920-1980 MHz / 2110-2170 MHz for terrestrial systems for Mobile/Fixed Communications Networks (MFCN) in border areas” (Tallinn, 19 December 2014).

## 1. Principles

- 1.1. This Arrangement is based on the concept of coordination field strength levels for base stations, allocation of preferential and non-preferential code groups for UMTS systems, allocation of preferential and non-preferential Physical Cell Identifiers (PCI) for LTE systems as described in ERC Recommendation 01-01 of 5 February 2016 “Cross-border coordination for mobile/fixed communications networks (MFCN) in the frequency bands: 1920-1980 MHz and 2110-2170 MHz” (hereinafter referred to as ERC/REC 01-01), on the principle of the equal access to spectrum by both Parties.
- 1.2. The following frequency arrangement presumes: mobile stations operating in FDD<sup>2</sup> mode transmit and receive respectively in the bands 1920-1980 MHz / 2110-2170 MHz, base stations operating in FDD mode transmit and receive respectively in the bands 2110-2170 MHz / 1920-1980 MHz. The frequency arrangement conforms to ECC Decision (06)01 “The harmonised utilisation of the bands 1920-1980 MHz and 2110-2170 MHz for mobile/fixed communications networks (MFCN) including terrestrial IMT systems” (amended 2 November 2012).
- 1.3. Allocation by preferential and non-preferential code groups for UMTS FDD systems between Parties is given in Annex 1 to this Arrangement.
- 1.4. Allocation of preferential and non-preferential Physical Cell Identifiers (PCI) for LTE FDD systems between Parties is given in Annex 2 of this Arrangement.
- 1.5. Field strength values in this Arrangement are based on a receiving antenna height of 3 m above ground for 10 % of time and 50 % of locations.
- 1.6. This Arrangement covers coordination of base stations.
- 1.7. In the context of this Arrangement the term “border” is understood as the international borderline between the countries of the Parties.

## 2. Use of frequencies

- 2.1. Each Party may use the frequency bands 1920-1980 MHz / 2110-2170 MHz for UMTS or LTE FDD systems respectively using its preferential codes or PCIs without coordination with the other Party if the predicted mean field strength value produced by

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<sup>1</sup> Mobile/fixed communications networks (MFCN) includes IMT and other communications networks in the mobile and fixed services.

<sup>2</sup> FDD - Frequency Division Duplex.

the base station cell does not exceed the value of 65 dB $\mu$ V/m/5 MHz at the border and does not exceed the value of 37 dB $\mu$ V/m/5 MHz at a distance of 6 km from the border inside the neighbouring country.

- 2.2. For UMTS or LTE systems each Party respectively may use all codes or PCIs available if the predicted mean field strength produced by the base station cell does not exceed the value of 37 dB $\mu$ V/m/ 5 MHz at the border. If the predicted mean field strength produced by the base station cell of UMTS or LTE systems exceeds the value of 37 dB $\mu$ V/m/ 5 MHz at the border each Party respectively shall use only their own preferential codes or PCIs according to the Annex 1 and Annex 2 to this Arrangement.
- 2.3. If frequency block size is other than 5 MHz, a correction, calculated by the formula  $10 \times \log_{10}(\text{frequency block size} / 5 \text{ MHz})$ , dB, shall be added to the field strength values indicated in items 2.1, 2.2.

### **3. Procedure**

- 3.1. If the predicted mean field strength value produced by the base station exceeds the levels indicated in item 2.1 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 6 of ERC/REC 01-01 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 item 2.1 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 Arrangement may be revised at any time on the initiative of any Party with the consent of the other Party.
- 5.2. This Arrangement 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 Arrangement shall come into force on the date of signing it by both Parties.
- 6.2. This Arrangement has been drawn in two identical copies, one for Latvia and one for Estonia.

Riga, 24 April 2019.

On behalf of the Electronic  
Communications Office of the  
Republic of Latvia

On behalf of the Consumer  
Protection and Technical  
Regulatory Authority of the  
Republic of Estonia

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Māris Aleksandrovs

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Arvo Rammus

**Allocation of preferential code groups for UMTS FDD systems in the 1920-1980 MHz / 2110-2170 MHz frequency bands between Latvia and Estonia<sup>3</sup>**

<b>Set</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>
<b>Code indices</b>	0...10	11...20	21...31	32...42	43...52	53...63
<b>Set preferential to</b>	LVA <sup>4</sup>	LVA	EST <sup>5</sup>	EST	LVA	EST

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<sup>3</sup> According to Annex 3 of ERC/REC 01-01.

<sup>4</sup> LVA – the Republic of Latvia.

<sup>5</sup> EST – the Republic of Estonia.

**Allocation of Physical Cell Identifiers (PCI) for LTE FDD systems in the 1920-1980 MHz/  
2110-2170 MHz frequency bands between Latvia and Estonia<sup>6</sup>**

<b>Set</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>
<b>PCI</b>	0...83	84...167	168...251	252...335	336...419	420...503
<b>Set preferential to</b>	LVA	LVA	EST	EST	LVA	EST

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<sup>6</sup> According to Annex 5 of ERC/REC 01-01.