

## **ARRANGEMENT**

**between  
the Electronic Communications Office of the Republic of Latvia  
and the Communications Regulatory Authority of the Republic  
of Lithuania**

**concerning the use of the frequency bands  
2300-2390 MHz  
for terrestrial systems for Mobile/Fixed Communications  
Networks (MFCN) in border areas**

**1 December 2014**

## Preamble

According to Article 6 of the ITU Radio Regulations, representatives of the Electronic Communications Office of the Republic of Latvia and the Communications Regulatory Authority of the Republic of Lithuania (hereinafter referred to as the Parties) have concluded this Arrangement concerning the use of the 2300-2390 MHz frequency bands for terrestrial systems for mobile/fixed communications networks (MFCN)<sup>1</sup> in border<sup>2</sup> areas (hereinafter referred to as the Arrangement) with the aim of optimizing the use of the frequency band and avoiding mutual interference on a mutually coordinated basis.

### 1. Principles

- 1.1. This Arrangement is based on the concept of coordination field strength levels for base stations, preferential / non-preferential Physical Cell Identifiers<sup>3</sup> (PCI) for LTE systems as described in ECC Recommendation (14)04 of 30<sup>th</sup> May 2014 "Cross-border coordination for mobile/fixed communications networks (MFCN) and between MFCN and other systems in the frequency band 2300-2400 MHz" (hereinafter referred to as ECC/REC (14)04 and on the principle of the equal access to spectrum by both Parties.
- 1.2. This Arrangement presumes TDD<sup>4</sup> frequency arrangement for terrestrial MFCN systems. The frequency arrangement conforms to ECC Decision (14)02 of 27<sup>th</sup> June 2014 "Harmonised technical and regulatory conditions for the use of the band 2300-2400 MHz for Mobile/Fixed Communications Networks (MFCN)".
- 1.3. 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.
- 1.4. This Arrangement covers coordination of base stations.

### 2. Use of frequencies and PCI

- 2.1. Each Party may use the frequency band 2300-2390 MHz for MFCN TDD systems without coordination with the other Party if the predicted mean field strength of each cell produced by the base station does not exceed a value of 30 dB $\mu$ V/m/5MHz at the border.
- 2.2. Each Party may use the frequency band 2300-2390 MHz for synchronised across the border MFCN TDD systems without coordination with the other Party if the predicted mean field strength of each cell produced by the base station does not exceed a value of 65 dB $\mu$ V/m/5MHz at the border and does not exceed a value of 49 dB $\mu$ V/m/5MHz at a distance of 6 km from the border inside the neighbouring country.
- 2.3. For LTE TDD systems each Party may use all PCI available if the predicted mean field strength produced by the cell (all transmitters within the sector) does not exceed a value of 21 dB $\mu$ V/m/5MHz at the border. If the predicted mean field strength produced by the cell (all transmitters within the sector) for LTE TDD systems exceeds the value of 21 dB $\mu$ V/m/5MHz at the border each Party shall use only their own preferential PCI according to the Annex to this Arrangement.

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

<sup>3</sup> Coordination of the Physical Cell Identifiers (PCI) is only needed in case of use of the LTE systems by both Parties when the channel centre frequencies are aligned independently of the channel bandwidth.

<sup>4</sup> TDD - Time Division Duplex.

- 2.4. For synchronised across the border LTE TDD systems each Party may use all PCI available if the predicted mean field strength produced by the cell (all transmitters within the sector) does not exceed a value of 49 dB $\mu$ V/m/5MHz at the border. If the predicted mean field strength produced by the cell (all transmitters within the sector) for synchronised across the border LTE TDD systems exceeds the value of 49 dB $\mu$ V/m/5MHz at the border each Party shall use only their own preferential PCI according to the Annex to this Arrangement.
- 2.5. If frequency block size is wider than 5 MHz, a correction, calculated by the formula  $10 \times \lg(\text{frequency block size} / 5 \text{ MHz})$ , dB, shall be added to the field strength values indicated in items 2.1, 2.2, 2.3 and 2.4.
- 2.6. Each Party shall notify the other Party concerning the beginning or cancellation of use of synchronised across the border MFCN TDD systems in frequency band 2300-2390 MHz in border areas indicating the frequency bands or channels concerned.
- 2.7. Each Party shall notify the other Party concerning the beginning or cancellation of use of the LTE TDD systems in frequency band 2300-2390 MHz in border areas indicating the frequency bands or channels concerned.

### **3. Procedure**

- 3.1. If the predicted mean field strength value of each cell produced by the base station exceeds the levels indicated in items 2.1 and 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 4 of ECC/REC (14)04 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. Revision and cancellation**

- 4.1. This Arrangement may be revised at any time on the initiative of any Party with the consent of the other Party.
- 4.2. 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.

## **5. Entry into force**

5.1. This Arrangement shall come into force on 1 December 2014.

5.2. This Arrangement has been drawn in two identical copies, one for the Republic of Latvia and one for the Republic of Lithuania.

Signed by correspondence.

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

On behalf of the Communications  
Regulatory Authority of the  
Republic of Lithuania

**Allocation of preferential Physical Cell Identifiers (PCI)  
in the 2300-2390 MHz frequency band  
between the Republic of Latvia and the Republic of Lithuania<sup>5</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>	LTU <sup>6</sup>	LVA <sup>7</sup>	LTU	LVA	LVA	LTU

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<sup>5</sup> According to Annex 5 of ECC/REC (14)04.

<sup>6</sup> LTU – the Republic of Lithuania.

<sup>7</sup> LVA – the Republic of Latvia.