

TECHNICAL ARRANGEMENT

between

**the Communications Regulatory Authority of the Republic of Lithuania
and the Office of Electronic Communications of the Republic of Poland**

**concerning the use of terrestrial systems capable of providing electronic
communications services in the frequency band 694-790 MHz in border
areas**

Preamble

According to the Article 6 of ITU Radio Regulations and in the framework of the “HCM Agreement”¹ the representatives of the Communications Regulatory Authority of the Republic of Lithuania and the Office of Electronic Communications of the Republic of Poland (hereinafter referred to as the Parties) have concluded this Technical Arrangement concerning the use of the 694-790 MHz frequency band for terrestrial mobile/fixed communications networks (MFCN)² with the aim to avoid mutual interference and optimize the use of the above-stated frequency band in the border areas³ on the mutually agreed basis (hereinafter referred to as the Arrangement).

The frequency band 694-790 MHz is designated for terrestrial systems capable of providing wireless broadband electronic communications services according to Commission Implementing Decision (EU) 2016/687 of 28 April 2016 on the “*Harmonisation of the 694-790 MHz frequency band for terrestrial systems capable of providing wireless broadband electronic communications services and for flexible national use in the Union*”.

1. Principles

- 1.1. This Arrangement is based on the concept of field strength levels for base stations, distribution of preferential and non-preferential Physical-layer Cell Identities (PCI) for LTE and NR systems as described in the ECC Recommendation (15)01 of 13 February 2015 (latest amended on 10 June 2022) “Cross-border Coordination for Mobile/Fixed Communications Networks (MFCN) in the frequency bands: 694-790 MHz, 1427-1518 MHz and 3400-3800 MHz” and principle of the equal access to spectrum by both Parties.
- 1.2. The frequency arrangement and parameters of transmission for base stations and mobile stations (user equipment or terminals) conform to the ECC Decision (15)01 of 6 March 2015 „Harmonised technical conditions for mobile/fixed communications networks (MFCN) in the band 694-790 MHz including a paired frequency arrangement (Frequency Division Duplex 2x30 MHz) and an optional unpaired frequency arrangement (Supplemental Downlink)“ and ECC Decision (16)02 of 17 June 2016 (amended 8 March 2019) “Harmonised technical conditions and frequency bands for the implementation of Broadband Public Protection and Disaster Relief (BB-PPDR) systems”.
- 1.3. The following operational modes are used: in FDD⁴ mode mobile stations transmit and receive in the frequency bands 698-736 MHz and 753-791 MHz respectively, base stations transmit and receive in the frequency bands 753-791 MHz and 698-736 MHz respectively, in SDL⁵ mode base stations transmit and mobile stations receive in the frequency band 738-753 MHz.
- 1.4. This Arrangement covers coordination of base stations only. Coordination for mobile stations is not required since that is covered by coordination of base stations.

¹ Agreement between the Administrations of Austria, Belgium, the Czech Republic, Germany, France, Hungary, the Netherlands, Croatia, Italy, Liechtenstein, Lithuania, Luxembourg, Poland, Romania, the Slovak Republic, Slovenia and Switzerland on the co-ordination of frequencies between 29.7 MHz and 43.5 GHz for the fixed service and the land mobile service (HCM Agreement), agreed by correspondence in 2020 (date of entry into force: 1 July 2021)

² Mobile/fixed communications networks (MFCN) includes IMT and other communications networks in the mobile and fixed services

³ In the context of this Arrangement the term “border” is understood as the international borderline between the countries of the Parties

⁴ FDD – Frequency Division Duplex

⁵ SDL – Supplemental Downlink

2. Use of frequencies and PCIs

- 2.1. Each Party may use the 753-791/698-736 MHz frequency bands for MFCN FDD systems and 738-753 MHz frequency band for MFCN SDL systems without coordination with the other Party if the predicted mean field strength produced by the cell (all transmitters within the sector) at a height of 3 m above ground does not exceed field strength levels given in Annex 1 to this Arrangement.
- 2.2. Each Party shall use PCIs for LTE and NR systems according to the Annex 2 to this Arrangement.
- 2.3. If frequency block size is other than 5 MHz, a correction factor, 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 item 2.1.
- 2.4. For the field strength calculations the tool of the HCM Agreement shall be applied (using appropriate calculation mode). The Parties may apply other calculation tools using 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 4000 MHz" for 10 % of time and 50 % of locations. In case of any differences in results of calculations the official version of HCM Program shall be used as a reference.

3. Coordination procedure and harmful interference

- 3.1. If the predicted mean field strength value of any carrier produced by the base station exceeds the levels indicated in item 2.1 the frequency assignment shall be sent for coordination 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 2 of the HCM Agreement in the electronic format for mobile service.
- 3.4. Reports on harmful interference shall be presented in accordance with Annex 7 of the HCM Agreement. The Parties shall take all possible measures in order to eliminate harmful interference.
- 3.5. Complaints on 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.

4. Operators' arrangements

- 4.1. Operators concerned may agree on preferential frequency distribution, network synchronisation and to deviate from field strength levels in Section 2 by mutual consent concluding an arrangement between operators (hereinafter referred to as the AbO) with the written mutual consent of the Parties concerned.
- 4.2. AbO shall only be valid as long as all participating operators hold exclusive rights of use of the common part of the frequency bands.

- 4.3. Operators should inform relevant Parties on the cancellation of the AbO. This will not affect the operation of stations already brought into use under the AbO. After such cancellation, Parties will exchange the list of stations already brought into use under the AbO.
- 4.4. Operators shall take all possible measures in order to eliminate harmful interference originating from station brought into use under the AbO.
- 4.5. In case interference cannot be eliminated by mutual consent between Operators concerned provisions in accordance with Section 2 apply to base station causing interference. In case interference persist, the concerned base station should be switched off.

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. This does not affect the operation of stations already brought into use or coordinated under this Arrangement. After such cancellation, Parties will exchange the list of stations already brought into use or coordinated under this Arrangement.

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 English in two identical copies, one for the Republic of Lithuania and one for the Republic of Poland.

Done by correspondence

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

Vilnius
2022-08-01

/Place, Date/



Darius Kuliešius

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

Warszawa, 17.08.2022 r.

/Place, Date/



Paweł Krzyński

Annex 1

Predicted mean field strength levels for MFCN FDD and SDL base stations (LTE and NR systems)

	Predicted mean field strength level, dB μ V/m / 5 MHz		
	Centre frequencies aligned		Centre frequencies not aligned
	Preferential PCI used	Non-preferential PCI used	All PCIs used
at the border	59	41	59
at a distance of 6 km inside the territory of the other Party	41	-	41

Distribution of preferential Physical-layer Cell Identities (PCI) for LTE and NR systems

Set	A	B	C	D	E	F
PCI for LTE	0..83	84..167	168..251	252..335	336..419	420..503
PCI for NR	0..83 504..587	84..167 588..671	168..251 672..755	252..335 756..839	336..419 840..922	420..503 923..1007
Set preferential to	LTU ⁶	LTU	LTU	POL ⁷	POL	POL

⁶ LTU – Republic of Lithuania

⁷ POL – Republic of Poland