

TECHNICAL CRITERIA and PRINCIPLES

**concerning the use of the frequency band
790-862 MHz for terrestrial systems**

between

**the Office of Electronic Communications of the Republic of Poland and the State
Supervisory Department for Telecommunications of the Ministry of
Telecommunications and Informatization of the Republic of Belarus**

November 2017

Preamble

According to Article 6 of the ITU Radio Regulations, the representatives of the Office of Electronic Communications of the Republic of Poland and the State Supervisory Department for Telecommunications of the Ministry of Telecommunications and Informatization of the Republic of Belarus (hereinafter referred to as Parties) have agreed the present Technical Criteria and Principles (hereinafter referred to as Document) concerning the use of the frequency band 790-862 MHz with the purpose of avoiding mutual interference and optimising the use of the above-stated frequency band on a mutually coordinated basis.

1 Principles

- 1.1 This Document is based on the concept of coordination field strength levels, the idea of symmetrical conditions and on the principle of equitable access to spectrum for both Parties.
- 1.2 This Document covers the coordination¹ between stations of land mobile service and stations of land mobile service and aeronautical radionavigation service of both Parties.
- 1.3 The frequency arrangement for land mobile service conforms to the FDD² frequency arrangement and parameters of transmission for base stations and user equipment are in accordance with ECC Decision (09)03 of 30th October 2009 "On harmonised conditions for mobile/fixed communications networks (MFCN) operating in the band 790-862 MHz".
- 1.4 TDD frequency arrangement for stations of land mobile service is not covered by this Document.
- 1.5 This Document applies to stations of the services listed in item 1.2 and brought into use after the date mentioned in Section 6 of this Document.
- 1.6 This Document does not abrogate the fulfilment of the protection requirements for broadcasting service stipulated in GE-06 Regional Agreement until TV broadcasting is cancelled in the frequency band 790-862 MHz and the respective Party informs about it.
- 1.7 The frequency arrangement contains a guard band of 1 MHz (790-791 MHz) intended for protection of broadcasting service.
- 1.8 For coordination of LTE FDD systems, this Document is based on the concept of coordination field strength levels for base stations and allocation of preferential and non-preferential Physical Cell Identifiers³ (PCI) as described in ECC Recommendation (11)04 of 26th May 2011 "Frequency planning and frequency coordination for terrestrial systems for Mobile/Fixed Communication Networks (MFCN) capable of providing electronic communications services in the frequency band 790-862 MHz" (hereinafter referred to as the Recommendation ECC/REC/(11)04).

2 Use of frequencies and PCI

- 2.1 Aeronautical radionavigation stations of the Republic of Belarus may use the frequency band 832-862 MHz without coordination with the Republic of Poland provided that technical characteristics except carrier frequency of the stations coordinated and brought into use before the date of signing of this Document (see item 1.5) are kept unchanged and the frequency change does not adversely affect the other Party. In case if a carrier frequency of an aeronautical radionavigation station in the above-mentioned frequency band is changed, the State Supervisory Department for Telecommunications of the Ministry of Telecommunications and Informatization of the Republic of Belarus shall inform the Office of Electronic Communications of the Republic of Poland indicating a new carrier frequency not later than 10 weeks before these assignments are modified.

¹ The term «coordination» should be understood as bilateral coordination between Parties without involving BR in this process. The document given under this bilateral coordination shall be considered by Parties as an agreed under relevant RR procedure.

² FDD - Frequency Division Duplex.

³ Coordination of the 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.

- 2.2 For LTE FDD systems, each Party may use the frequency bands 791-821/832-862 MHz without coordination with the other Party if the predicted mean field strength level produced by the cell (all transmitters within the sector) does not exceed the value of 48 dB μ V/m/5MHz at a receiving antenna height of 3 m above ground at the border and does not exceed the value of 29 dB μ V/m/5MHz at a receiving antenna height of 3 m above ground at a distance of 9 km from the border inside the territory of the other Party respectively.
- 2.3 For LTE systems, each Party may use all PCI available if the predicted mean field strength level produced by the cell (all transmitters within the sector) does not exceed the value of 29 dB μ V/m/5MHz at a receiving antenna height of 3 m above ground at the border. If the predicted mean field strength produced by the cell (all transmitters within the sector) for LTE systems exceeds the value of 29 dB μ V/m/5MHz at a receiving antenna height of 3 m above ground at the border each Party shall use only their own preferential PCI according to the Appendix to this Document.
- 2.4 If frequency block size of LTE FDD systems is other 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 2.2 and 2.3.
- 2.5 Each Party shall notify the other Party concerning the beginning or cancellation of the use of LTE FDD systems in the area of 30 km from the border indicating the frequency bands or channels concerned.

3 General

- 3.1 If the predicted mean field strength value of any cell (all transmitters within the sector) produced by the base station exceeds the levels indicated in item 2.2 the frequency assignment shall be coordinated with the other Party.
- 3.2 The coordination procedure shall be performed in accordance with Article 4 of this Document.
- 3.3 Preliminary coordination may take place between the land mobile service operators concerned. The results of such preliminary coordination must be approved by the Parties.
- 3.4 In the presence of harmful interference produced by a station covered by this Document, the Report of harmful interference shall be presented in accordance with Appendix 10 of the ITU Radio Regulations. The field strength specified in the interference report shall be based on median values of field strength measured during transmission at antenna height stipulated in Article 2 at least in two different points over a range of at least 100 m along the border. The Parties shall take all possible measures in order to eliminate the interference in due time.
- 3.5 The latest version of ITU-R Recommendation P.1546 "Method for point-to-area predictions for terrestrial services in the frequency range 30 MHz to 3 000 MHz" with 10% of time and 50% of locations shall be used for calculations of the field strength levels produced by ground station of land mobile and aeronautical radionavigation services.
- 3.6 The latest version of ITU-R Recommendation P.525 "Calculation of free space attenuation" shall be used for calculations of the field strength levels when airborne station of aeronautical radionavigation service is concerned.

4 Coordination procedure

- 4.1 The Party wishing to initiate the use of a frequency assignment to the station covered by this Document that does not correspond to the terms specified in Article 2 of this Document shall send to the other Party a request to coordinate such frequency assignment. A request can be sent by mail, fax or e-mail. In case if a request is sent by e-mail the requesting Party shall send by fax a covering letter to the affected Party and to receive a confirmation of its receipt by e-mail.
- 4.2 The affected Party shall provide a feedback in respect of the request to coordinate assignments within 10 weeks from the date of the request receipt. If no feedback was received, an urgent reminder shall be sent. Parties that failed to respond within 2 weeks from the date of an urgent reminder receipt shall be

deemed agreeing if the Party, a consent of which is sought, did not ask for extra time needed to coordinate the request review.

- 4.3 In case of a refusal of the affected Party to satisfy a request for coordination the requesting, Party shall provide results of its calculations to the affected Party, or any new technical characteristics of the assignment.
- 4.4 If no response from the affected Party to the proposals provided in item 4.3 was received within 10 weeks from the date of proposals receipt, an urgent reminder shall be sent. Parties that failed to respond within 2 weeks from the date of receipt of an urgent reminder shall be deemed agreeing to the provided proposals on coordination.
- 4.5 The Party objecting to the received request for coordination shall provide results of its calculations and a proposal for reasonable changing of the request that shall not only provide for adequate protection for its available and planned services, but to the maximal possible extent shall preserve an initial objective of the request for coordination.
- 4.6 In case of controversies originating from this Document applying Parties shall be governed by provisions and procedures of the ITU Radio Regulations, as well as applicable international and bilateral Agreements.
- 4.7 Coordination requests for LTE FDD systems shall be drawn up according to Annex 4 of the Recommendation ECC/REC/(11)04.

5 Revision and cancellation

- 5.1 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. This does not affect the operation of stations already brought into use or coordinated under this Document. After such cancellation, Parties will exchange the list of stations already brought into use or coordinated under this Document.
- 5.2 This Document may be revised at any time on the initiative of any Party with the consent of the other Party.
- 5.3 In case if one of the Parties decides to suspend the use of the frequency band 790-862 MHz in the border areas by any service indicated in item 1.2, this Document shall be reviewed.
- 5.4 In case if the current procedures and frequency allocations of the ITU Radio Regulations for the frequency band 790-862 MHz are changed, this Document shall be reviewed.
- 5.5 In case if the study results on the usage of the frequency band 790-862 MHz by services indicated in item 1.2 are obtained and agreed by both Parties, this Document shall be reviewed taking into account these results.

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

Done by correspondence.

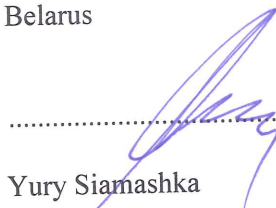
On behalf of
the Office of Electronic
Communications of the Republic of
Poland



.....
Wiktor Segal

Warsaw, 30 November 2017

On behalf of
the State Supervisory Department for
Telecommunications of the Ministry of
Telecommunications and
Informatization of the Republic of
Belarus



.....
Yury Siamashka

Minsk, 20 November 2017

**Allocation of preferential Physical Cell Identifiers (PCI) for LTE systems
in the 791-821/832-862 MHz frequency bands
between the Republic of Poland and the Republic of Belarus⁴**

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

⁴ According to Annex 5 of the Recommendation ECC/REC(11)04

⁵ POL – the Republic of Poland

⁶ BLR – the Republic of Belarus