

COORDINATION PRINCIPLES AND TECHNICAL CRITERIA

for terrestrial UMTS systems at the border areas

in the frequency bands

1900-1980 MHz, 2020-2025 MHz and 2110-2170 MHz

between the Telecommunications Administrations of

the Republic of Belarus, the Republic of Lithuania and the Republic of Poland

1. Introduction

- 1.1 According to the ITU Radio Regulations the representatives of the Telecommunications Administrations of the Republic of Belarus, the Republic of Lithuania and the Republic of Poland (hereinafter referred to as Parties) have concluded these Coordination principles and technical criteria for terrestrial UMTS systems at the border areas in the frequency bands 1900-1980 MHz, 2020-2025 MHz and 2110-2170 MHz (hereinafter referred to as Coordination principles).
- 1.2 To avoid possible disagreements while effecting frequency (code) coordination of frequency assignments to stations of the UMTS system the Parties commit to be guided by the CEPT ERC Recommendation (01) 01.

2. Principles

- 2.1 These Coordination principles are on the concept of the preferential and non-preferential code groups. These Coordination principles do not use the concept of the preferential and non-preferential frequencies.

3. Operational frequencies

- 3.1 Frequency bands shall be selected in accordance with the CEPT ERC Decisions (97) 07, CEPT ERC Decisions (00) 01 and harmonised in accordance with the CEPT ERC Decision (99) 25.
- 3.2 The frequency band 1920-1980 MHz paired with 2110-2170 shall be used for FDD operation: the lower band 1920-1980 MHz shall be used for transmission of mobile station and upper band 2110-2170 MHz shall be used for the transmission of base station. The UMTS systems in these frequency bands shall use IMT-2000 CDMA Direct Spread (UTRA FDD) radio interface.
- 3.3 The unpaired frequency bands 1900-1920 MHz and 2020-2025 MHz shall be used for TDD operation. The UMTS systems in these frequency bands shall use IMT-2000 CDMA TDD (UTRA TDD) radio interface.
- 3.4 Carriers of the channels in the frequency bands 1900-1980 MHz, 2020-2025 MHz and 2110-2170 MHz shall be an integer multiple of 200 kHz.

4. Coordination provisions

- 4.1 In accordance with CEPT ERC Recommendation (01) 01 the border coordination on the basis of the preferential code groups is only used when centre frequencies of the transmitters of UMTS base stations allocated in the neighbouring countries are aligned.
- 4.2 Code groups:
 - 4.2.1 For the FDD mode there are 64 (scrambling) code groups defined in specification ETSI TS 125 213 § 5.2, numbered from 0 to 63.
 - 4.2.2 For the TDD mode there are 32 (scrambling) code groups defined in specification ETSI TS 125 223 § 7.3, numbered from 0 to 31.
- 4.3 The code groups allocated as preferential between the Parties within frequency bands 1900-1980 MHz, 2020-2025 MHz and 2110-2170 MHz are listed in Appendix 1.
- 4.4 Coordination in border areas is based on the following concept (main criteria are shown in Appendix 2):

- 4.4.1 Each Party use channels within the frequency band 1900-1920 MHz and 2020-2025 MHz for TDD systems using its preferential codes or where centre frequencies are not aligned without coordination with the other Party if the field strength value of each carrier produced by the base station does not exceed 36 dB μ V/m/5 MHz at a height of 3 m above ground level at the border line.
- 4.4.2 Each Party can use channels within the frequency band 2110-2170 MHz for FDD systems using its preferential codes or where centre frequencies are not aligned without coordination with the other Party if the field strength value of each carrier produced by the base station does not exceed 45 dB μ V/m/5 MHz at a height of 3 m above ground level at the border line.
- 4.4.3 Each Party can use channels within the frequency band 1900-1980 MHz, 2020-2025 MHz and 2110-2170 MHz for systems using non preferential codes and where centre frequencies are aligned without coordination with the other Party if the field strength value of each carrier produced by the base station does not exceed a value 21 dB μ V/m/5 MHz at a height of 3 m above ground level at the border line.
- 4.5 A three countries code sharing should be applied or used by base stations that exceed the relevant trigger level (items 4.4.1, 4.4.2, 4.4.3) of two neighbouring countries.
- 4.6 The coordination procedure, and also form and volume of the information, submitted to coordination of frequency (code) assignment, should meet the Berlin (Vienna) Agreement, 2003. If the Party, which initiated the coordination procedure, does not receive a reply within 60 days, it may send a reminder. The Party affected shall respond to this reminder within 20 days. If the Party affected does not respond within these 20 days, it shall be deemed to have given its consent and the station shall be considered as coordinated.
- 4.7 The field strength values in these Coordination principles are based on a receiving antenna height of 3 m, 10% of the time and 50% of locations.
- 4.8 The Parties shall use the latest version of the ITU-R Recommendation P.1546 „Method for point-to-area predictions for terrestrial services in the frequency range 30 MHz to 3000 MHz” as specified in CEPT ERC Recommendation (01) 01 Annex 2 for field strength calculations relating to these Coordination principles.
- 4.9 Lithuanian and Poland Parties can use the latest version of Berlin (Vienna) Agreement, 2003 for field strength calculations.

5. Procedure in case of interference

- 5.1 In the presence of harmful interference the claims should be submitted in accordance with the Appendix 10 of the ITU Radio Regulations.
- 5.2 The Parties shall take all possible measures in order to eliminate harmful interference.

6. Revision and withdrawal of Coordination principles

- 6.1 These Coordination principles may be revised at any time at the initiative of any Party subject to approval by the other Parties.
- 6.2 The Party may withdraw these Coordination principles by giving notice to the other Parties on its intention at least 6 months before.

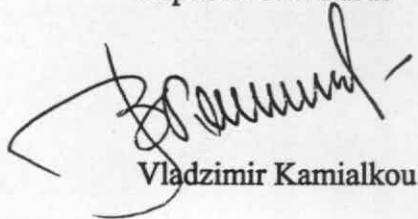
7. Language of this these Coordination principles

- 7.1 These Coordination principles are concluded and executed in the English language in three copies – one copy for the each Party.

8. Date of entry into force

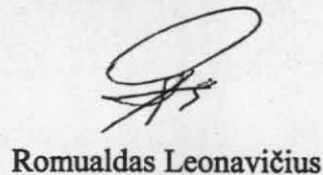
- 8.1 These Coordination principles shall enter into force at the first day of the month following the date of the signing.

On behalf of the
Telecommunications
Administration of the
Republic of Belarus



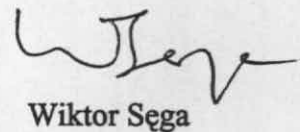
Vlădzimir Kamialkou

On behalf of the
Telecommunications
Administration of the
Republic of Lithuania



Romualdas Leonavičius

On behalf of the
Telecommunications
Administration of the
Republic of Poland



Wiktor Segă

Nida, 26th August 2004

Assignment¹ of preferential code groups between the Parties

For each country the following tables and figure show the sharing of the codes with the neighbouring countries with the following conventions of writing:

	Preferential code
	Non-preferential code

FDD case:

Country: <u>LTU</u>	Set A: 0..10	Set B: 11..20	Set C: 21..31	Set D: 32..42	Set E: 43..52	Set F: 53..63
Border: <u>LTU-BLR</u>						
Zone: <u>LTU-BLR-POL</u>						
Border: <u>LTU-POL</u>						

Country: <u>BLR</u>	Set A: 0..10	Set B: 11..20	Set C: 21..31	Set D: 32..42	Set E: 43..52	Set F: 53..63
Border: <u>BLR - LTU</u>						
Zone: <u>BLR-POL-LTU</u>						
Border: <u>BLR-POL</u>						

Country: <u>POL</u>	Set A: 0..10	Set B: 11..20	Set C: 21..31	Set D: 32..42	Set E: 43..52	Set F: 53..63
Border: <u>POL-BLR</u>						
Zone: <u>POL-LTU-BLR</u>						
Border: <u>POL-LTU</u>						

TDD case:

Country: <u>LTU</u>	Set A: 0..4	Set B: 5..10	Set C: 11..15	Set D: 16..20	Set E: 21..26	Set F: 27..31
Border: <u>LTU-BLR</u>						
Zone: <u>LTU-BLR-POL</u>						
Border: <u>LTU-POL</u>						

Country: <u>BLR</u>	Set A: 0..4	Set B: 5..10	Set C: 11..15	Set D: 16..20	Set E: 21..26	Set F: 27..31
Border: <u>BLR - LTU</u>						
Zone: <u>BLR-POL-LTU</u>						
Border: <u>BLR-POL</u>						

Country: <u>POL</u>	Set A: 0..4	Set B: 5..10	Set C: 11..15	Set D: 16..20	Set E: 21..26	Set F: 27..31
Border: <u>POL-BLR</u>						
Zone: <u>POL-LTU-BLR</u>						
Border: <u>POL-LTU</u>						

¹ The assignment is based on CEPT ERC Recommendation (01) 01 Annex 4.

Criteria for coordination of terrestrial UMTS stations in border areas

Mode	Frequency band	Aligned		Not aligned	
		Preferential	Non preferential	Preferential	Non preferential
TDD	1900 – 1920 MHz	36 dBμV/m/5MHz	21 dBμV/m/5MHz	36 dBμV/m/5MHz	
	2020 – 2025 MHz				
FDD	2110 – 2170 MHz	45 dBμV/m/5MHz		45 dBμV/m/5MHz	