

A G R E E M E N T

between the Telecommunications Administrations of Estonia and Russia concerning the use of
the frequency bands
890-915/935-960 MHz for Land Mobile Service of Estonia and Russia and the Aeronautical
Radionavigation Service of Russia in the border areas

Tallinn, 5 April 2002

Preamble

According to Article S6 of the Radio Regulations, the representatives of Telecommunications Administrations of Estonia and Russia (hereinafter referred as Parties) have concluded the present Agreement concerning the use of the frequency bands 890-915/935-960 MHz with the purpose of avoiding mutual interference and optimizing the use of the above-stated frequency band on a mutually coordinated basis.

In order to eliminate the possible disagreements the Parties, if necessary, will be guided by the provisions of the CEPT Recommendations T/R 20-08 and T/R 25-08, while effecting coordination of the frequency assignments.

Both Parties noted an importance of the frequency bands 890-915/935-960 MHz for GSM Systems in the interests of respective countries. However, the above bands are used for short-range radionavigation and instrument landing systems which are the principal navigation and landing means of Russian aviation.

1. Frequencies

GSM (P-GSM 900) channel numbering in accordance with ETS 300 577 is presented in Annex 1.

Allocation of preferential frequencies between Estonia and Russia is presented in Annex 2.

2. Characteristics and coordination procedures

The preferential frequency bands will be allocated between the Parties as follows:

2.1 Russia may use GSM channels 1-22, 64-69, 75-87, 92-98, 105-112 and 116-121 without coordination with Estonia, if the field strength of every single carrier produced by the base station does not exceed 19 dB μ V/m at distance of 15 km inland the Estonian territory at 3 m antenna height above ground level (or at distance of 30 km inland the Estonian territory at 10 m antenna height above ground level does not exceed 26 dB μ V/m).

2.2 Estonia may use GSM channels 23-63, 70-74, 88-91, 99-104, 113-115 and 122-124 without coordination with Russia, if the field strength of every single carrier produced by the base station does not exceed 19 dB μ V/m at distance of 15 km inland the Russian territory at 3 m antenna height above ground level (or at distance of 30 km inland the Russian territory at 10 m antenna height above ground level does not exceed 26 dB μ V/m).

The non-preferential frequency bands will be allocated between the Parties as follows:

2.3 Russia may use GSM channels 23-63, 70-74, 88-91, 99-104, 113-115 and 122-124 without coordination with Estonia, if the field strength of every single carrier produced by the base station does not exceed 19 dB μ V/m at the border line between Estonia and Russia at 3 m antenna height above ground level (or 26 dB μ V/m at the border line between Estonia and Russia at 10 m antenna height above ground level).

2.4 Estonia may use GSM channels 1-22, 64-69, 75-87, 92-98, 105-112 and 116-121 without coordination with Russia, if the field strength of every single carrier produced by the base station does not exceed 19 dB μ V/m at the border line between Estonia and Russia at 3 m antenna height above ground level (or 26 dB μ V/m at the border line between Estonia and Russia at 10 m antenna height above ground level).

The above mentioned (items 2.1-2.4) field strength values are based on the following: 10% of time, 50% of locations.

2.5 If the field strength value of each base station carrier exceeds the above-stated level (2.1-2.4) a frequency assignment shall be coordinated. The technical characteristics to be presented for coordination of a frequency assignments are shown in Annex 3.

2.6 The propagation model to be used to determine the interference field strength, should be the method for point-to-area predictions for Terrestrial Services taken from the latest version of the relevant ITU-R Recommendation.

2.7 The period of coordination shall not exceed 65 days from the date of the receipt of the request by fax and 20 days after the reminder. If no reply is received after 85 days from the date of receipt of request the frequency assignment shall be considered as coordinated.

2.8 In the presence of interference the claims shall be shown in accordance with Appendix S 10 of the Radio Regulations. The Parties shall take all possible measures in order to eliminate the interference.

2.9 In case of mutual interference between GSM stations (Estonia) and aeronautical radionavigation stations (Russia) the Parties commit to compensate each other for the

equivalent number of affected GSM channels taking into account the interests of affected operators.

2.10 Technical and organizational matters arising in the course of coordination shall be solved by correspondence (telephone, fax or e-mail) or at the meeting of experts.

3. Revision of the Agreement

3.1 The present Agreement can be revised at any time on the initiative of any Administration with the consent of other Administration.

3.2 This Agreement can be cancelled by a mutual decision of both Administrations on terms and conditions adopted by these Administrations.

4. Coming into force

The present Agreement will come into force from 01.08.2002 .

The previous agreement (09.10.1998) shall be cancelled from the date coming into force of the given agreement.

The present Agreement has been drawn up in English in two copies:

One copy for Estonia

One copy for Russia

Tallinn

05 April 2002

For the Administration of Estonia:

A handwritten signature in black ink, appearing to read 'Arvo Rammus', written over a horizontal dashed line.

Arvo Rammus

For the Administration of Russia:

A handwritten signature in black ink, appearing to read 'Victor Eliseev', written over a horizontal dashed line.

Victor Eliseev

**Frequency grid
of the 890-915/935-960 MHz with the
200 kHz for GSM system**

Number of channels	Mobil station transmission frequency, MHz	Base station transmission frequency, MHz	Number of channels	Mobil station transmission frequency, MHz	Base station transmission frequency, MHz
1	2	3	4	5	6
1	890.200	935.200	41	898.200	943.200
2	890.400	935.400	42	898.400	943.400
3	890.600	935.600	43	898.600	943.600
4	890.800	935.800	44	898.800	943.800
5	891.000	936.000	45	899.000	944.000
6	891.200	936.200	46	899.200	944.200
7	891.400	936.400	47	899.400	944.400
8	891.600	936.600	48	899.600	944.600
9	891.800	936.800	49	899.800	944.800
10	892.000	937.000	50	900.000	945.000
11	892.200	937.200	51	900.200	945.200
12	892.400	937.400	52	900.400	945.400
13	892.600	937.600	53	900.600	945.600
14	892.800	937.800	54	900.800	945.800
15	893.000	938.000	55	901.000	946.000
16	893.200	938.200	56	901.200	946.200
17	893.400	938.400	57	901.400	946.400
18	893.600	938.600	58	901.600	946.600
19	893.800	938.800	59	901.800	946.800
20	894.000	939.000	60	902.000	947.000
21	894.200	939.200	61	902.200	947.200
22	894.400	939.400	62	902.400	947.400
23	894.600	939.600	63	902.600	947.600
24	894.800	939.800	64	902.800	947.800
25	895.000	940.000	65	903.000	948.000
26	895.200	940.200	66	903.200	948.200
27	895.400	940.400	67	903.400	948.400
28	895.600	940.600	68	903.600	948.600
29	895.800	940.800	69	903.800	948.800
30	896.000	941.000	70	904.000	949.000
31	896.200	941.200	71	904.200	949.200
32	896.400	941.400	72	904.400	949.400
33	896.600	941.600	73	904.600	949.600
34	896.800	941.800	74	904.800	949.800
35	897.000	942.000	75	905.000	950.000
36	897.200	942.200	76	905.200	950.200
37	897.400	942.400	77	905.400	950.400
38	897.600	942.600	78	905.600	950.600
39	897.800	942.800	79	905.800	950.800
40	898.000	943.000	80	906.000	951.000

81	906.200	951.200	101	910.200	955.200
82	906.400	951.400	102	910.400	955.400
83	906.600	951.600	103	910.600	955.600
84	906.800	951.800	104	910.800	955.800
85	907.000	952.000	105	911.000	956.000
86	907.200	952.200	106	911.200	956.200
87	907.400	952.400	107	911.400	956.400
88	907.600	952.600	108	911.600	956.600
89	907.800	952.800	109	911.800	956.800
90	908.000	953.000	110	912.000	957.000
91	908.200	953.200	111	912.200	957.200
92	908.400	953.400	112	912.400	957.400
93	908.600	953.600	113	912.600	957.600
94	908.800	953.800	114	912.800	957.800
95	909.000	954.000	115	913.000	958.000
96	909.200	954.200	116	913.200	958.200
97	909.400	954.400	117	913.400	958.400
98	909.600	954.600	118	913.600	958.600
99	909.800	954.800	119	913.800	958.800
100	910.000	955.000	120	914.000	959.000
			121	914.200	959.200
			122	914.400	959.400
			123	914.600	959.600
			124	914.800	959.800

**Allocation of preferential radio channels in the frequency band
890-915/935-960 MHz between Telecommunication Administrations of Estonia and Russia**

22 RUS (22) 1	63 EST (41) 23	69 RUS (6) 64	74 EST (5) 70	87 RUS (13) 75	91 EST (4) 88 ✓
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98 RUS (7) 92	104 EST (6) 99	112 RUS (8) 105	115 EST (3) 113	121 RUS (6) 116	124 EST (3) 122
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For the Administration of Estonia: 62 channels

For the Administration of Russia: 62 channels

CHARACTERISTICS OF ASSIGNMENT of BASE STATION

1A	Transmitting frequency (MHz)
6A	Class of station
2C	Date of bringing into use
4A	Name of station
4B	Country
4C	Geographical coordinates of the station (longitude;latitude)
4D	Radius of the service area (km)
4Z	Height of the station site above sea level (m)
7A	Designation of emission
8B1	Max. radiated power (dBW)
8B2	Type of reference antenna
9A	Azimuth of maximum radiation (degrees)
9B	Elevation angle of main radiation (degrees)
9D	Polarization
9Y	Height of antenna above ground (m)
9XH	Type of antenna: horizontal
9XV	Type of antenna: vertical
1Y	Transmitted frequency of the corresponding receiving station or receiving frequency (MHz)
13Z	Remarks