

AGREEMENT

between the Administrations of
Austria, Croatia, Hungary and Slovenia
concerning the allotment of preferential frequency blocks
in the bands
450.000 – 457.400 MHz and 458.400 – 460.000 MHz
as well as
460.000 – 467.400 MHz and 468.400 – 470.000 MHz

Budapest, 28 May 2014

1. Introduction

In the framework of the HCM Agreement the Administrations of Austria, Croatia, Hungary and Slovenia concluded this Agreement concerning the allotment of preferential frequencies in the bands 450.000 – 457.400 MHz and 458.400 – 460.000 MHz as well as 460.000 – 467.400 MHz and 468.400 – 470.000 MHz. The relevant provisions of the version of the HCM Agreement in force (further on referred to as HCM Agreement) shall be applied unless otherwise laid down in this Agreement.

2. Principles – Background

- 2.1 The Administrations mentioned above deemed it necessary to conclude an agreement on the allotment of the preferential frequencies for narrow-band systems and the co-ordination principles for wide-band systems in the frequency bands 450.000 – 457.400 MHz and 458.400 – 460.000 MHz as well as 460.000 – 467.400 MHz and 468.400 – 470.000 MHz.
- 2.2 The co-ordination procedures shall be based on the concept of preferential frequencies (see Article 4.2 of the current version of the HCM Agreement 2013).
- 2.3 The frequency bands 450.000 – 457.400 MHz and 458.400 – 460.000 MHz as well as 460.000 – 467.400 MHz and 468.400 – 470.000 MHz are split into preferential frequency blocks which shall be assigned equally between countries involved.
- 2.4 Operators shall have the possibility of using these frequencies in a different way in order to minimise interference and to achieve the most efficient use of the available spectrum. The provisions laid down in the relevant “Agreement between administrations concerned regarding the approval of arrangements between operators” shall apply.

3. Technical provisions

- 3.1 The division into preferential frequency blocks is given in the Annex.
- 3.2 Usage of narrow-band systems

The frequency bands 450.000 – 457.400 MHz and 458.400 – 460.000 MHz as well as 460.000 – 467.400 MHz and 468.400 – 470.000 MHz may be used in duplex or simplex operation.

In the case of duplex operation the base station shall transmit in the band 460 – 470 MHz and the mobile station shall transmit in the band 450 – 460 MHz.

In the case of simplex use within the preferential blocks, mobile station frequencies may be used on a preferential basis and base station transmitter frequencies may only be used in the band 460 – 470 MHz on a preferential basis, but the receiver frequencies of base stations in the band 460 – 470 MHz cannot claim any protection.

Frequencies may be used under the conditions of a preferential frequency if the bandwidth of the emission is within the band limits of the preferential frequency blocks established in the Annex.

3.2.1 Preferential frequencies for narrowband systems (bandwidths \leq 25 kHz)

3.2.1.1 Distance between the base station and the border line equal to or less than 15 km.

Preferential frequencies may be used without co-ordination if the field strength does not exceed a value of 34 dB μ V/m/25 kHz at a height of 10 m above ground at a distance of 15 km inside the affected country.

The propagation curves for analogous emissions with a time probability of 10% or with a time probability of 1% for digital emissions shall be used.

3.2.1.2 Distance between the base station and the border line more than 15 km

Preferential frequencies may be used without co-ordination if the field strength does not exceed a value of 20 dB μ V/m/25 kHz at a height of 10 m above ground at a distance of 50 km inside the affected country.

The propagation curves for analogous emissions with a time probability of 10% or with a time probability of 1% for digital emissions shall be used.

3.2.2 Non-preferential frequencies for narrowband systems (bandwidths \leq 25 kHz)

Co-ordination requests on non-preferential frequencies may be limited by giving co-ordination status H to the co-ordination request with reference to the preferential right (4.2.3 of the HCM Agreement 2013).

Non-preferential frequencies may be used without co-ordination with a neighbouring country if the field strength does not exceed a trigger value of 20 dB μ V/m/25 kHz at a height of 10 m above ground at the border line.

The propagation curves for analogous emissions with a time probability of 10% or with a time probability of 1% for digital emissions shall be used.

3.3 Frequencies for wideband systems (bandwidth = 1.25 MHz)

3.3.1 Distance between the base station and the border line equal to or less than 15 km

Frequencies may be used for wideband systems without coordination if the field strength does not exceed a value of 37 dB μ V/m/1.25 MHz at a height of 10 m above ground at a distance of 15 km inside the affected country.

The propagation curves with a time probability of 1% shall be used.

3.3.2 Distance between the base station and the border line more than 15 km

Frequencies may be used for wideband systems without coordination if the field strength does not exceed a value of 20 dB μ V/m/1.25 MHz at a height of 10 m above ground at a distance of 50 km inside the affected country.

The propagation curves with a time probability of 1% shall be used.

3.4 Shared frequencies

Shared frequencies may be used on the basis of bilateral agreements between affected countries or without co-ordination on a non-protected basis.

3.5 Protection for receivers

Protection for receivers on preferential frequencies can only be claimed under the following conditions (see also Annex 1 of the HCM Agreement):

The reference transmitter with an effective radiated power of 16 dBW produces a field strength of max. 20 dB μ V/m/25 kHz in a distance of 50 km (maximum cross-border range) from the border inside the other country.

The effective radiated power of the reference-transmitter has to be increased by the antenna gain of the receiver in the actual direction.

The propagation curves with a time probability of 10% are used.

3.6 Calculation method

The calculations of the interfering field strength are based on the HCM Agreement and shall be carried out with the official version of the HCM program.

4. Administrative procedure

In derogation of the HCM Agreement, the following special procedures are agreed:

Responses to notifications of preferential frequency assignments are not required.

The assignment of a preferential frequency shall be entered in the frequency register with co-ordination status P.

The assignment of frequencies to wideband systems fulfilling the conditions of paragraph 3.3.1 shall be entered in the frequency register with co-ordination status P and frequency category 7 (pending a future amendment of the "HCM Agreement 2013" in this respect).

5. Status of existing stations

This Agreement shall not apply to existing frequency utilisations agreed between administrations prior to this Agreement. Frequencies included in the frequency list that will be provided between administrations concerned for the frequency range 450.000 – 457.400 MHz and 458.400 – 460.000 MHz as well as 460.000 – 467.400 MHz and 468.400 – 470.000 MHz until the end of 2014, have to be protected until removal from service in accordance with their co-ordination status. Possible harmful interference caused by them shall be accepted.

Narrow-band stations, which have been included in the above mentioned frequency list, when new wideband systems with channel spacing of 1.25 MHz are introduced, shall be protected at their receiver antenna heights at a field strength level (E_{\max} per 1.25 MHz) determined by the following formula:

$$E_{\max} = 14 \text{ dB}\mu\text{V/m} + 10 \log(1250 \text{ (kHz)} / \text{channel spacing of narrow-band station (kHz)})$$

6. Status of existing Agreement

Concerning the frequency band 450.0 – 451.3 / 460.0 – 461.3 MHz the “Agreement between the telecommunications administrations of Austria, Croatia, the Czech Republic, Hungary, the Slovak Republic and Slovenia concerning the allotment of preferential frequencies in the bands 410 – 420 / 420 – 430 MHz and 450.0 – 451.3 / 460.0 – 461.3 MHz (Vienna, 30 September 1994)” is replaced by this new agreement.

7. Review

This Agreement can be revised in light of administrative, regulatory or technical developments, especially in order to comply with relevant amendments of the HCM Agreement or changes in the relevant CEPT ERC/ECC decisions, recommendations and reports at the proposal of any Signatory Administration with the agreement of all other Signatory Administrations.

In particular, if technical provisions of broadband systems with channel spacing greater than 1,25 MHz in this band have been elaborated, this Agreement can be revised.

8. Withdrawal

Any Administration may withdraw from this Agreement by the end of a calendar month by giving notice of its intention at least six months in advance. A declaration to that effect shall be addressed to all other Signatory administrations and to the managing administration of the HCM Agreement. Frequency assignments made within the framework of this Agreement prior to the date of entry into force of the withdrawal shall remain valid and be protected according to their status.

9. Language of the Agreement

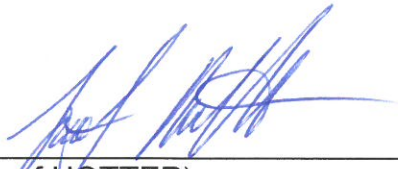
The original text of this Agreement exists in English in four originals.

10. Date of entry into force of the Agreement

This Agreement enters into force on 28 May 2014.


Done at Budapest, 28 May 2014

For the Austrian Administration



(Josef HOTTER)

For the Croatian Administration



(Ivančica SAKAL)

For the Hungarian Administration



(Peter VÁRI)

For the Slovenian Administration



(Meta PAVŠEK TAŠKOV)

Frequency band	Block No	AUT/ HRV/ SVN	AUT/ HNG/ HRV/ SVN	HNG/ HRV/ SVN	HNG/ HRV	HRV/ SVN
450.000 - 450.200	1	SVN	SVN	SVN	HRV	SVN
450.200 - 450.400	2	HRV	HRV	HRV	HRV	HRV
450.400 - 450.600	3	SVN	HNG	HNG	HNG	HRV
450.600 - 450.800	4	AUT	AUT	HNG	HNG	HRV
450.800 - 451.000	5	HRV	HRV	HRV	HRV	HRV
451.000 - 451.200	6	HRV	HRV	HRV	HRV	HRV
451.200 - 451.400	7	HRV	HRV	HRV	HRV	HRV
451.400 - 451.600	8	SVN	HNG	HNG	HNG	SVN
451.600 - 451.800	9	AUT	AUT	SVN	HNG	SVN
451.800 - 452.000	10	HRV	HRV	HRV	HRV	HRV
452.000 - 452.200	11	SVN	SVN	SVN	HRV	SVN
452.200 - 452.400	12	HRV	HNG	HNG	HNG	SVN
452.400 - 452.600	13	SVN	SVN	SVN	HRV	SVN
452.600 - 452.800	14	AUT	AUT	HNG	HNG	SVN
452.800 - 453.000	15	SVN	SVN	SVN	HRV	SVN
453.000 - 453.200	16	AUT	AUT	HRV	HRV	HRV
453.200 - 453.400	17	HRV	HNG	HNG	HNG	SVN
453.400 - 453.600	18	AUT	AUT	SVN	HNG	SVN
453.600 - 453.800	19	HRV	HNG	HNG	HNG	HRV
453.800 - 454.000	20	AUT	AUT	HRV	HRV	HRV
454.000 - 454.200	21	SVN	SVN	SVN	HRV	SVN
454.200 - 454.400	22	HRV	HNG	HNG	HNG	SVN
454.400 - 454.600	23	SVN	SVN	SVN	HRV	SVN
454.600 - 454.800	24	SVN	SVN	SVN	HNG	SVN
454.800 - 455.000	25	SVN	SVN	SVN	HNG	SVN
455.000 - 455.200	26	AUT	AUT	SVN	HRV	SVN
455.200 - 455.400	27	SVN	HNG	HNG	HNG	SVN
455.400 - 455.600	28	AUT	AUT	HRV	HRV	HRV
455.600 - 455.800	29	HRV	HRV	HRV	HRV	HRV
455.800 - 456.000	30	HRV	HRV	HRV	HRV	HRV
456.000 - 456.200	31	SVN	HNG	HNG	HNG	HRV
456.200 - 456.400	32	AUT	AUT	HNG	HNG	HRV
456.400 - 456.600	33	HRV	HRV	HRV	HRV	HRV
456.600 - 456.800	34	HRV	HRV	HRV	HRV	HRV
456.800 - 457.000	35	HRV	HRV	HRV	HRV	HRV
457.000 - 457.200	36	AUT	HNG	HNG	HNG	SVN
457.200 - 457.400	37	SVN	SVN	SVN	HNG	SVN
UIC Channels						
458.400 - 458.600	38	AUT	AUT	HNG	HNG	SVN
458.600 - 458.800	39	HRV	HRV	HRV	HRV	HRV
458.800 - 459.000	40	AUT	HNG	HNG	HNG	HRV
459.000 - 459.200	41	SVN	SVN	SVN	HNG	SVN
459.200 - 459.400	42	AUT	AUT	SVN	HRV	SVN
459.400 - 459.600	43	SVN	SVN	SVN	HNG	SVN
459.600 - 459.800	44	AUT	HNG	HNG	HNG	HRV
459.800 - 460.000	45	AUT	Shared	HRV	Shared	HRV