

AGREEMENT

between administrations of

the Czech Republic and the Republic of Poland

**on frequency planning and frequency usage at border
areas for terrestrial systems capable of providing
electronic communication services in the frequency bands
791 - 821 MHz and 832 - 862 MHz**

Wrocław, 5th June 2012

1. Introduction

The frequency bands 791 - 821 MHz and 832 - 862 MHz are designated for terrestrial systems capable of providing electronic communications services according to *COMMISSION DECISION (2010/267/EC) of 6th May 2010 on harmonised technical conditions of use in the 790-862 MHz frequency band for terrestrial systems capable of providing electronic communications services in the European Union* (notified under document C(2010) 2923).

2. Principles of frequency planning and frequency usage at border areas

The administrations of the Czech Republic and the Republic of Poland have agreed on the following frequency planning and frequency usage procedures based on the concept of equal access probability. This concept enables equitable coverage for two or more networks using the same frequency band with the same or different digital technologies in geographically adjacent areas without coordination. Operation of stations in the respective border area exceeding the specified field strength values after performing traditional frequency coordination would disturb the balance in the respective area and is therefore not desirable.

The following principles apply to frequency utilisation by terrestrial systems capable of providing electronic communications services in geographically adjacent areas in cases where concerned administrations agree to use the concept of equal access probability:

- Field strength values are defined inside a reference frequency block of 5 MHz.
- The field strength calculations shall take into account the sum of all signals radiated from the respective antenna sector within the reference frequency block. The respective field strength values for each signal should be applied by each antenna sector and can be deduced by reducing the limit proportionally to the bandwidth portions falling into the reference frequency block (reduction factor = $10 \times \log(\text{bandwidth portion} / 5 \text{ MHz})$).

In order to assure equitable coverage and equal access probability to the spectrum in border areas even with different transmission technologies, and to enhance the efficiency of spectrum usage, the principles and field strength limits as given in chapter 3 of this agreement shall be respected by all network operators concerned.

3. Technical provisions

These frequency bands are parts of the "Digital Dividend".

The mode of operation shall be frequency division duplex (FDD) with the following arrangements: The duplex spacing shall be 41 MHz with base station transmission (down link) located in the lower part of the band starting at 791 MHz and finishing at 821 MHz and terminal station transmission (up link) located in the upper part of the band starting at 832 MHz and finishing at 862 MHz.

Base stations may be operated if the field strength produced at a height of 3 m above ground does not exceed the value of 55 dB μ V/m in the reference bandwidth of 5 MHz at the border line, and does not exceed the value of 29 dB μ V/m in the reference bandwidth of 5 MHz at a line of 9 km beyond the border.

4. Operator arrangements

To further improve the compatibility of terrestrial systems capable of providing electronic communications services in border areas, operators may conclude additional arrangements such as:

- preferential frequency distribution arrangements,
- preferential code division arrangements (e.g. according to ERC/REC(01)01),
- preferential physical-layer cell identities (PCI) (e.g. according to ECC/REC/(11)04),
- frequency carrier definitions (e.g. according to ECC/REC/(11)04),
- synchronisation of concerned networks,

Such operator arrangements

- shall only be valid as long as all participating operators hold exclusive rights for concerned frequencies,
- shall not impose disadvantages on other operators,
- should respect field strength levels and provisions given by relevant documents (e.g. ECC recommendations),
- are subject to prior consent of the administrations concerned.

5. Field strength prediction

For the field strength calculations the tool of the HCM Agreement shall be applied. Time probability in all calculations is 10 %.

6. Protection of Broadcasting Service

Digital and / or analogue television transmitters are still operated in the frequency bands 791-821 MHz and 832-862 MHz. Border sections and field strength thresholds required to protect the reception of these TV signals are given in the Annexes. These field strength limits are to be kept in the respective border sections in addition to the values specified in section 3. The field strength threshold values are taken from the CEPT Report 29 and correspond to the following table:

| Coordination trigger field strength for the protection of the Broadcasting Service at 10 m | |
|--|-------------------------------------|
| Protection of the digital TV | 44 dB μ V/m/8 MHz at the border |

7. Revision of this agreement

This agreement may be modified at a request of any of the signatory administrations where such a modification becomes necessary in the light of administrative, regulatory or technical development. Modification of the agreement shall be done by an amendment.

8. Withdrawal from the agreement

Any administration may withdraw from the agreement by the end of a calendar month by giving notice of its intention at least six months before.

9. Language of the agreement

This agreement has been concluded in English language.

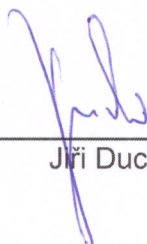
10. Date of entry into force

The date of entry into force is 1st July 2012.

11. Signature of the agreement

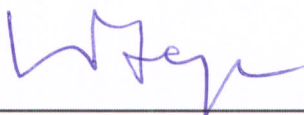
This agreement exists in 2 equally authentic copies. The Czech administration makes notification in accordance with HCM Agreement to the managing administration.

the Czech Republic:



Jiří Duhač

Republic of Poland:



Wiktor Sęga

Annex 1 : Protection of the CZE reception of TV transmitters according to the chapter 6

| Name of TV station | Frequency area | | Border area to be protected | | Digital / Analogue | Trigger field strength at the border in dB μ V/m at h=10 m. | to be protected until |
|--------------------|----------------|-----------|-----------------------------|--------------------------|--------------------|---|-----------------------|
| | from MHz | up to MHz | from Longitude Latitude | up to Longitude Latitude | | | |
| TRUTNOV | 790 | 798 | 14E58 / 50N52 | 16E34 / 50N12 | digital | 44 | 31.08.2013 |
| Allotment MOS-07 | 806 | 814 | 17E25 / 50N16 | 18E25 / 49N23 | digital | 44 | 31.08.2013 |
| Allotment LIB-07 | 822 | 830 | 14E40 / 50N51 | 15E34 / 50N46 | digital | 44 | 31.08.2013 |

Annex 2: Protection of the POL reception of TV transmitters according to the chapter 6

| Name of TV station | Frequency area | | Border area to be protected | | Digital / Analogue | Trigger field strength at the border in dB μ V/m at h=10 m | to be protected until |
|------------------------|----------------|-----------|-----------------------------|--------------------------|--------------------|--|-----------------------|
| | from MHz | up to MHz | from Longitude Latitude | up to Longitude Latitude | | | |
| Allotment JELENIA GORA | 806 | 814 | 14E50 / 50N53 | 16E50 / 50N40 | digital | 44 | 31.07.2013 |
| Allotment KLODZKO | 798 | 806 | 16E50 / 50N40 | 17E03 / 50N25 | digital | 44 | 31.07.2013 |
| Allotment WROCLAW | 814 | 822 | 16E50 / 50N40 | 17E03 / 50N25 | digital | 44 | 31.07.2013 |
| Allotment ZAGAN | 790 | 798 | 14E50 / 50N53 | 16E50 / 50N40 | digital | 44 | 31.07.2013 |
| Allotment OPOLE | 830 | 838 | 17E03 / 50N25 | 18E09 / 50N00 | digital | 44 | 31.07.2013 |
| Allotment WISLA | 798 | 806 | 18E09 / 50N00 | 19E27 / 49N37 | digital | 44 | 31.07.2013 |
| Allotment KATOWICE | 838 | 846 | 18E09 / 50N00 | 19E27 / 49N37 | digital | 44 | 31.07.2013 |