AGREEMENT

between the administrations of

Poland and Slovak Republic

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

Warszawa, 23rd August 2011

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 6 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).

Even if the ECC has not yet developed a border coordination recommendation for such services an agreement on frequency planning for these bands is deemed to be necessary since the frequency bands 791 - 821 MHz and 832 - 862 MHz are on the way to be auctioned and assigned.

This agreement is based on the concept of equal access probability. The principles of this new frequency planning method enabling equitable coverage for two or more networks using the same frequency band with the same or different digital technologies in geographically adjacent areas without further coordination have been proposed by the TWG HCM MS to the ECC PT1 and are still in discussion there. The agreement is based on the respective TWG HCM MS proposal.

The administrations Poland and Slovak Republic have agreed on the following frequency planning and frequency using procedures.

2. PRINCIPLES OF FREQUENCY PLANNING AND FREQUENCY USAGE AT BORDER AREAS

The concept of equal access probability is a new frequency planning principle enabling 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 frequency block portions falling into the reference bandwidth (reduction factor = 10 x log (frequency block portion / 5 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 5. of this agreement shall be respected by all networks concerned.

3. OPERATOR ARRANGEMENTS

To further improve the compatibility of terrestrial systems capable of providing electronic communications services in border areas, operator arrangements may be concluded concerning other frequency coordination methods such as:

- preferential frequency distribution arrangements,
- (if concerned neighbouring systems in all affected countries are using code division multiple access technologies such as IMT-2000/UMTS) preferential code division arrangements (e.g. according to ERC/REC(01)01),
- frequency carrier definitions (e.g. with LTE),
- synchronisation of concerned networks.

Such arrangements are subject to consent of the administrations concerned. In particular, before giving consent to such arrangements, the administrations concerned should take care that all network operators concerned are parties in such an arrangement.

4. PROTECTION OF OTHER SERVICES AND SYSTEMS

4.1 GENERAL REMARKS

The provisions in all section 4 and the field strength levels and values named in it are preliminary (see section 7).

Implementation rights may result from entries in the GE-06 Plan as long as they stay within the corresponding thresholds. In such cases, following Declaration 42 of the GE-06 Agreement, the conformity of such kind of implementation has to be checked. Since for the time being there is no final assessment agreed between the signatory administrations, the procedure to be made use of is given in sections 4.2 for TV systems and 4.3 for ARNS systems.

In advance of implementing a station the emissions of which are not in conformity with an entry to the GE-06 Plan, a coordination has to be done. This coordination will be based on the following field strength threshold values:

Coordination trigger field strength for the protection of the Broadcasting Service at 10 m	
Protection of the digital TV	44 dBµV/m/8 MHz at the border

4.2 DIGITAL AND ANALOGUE TV SYSTEMS

In the frequency bands 791 – 821 MHz, 832 – 862 MHz, analogue and / or digital television transmitters are still planned or operated in some countries. DVB-T allotments and field strength thresholds required to protect the reception of these TV signals are given in the Annex 1 and Annex 2. This field strength limit is to be kept in the respective areas of allotments in addition to the values specified in section 5.

4.3 ARNS SYSTEMS

In the frequency band 835 – 862 MHz Primary Surveillance Radars in RSP-10 system are still operated in Poland. Terminal Stations in border areas may be operated if the produced field strength at a height of 10 m above ground does not exceed the value of 15 dBµV/m in the reference bandwidth of 5 MHz at geographical points given below (airfields close to the border notified in the MIFR):

- KRAKOW-BALICE: 019E4705; 50N0439
- RADOM: 021E1241; 51N2319.

This field strength limit is to be kept in the respective areas of allotments in addition to the values specified in section 5.

5. TECHNICAL CHARACTERISTICS

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

The following provision and the field strength levels and values named in it is preliminary (see section 7).

The following values shall be applied to achieve equal access probability, and equitable coverage respectively.

The duplex 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 in border areas may be operated if the produced field strength at a height of 3 m above ground does not exceed the value of 55 dBμV/m in the reference bandwidth of 5 MHz at the border line, and does not exceed the value of 29 dBμV/m in the reference bandwidth of 5 MHz at a distance of 9 km beyond the border.

6. PREDICTION OF PROPAGATION

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

7. REVISION OF THE AGREEMENT

This agreement may be modified at the request of one of the signatory administrations where such a modification becomes necessary in the light of administrative, regulatory or technical development.

If ECC publishes a coordination recommendation for WAPECS, the consequences of such a recommendation for this agreement shall be discussed among the signatories to this agreement.

The technical characteristics may be reviewed in the light of practical experience of its application and of the operation of terrestrial systems capable of providing electronic communications services in general.

The provisions under sections 4 (4.1, 4.2, 4.3) and 5 are subject to more detailed investigations concerning the rights stemming from the GE-06 Agreement and corresponding Plan entries. This may lead to revisions of the indicated field strength levels and values. Amendments will be considered as soon as requested by one of the signatory administrations.

8. WITHDRAWAL FROM THE AGREEMENT

Any administration may withdraw from this agreement subject to six months notice.

9. LANGUAGE OF THE AGREEMENT

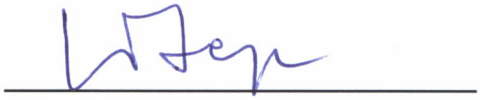
This agreement has been concluded in English.

10. DATE OF ENTRY INTO FORCE

The date of entry into force is the date of signature.

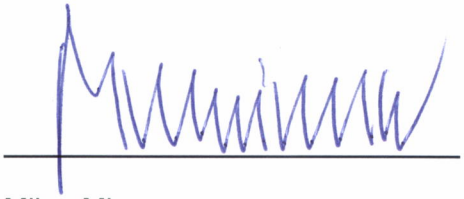
11. SIGNATURE OF THE AGREEMENT

Poland



Wiktor Sęga

Slovak Republic



Milan Mizera

Annex 1: Protection of the POL reception of TV transmitters according to the chapter 4.1

Name of TV allotment	Frequency area [MHz]	Channel	Allotment ID	Digital / Analogue	Trigger field strength at the edge of allotment in dBµV/m at h=10 m	to be protected until
BIESZCZADY	806 - 814	63	480002031	Digital	44	*)
GORLICE	790 - 798	61	temp.	Digital	44	*)
KIELCE	798 - 806	62	temp.	Digital	44	*)
KRAKOW	814 - 822	64	480002156	Digital	44	*)
LEZAJSK	790 - 798	61	temp.	Digital	44	*)
RZESZOW	790 - 798	61	temp.	Digital	44	*)
TARNOW	790 - 798	61	480002288	Digital	44	*)
WISLA	798 - 806	62	480002303	Digital	44	*)
ZAKOPANE	790 - 798	61	temp.	Digital	44	*)
ZAKOPANE	806 - 814	63	480002324	Digital	44	*)
ZAMOSC	798 - 806	62	480002331	Digital	44	*)

*) Until closing of new channel coordination process for substitution

NOTE: Definitions of the allotments are in the GE06 Plan. Shapes of the temporary allotments are the same as the same-named GE06 allotments in channels above 60.

Annex 2: Protection of the SVK reception of TV transmitters according to the chapter 4.1

Name of TV allotment	Frequency area [MHz]	Channel	Allotment ID	Digital / Analogue	Trigger field strength at the edge of allotment in dBµV/m at h=10 m	to be protected until
BJ-07	798 – 806	62	SVK-DT2-0075	Digital	44	**)
KE-07	814 – 822	64	SVK-DT2-0082	Digital	44	**)
MI-07	814 – 822	64	SVK-DT2-0073	Digital	44	**)
NO-07	846 – 854	68	SVK-DT2-0077	Digital	44	**)
PP-07	830 – 838	66	SVK-DT2-0072	Digital	44	**)
ZA-04	790 – 798	61	SVK-DT2-0046	Digital	44	**)
ZA-07	846 – 854	68	SVK-DT2-0078	Digital	44	**)

**) Until closing of new channel coordination process for substitution

NOTE: Definitions of the allotments are in the GE06 Plan