**Agreement between Administrations of Russian Federation and Poland concerning the rules of protection for future implementation of the DVB-T and T-DAB records in a Plan, adopted at Regional Radiocommunication Conference (RRC-06)**

For allotments of Russian Federation, mentioned in table given below, the following rule will be applied during the implementation of the plan:
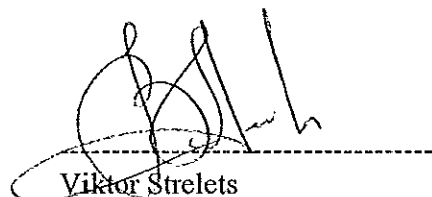
Cumulative interference field strength, caused by assignments those are belonging to same group of Russian allotments, written below, should not exceed the values shown in Annex 1 at any test point on the border of Polish co-channel allotments in plan.

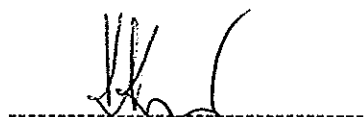Groups of Russian allotments, which are subject of this agreement:

| Group | Channel | Administration ID-s |
|-------|---------|---------------------|
| 1. | 30 | RUS30701, RUS301710, RUS301711, RUS_KALININGRAD_30, RUS_VESELOVKA_30 |
| 2. | 32 | RUS32701, RUS321711, , RUS_KALININGRAD_32 |
| 3. | 34 | RUS34701, RUS341711, RUS_KALININGRAD_34 |
| 4. | 40 | RUS40701, RUS401711, RUS_KALININGRAD_40 |
| 5. | 41 | RUS41701, RUS411711, RUS_KALININGRAD_41 |
| 6. | 47 | RUS47701, RUS471710, RUS471711, RUS_KALININGRAD_47, RUS_VESELOVKA_47 |

The parties agree that any future implementation of any allotment shall be coordinated if the cumulative interfering field strength exceeds the values listed in Annex 1 on the area of any exiting co-channel/co-block allotment.

Geneva, 01.06.2006

Viktor Strelets
on behalf of the
Administration of the Russian Federation

Krystyna Roslan-Kuhn
on behalf of the
Administration of Poland

# Annex 1 to agreement between Russian Federation and Poland

## Interfering field strength requiring coordination

If the cumulative interfering field strength exceeds the values listed in Table 1-4 below on the boundary of any existing co-channel/co-block allotment coordination with the affected administration is needed.

For affected DVB-T it's proposed to use the $E_{max\,int}$ for RPC2 and for affected T-DAB it's proposed to use the $E_{max\,int}$ for RPC5.

### DVB-T interfered by DVB-T for 200 MHz and 650 MHz respectively

| Reference planning configuration | RPC2 |
|---|---|
| Reference location probability | 95% |
| Reference C/N [dB] | 19 |
| Reference (Emed)ref [dB$\mu$V/m] at 200 MHz | 67 |
| Reference (Emed)ref [dB$\mu$V/m] at 650 MHz | 78 |
| CF at 200 MHz | 12.8 |
| CF at 650 MHz | 12.8 |
| IM | 2.8 |
| $E_{max\,int}$ [dB$\mu$V/m] at 200 MHz | 38 |
| $E_{max\,int}$ [dB$\mu$V/m] at 650 MHz | 49 |

Table 1 $E_{max\,int}$ for DVB-T interfered by DVB-T

In UHF the value should be adjusted with respect to frequency with $30*\log(f/f_{650})$, f in MHz.

### T-DAB interfered with by T-DAB for 200 MHz

| Reference planning configuration | RPC5 |
|---|---|
| Location probability | 95% |
| Reference C/N [dB] | 15 |
| Reference ($E_{med}$)$_{ref}$ [dB$\mu$V/m] | 66 |
| CF | 14.6 |
| IM | 2.6 |
| $E_{max\,int}$ [dB$\mu$V/m] | 39 |

Table 2 $E_{max\,int}$ for T-DAB interfered by T-DAB

### DVB-T interfered by T-DAB for 200 MHz

| Reference planning configuration | RPC2 |
|---|---|
| Reference location probability | 95% |
| Protection ratio [dB] | 23.6 |
| Reference (Emed)ref [dB$\mu$V/m] at 200 MHz | 67 |
| CF at 200 MHz | 12.8 |
| IM | 2.4 |
| $E_{max\,int}$ [dB$\mu$V/m] | 33 |

Table 3 $E_{max\,int}$ for DVB-T interfered by T-DAB

### T-DAB interfered with by 7 MHz DVB-T for 200 MHz

| Reference planning configuration | RPC5 |
|---|---|
| Location probability | 95% |
| Protection ratio [dB] | 9 |
| Reference $(E_{med})_{ref}$ [dB$\mu$V/m] | 66 |
| CF | 14.6 |
| IM | 2.6 |
| $E_{max\,int}$ [dB$\mu$V/m] | 45 |

Table 4 $E_{max\,int}$ for T-DAB interfered with by 7 MHz DVB-T

### Derivation maximum allowable interfering field strength

The maximum allowable interfering field strength, $E_{max\,int}$, at any test point given by the input requirement is calculated as follows:

$$E_{max\,int} = E_{med} + f_{corr} - CF - PR + IM$$

where

$E_{med}$ is the minimum median equivalent field strength (in dB$\mu$V/m)
for 200 MHz and 650 MHz, respectively;

$f_{corr}$ is the frequency correction (in dB) for UHF, given by $30^*\log(f/f_{650})$, f in MHz;

CF is the combined location correction factor: $CF = q\sqrt{\left(\sigma_w^2 + \sigma_i^2\right)}$;

$q$ is the distribution factor;

$\sigma_w$ is the standard deviation of the lognormal distribution of the wanted signal (in dB);

$\sigma_i$ is the standard deviation of the lognormal distribution of the interfering signal (in dB);

PR is the appropriate protection ratio;

> When the interfering system is of the same type as the wanted one, PR is equal to C/N for the wanted system's RPC. PR and C/N are taken from Addendum 12 to Document 7-E, input from CEPT to RRC-06.

IM is the implementation margin (in dB).