# AGREEMENT ON TECHNICAL CONDITIONS TO BE APPLIED AT THE STAGE OF IMPLAMENTATION OF THE DIGITAL BROADCASTING PLAN GENEVA RRC-06

Administration of Poland and Administration of the Republic of Latvia (hereafter referred as *Parties*), represented by the Heads of Delegations to the Regional Radiocommunication Conference RRC-06, agreed on conditions they will apply at the stage of implementation of the allotments, which are included in the Plan Geneva RRC-06.

Parties agree that during future implementation of Digital Plan entries the characteristics of the digital transmitting network, implementing the Plan entry, shall be coordinated with the other Party if the cumulative interfering field strength from that implementation on the boundary of any existing co-channel entry in the Plan exceeds the values listed in Annex 1

Geneva, 8.06.2006

For Administration of the Republic of Latvia

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For the Administration of Poland

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Annex 1: Method of derivation of the limiting interfering strength values.

## Annex 1 to agreement between Latvia and Poland

## Derivation of the limiting interfering field strength values

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 [dBµV/m] at 200 MHz	67
Reference (Emed)ref [dBµV/m] at 650 MHz	78
CF at 200 MHz	13
CF at 650 MHz	13
IM for VHF	3
E <sub>max int</sub> [dBμV/m] at 200 MHz	38
E <sub>max int</sub> [dBμV/m] at 650 MHz	46

Table 1 Emax int for DVB-T interfered by DVB-T

In UHF the value should be adjusted with respect to frequency with 30\*log(f/f650), 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
$E_{maxint}[dB\mu V/m]$	39

Table 2 Emax int for T-DAB interfered by T-DAB

DVB-T interfered by T-DAB for 200 MHz

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Reference planning configuration	RPC2
Reference location probability	95%
Protection ratio [dB]	23,6
Reference (Emed)ref [dBµV/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<sub>max int</sub> 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
$E_{\text{max int}}[dB\mu V/m]$	45

Table 4 E<sub>max int</sub> for T-DAB interfered with by 7 MHz DVB-T

#### Derivation maximum allowable interfering field strength

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

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

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 =  $q\sqrt{\left(\sigma_w^2 + \sigma_l^2\right)}$ ;

q is the distribution factor;

 $\mathcal{O}_w$  is the standard deviation of the lognormal distribution of the wanted signal (in dB);

Oi 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).