**How can DVB-T2 as a transmission system for digital broadcasting be implemented in terms of the GE06 Agreement?**

Provision 5.1.3 of Article 5 of the GE06 Regional Agreement allows for the implementation of a DVB-T2 assignment with characteristics different from that of the DVB-T or T-DAB digital Plan entry (GE06D). It is required that the peak power density over any 4 kHz of the DVB-T2 assignment shall not exceed the power density over the same 4 kHz of the Plan entry and that the conditions specified in Part A10, Section GE06/5.1.3 in the Rules of Procedures shall also be applied.

Use the notice form, GB1, for the notification of the DVB-T2 assignment.

The 7 MHz and 8 MHz variants of DVB-T2 that are considered compatible with GE06 7 MHz and 8 MHz channel arrangements and the 1.7 MHz variants that are considered compatible with the GE06 T-DAB frequency blocks are listed in **Tables 1, 2 and 3** respectively (ITU-R Recommendation BT.1877). The DVB-T2 implementation should apply the same level of filtering as that of the Plan entry to ensure that the out-of-band emissions are limited to the same level.

**Table 1. GE06 compatible 7 MHz channel DVB-T2 variants**

|  |  |  |  |
| --- | --- | --- | --- |
| **Modulation** | **FFT size** | **Code rate\*** | **Guard interval** |
| QPSK or16-QAM or64-QAM or256-QAM | 2k | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 | 1/32, 1/16, 1/8, ¼ |
| 4k | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 | 1/32, 1/16, 1/8, ¼ |
| 8k | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 | 1/128, 1/32, 1/16, 19/256, 1/8, 19/128, ¼ |
| 16k | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 | 1/128, 1/32, 1/16, 19/256, 1/8, 19/128, ¼ |
| 32k | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 | 1/128, 1/32, 1/16, 19/256, 1/8, 19/128 |

\* For block sizes of 16 200 and 64 800 bits

**Table 2. GE06 compatible 8 MHz channel DVB-T2 variants**

|  |  |  |  |
| --- | --- | --- | --- |
| **Modulation** | **FFT size** | **Code rate\*** | **Guard interval** |
| QPSK or16-QAM or64-QAM or256-QAM | 2k | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 | 1/32, 1/16, 1/8, ¼ |
| 4k | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 | 1/32, 1/16, 1/8, ¼ |
| 8k | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 | 1/128, 1/32, 1/16, 19/256, 1/8, 19/128, ¼ |
| 16k | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 | 1/128, 1/32, 1/16, 19/256, 1/8, 19/128, ¼ |
| 32k | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 | 1/128, 1/32, 1/16, 19/256, 1/8, 19/128 |
| 8k extended | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 | 1/128, 1/32, 1/16, 19/256, 1/8, 19/128, ¼ |
| 16k extended | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 | 1/128, 1/32, 1/16, 19/256, 1/8, 19/128, ¼ |
| 32k extended | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 | 1/128, 1/32, 1/16, 19/256, 1/8, 19/128 |

\* For block sizes of 16 200 and 64 800 bits

**Table 3. GE06 compatible 1.7 MHz block DVB-T2 variants**

|  |  |  |  |
| --- | --- | --- | --- |
| **Modulation** | **FFT size** | **Code rate\*** | **Guard interval** |
| QPSK or16-QAM or64-QAM or256-QAM | 1K | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 | 1/16, 1/8, ¼ |
| 2k | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 | 1/32, 1/16, 1/8, ¼ |
| 4k | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 | 1/32, 1/16, 1/8, ¼ |
| 8k | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 | 1/128, 1/32, 1/16, 19/256, 1/8, 19/128, ¼ |

\* For block sizes of 16 200 and 64 800 bits

It is important to note that the DVB-T2 assignment shall not claim more protection than that afforded to the DVB-T or T-DAB Plan entry.