

## **Questionnaire on cross-border agreements (EU and non EU) in the 3.4-3.8 GHz band**

### **5G / MFCN cross-border agreements:**

#### **- Do you have MFCN use which is not in conformity with EU decision (xx) and when this legacy use is expected to switch-off?**

According to the Plan for the Use of the Radio Frequency Resource of Ukraine (hereinafter - the Plan):

- Frequency band 3400-3600 MHz is used for the broadband radio access (type of radio communication: radio communication in multichannel point-to-multipoint systems for transmission and retransmission of television images, transmission of sound and digital information). Termination of the use of the radio technology is January 31<sup>st</sup>, 2020 (item 24 of the Plan).

In frequency band 3400-3600 MHz one license was issued to telecommunications operator in 2006. In February 2019 this license was revoked by the Regulator. The operator applied to court and, unfortunately, in September 2020, the highest court decided to reinstate the license. This license is valid until November 2021.

- Frequency band 3600-3700 MHz is used for the multiservice radio access (type of radio communication: radio communication in multichannel point-to-multipoint systems for transmission and retransmission of television images, transmission of sound and digital information). The end-date for the use of the radio technology is not defined (item 25 of the Plan).

In frequency band 3600-3700 MHz one license was issued to telecommunications operator in January 2019 and is valid until January 2025.

- Frequency band 3700-3800 MHz is free.

#### **- What is the status of cross-border agreements applicable to 5G/MFCN in the 3.4-3.8 GHz with each of neighbouring countries (EU and non-EU)? Do these agreements include elements regarding synchronization and frame structures? Is there a difficulty regarding the synchronisation with legacy MFCN networks (e.g. WiMax)?**

There are no agreements yet. We have old but still valid agreements with Hungary, Poland, the Slovak Republic, Romania, Russia, Belarus as follows:

- Agreement between the administrations of Austria, the Czech Republic, Hungary, Poland, the Slovak Republic, Slovenia and Ukraine on the frequency coordination for Fixed Wireless Access (FWA) systems in the bands 3410-3500 MHz and 3510-3600 MHz, Bratislava, 05.09.2002 (*Division is made for FDD technology only on the borders, channel arrangement is in accordance with CEPT/ERC Recommendation T/R 14-03, in case of coordination procedures the relevant provisions of the Vienna Agreement (Berlin 2001) shall be applied*)

- Agreement between the administrations of Croatia, Hungary, Romania, Slovenia and Ukraine on the frequency coordination for Fixed Wireless Access (FWA) systems in the bands 3410-3500 MHz and 3510-3600 MHz, Budapest, 21 October 2005 (*Division is made for FDD technology only on the borders, in case of coordination procedures the relevant provisions of the Vienna Agreement (Berlin 2003) shall be*

*applied, on the border with Romania the Agreement is applicable for channels 3, 4, 11 and 12 only)*

- Minutes of bilateral meeting between representatives of Administrations of Republic of Belarus and Ukraine on coordination of broadcasting service, land mobile service and other primary services, Kyiv, 22-26.01.2007 (*Annex 22 to the Minutes contains frequency division for FDD technology on the border in frequency band 3400-3600 MHz*).

- Minutes of the meeting of technical experts of State Inspection on Telecommunications of Republic of Belarus (RUE «BelGIE») and Ukrainian State Centre of Radio Frequencies (UCRF), Minsk, 24-27.05.2011 (*Annex 9 to the Minutes contains channel division for BWA systems in frequency band 3600-3800 MHz, channel arrangement – in accordance with ERC/REC 12-08, Annex B, part 2.2*)

- Minutes of bilateral meeting between technical experts of Administrations of the Russian Federation and Ukraine on coordination of frequency assignments to terrestrial stations, Kyiv, 15 – 19.03.2010 (*Annex 10 to the Minutes contains Principles of coordinated use of frequency band 3400-3600 MHz with stations of fixed broadband wireless access in border areas*).

**- How the risk of interference from 5G base station to 5G base station at the border is addressed? Is there any procedure for the case when real interference occurs (e.g. method of measurement, exchange of information, common measures, etc)?**

There are no provisions on these issues.

#### **5G / others services cross-border agreements:**

**- Could you describe the elements of cross-border agreements regarding the coexistence between 5G and other services in the 3.4-3.8 GHz band, (concerned services, coexistence method, expected impact on 5G deployment ...)?**

There are no agreements yet.

#### **Cross border negotiation difficulties (EU and non-EU)**

**- Do you meet any difficulty in current cross border negotiations (EU and non-EU)?**

Russia is not implementing 5G in C-band and continues deploying fixed satellite service in this band; bilateral meetings between Ukraine and Russia are not possible. This is a long-term problem as they even did not include C-band in GKRCh Decision No 20-54-02 of 17.03.2020 on identification of frequency bands for development of 5G/IMT-2020 communication networks on the territory of the Russian Federation.

**- Could such difficulty impact 5G deployment and why?**

Yes.