EBU
OPERATING EUROVISION AND EURORADIO

TECHNOLOGY
FACT SHEET

EBU POSITION ON WRC-19

For broadcasters, the availability of spectrum (frequencies) is essential for the production and distribution of radio and television services. The EBU closely follows the 'World Radiocommunication Conferences' (WRC), which meet every four years to coordinate global changes to radio regulations. The agenda for the 2019 conference, WRC-19, contains no items of immediate priority for the broadcast sector. However, the EBU is paying close attention to Agenda Item 10, which will set the agenda for the next World Radiocommunication Conference (WRC-23).

WRC-19 AGENDA ITEM 10

"*… to recommend to the Council items for inclusion in the agenda for the next WRC, and to give its views on the preliminary agenda for the subsequent conference and on possible agenda items for future conferences, in accordance with Article 7 of the Convention"*

EBU POSITION - UHF BAND

The EBU supports the WRC-15 conclusions that there should be no further discussions on allocations in the 470-694 MHz band at WRC-19, and that any studies on the future of that band should be started after WRC-19.

EBU supports No Change to ITU-R Resolution 235 (WRC-15) which defines WRC-23 Agenda Item 2.5 related to the UHF band in Region 1.

The European Union (EU) has decided that the 470-694 MHz band should be retained for DTT use until at least 2030. This recognises the importance of the DTT platform to broadcasters and viewers and the need to provide certainty for investments in broadcasting infrastructure. DTT will continue to play an essential role as a major distribution platform in the foreseeable future and long-term certainty for spectrum below 700 MHz will give the broadcasters the capacity to further innovate, develop and remain competitive. This band also remains crucial for Programme Making and Special Events (PMSE) services including those used for production of audio-visual content, news and events.

The EU has also agreed to release the 700 MHz (694-790 MHz), as per WRC-15 decisions, by 2020/22. Releasing the 700 MHz band from broadcasting services will require technical changes to the DTT network due to the change of frequencies. In many countries, introduction of new technologies such as DVB-T2 and HEVC will also be required to maintain the range of programmes currently offered by DTT and to allow the possibility of new services being introduced. As a consequence, millions of consumers across Europe will need to change their reception equipment at home. These new technologies will be introduced in the sub-700 MHz spectrum and this requires long term certainty of access to the band 470-694 MHz. Otherwise, timely release of the 700 MHz band might be hindered.

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EBU POSITION - C-BAND

The frequency range 3400 to 4200 MHz is used by broadcasters for programme contribution and programme distribution (including in some countries the backbone distribution network for DTT networks), nationally, regionally and globally. The EUROVISION satellite network also makes extensive use of the 3600-4200 MHz band for all coverage in Asia/Africa/America.

In Europe, the ECC/DEC/(11)06 harmonises the use of the band 3400 to 3800 MHz for wireless broadband services; the band is one of the pioneer bands for the introduction of 5G based services in Europe and several European countries have already auctioned the band or are in the process of doing so.

Studies on technical and regulatory conditions for coexistence between IMT and fixed satellite services in the frequency band 3400-4200 MHz are included in Report ITU-R S.2368. The results show that the required separation distances to avoid interference to satellite services could go up to tens of km or over 100 km in some particular cases. Recent 5G trials in the 3400-3800 MHz range have produced harmful interference to satellite services in the band, confirming the results of the studies.

In Europe in many cases the location of the receive satellite earth stations is known and an exclusion zone could guarantee their protection. However, this protection is not always applied for economic reasons. As a consequence, many broadcasters are moving their services to the upper part of the C-Band, the 3800-4200 MHz band.

The impact on broadcasters' satellite operations of the decision to make 3400-3800 MHz available to IMT has been to cause the failure of otherwise stable links in adjacent bands due to the impact of blocking caused by the relatively high levels of emission from IMT when compared with the emission from spacecraft. Satellite downlinks are designed to operate with high gain antenna systems and were largely designed to operate from 3400 MHz or 3700 MHz upwards. Therefore, existing satellite earth stations have little or no adjacent channel selectivity at these frequencies. To mitigate these effects additional filtering is required at each downlink which is costly to retrofit.

Given the impact on broadcasters' services of making the 3400-3800 MHz spectrum available to IMT, the remaining spectrum from 3800 to 4200 MHz is even more important to broadcasters. Taking into account the above, EBU does not support the allocation of the 3800-4200 MHz band to the Mobile Service. In addition, adequate protection measures in this band need to be provided to avoid adjacent channel interference from the 3400-3800 MHz band.

Recently in the US, an FCC programme to encourage registration of satellite downlinks using spectrum between 3700 and 4200 MHz was extended in order to be able to assess the protection required for incumbent services should this spectrum be reallocated. However, for most countries outside Europe and the US, the use and locations of downlink receivers used by broadcasters for distribution are rarely registered as there is usually no requirement to do so. A global allocation to IMT in the 3400-3800 MHz band will offer no protection to these broadcasters' operations and therefore it is not supported by the EBU.

In summary, the EBU does not support any future WRC agenda item that would consider additional allocations to the Mobile services for IMT in the 3400-4200 MHz frequency range.

FOR ADDITIONAL INFORMATION

Please contact Elena Puigrefagut (puigrefagut@ebu.ch) and Walid Sami (sami@ebu.ch) to obtain the latest supporting documentation from the EBU.

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