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**PRELIMINARY VIEWS ON WRC-19
AGENDA ITEM 9.1, ISSUE 9.1.1
(Item on the Agenda: 3.1 (SGT-1))
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SGT – 1

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Agenda item 9.1, issue 9.1.1: to study possible technical and operational measures to ensure coexistence and compatibility between the terrestrial component of IMT (in the mobile service) and the satellite component of IMT (in the mobile service and the mobile-satellite service) in the frequency bands 1 980-2 010 MHz and 2 170-2 200 MHz where those frequency bands are shared by the mobile service and the mobile-satellite service in different countries, in particular for the deployment of independent satellite and terrestrial components of IMT and to facilitate development of both the satellite and terrestrial components of IMT.

BACKGROUND

The frequency bands 1 885-2 025 MHz and 2 110-2 200 MHz (total of 230 MHz) were the very first identified for IMT at WARC-1992. Of these frequency bands, the bands 1 980-2 010 MHz and 2 170-2 200 MHz were also to be used for the satellite component of IMT, in No. **5.388** and under the provisions of Resolution **212 (Rev. WRC-15)**.

Resolution **212 (Rev. WRC-15)** notes that the terrestrial component of IMT (e.g. LTE) has either been deployed or is currently being considered for deployment globally in the frequency bands 1 885-1 980 MHz, 2 010-2 025 MHz and 2 110-2 170 MHz. It further notes that both the terrestrial and satellite IMT have either been deployed or are planned for deployment in the bands 1 980 - 2 010 MHz and 2 170 - 2 200 MHz. In addition, Resolution **212 (Rev. WRC-15)** reiterates that the attractiveness of IMT can be improved by making this 60 MHz spectrum available to both the terrestrial and satellite components of IMT.

Resolution **212 (Rev. WRC-15)** further notes that it is not feasible to implement the terrestrial and satellite components of IMT on the same frequency and in the same geographical area is not feasible unless techniques such as use of an appropriate guard band or other mitigation techniques are applied to ensure the coexistence and compatibility of the terrestrial and satellite components of IMT. Finally, it invites the ITU-R to study possible technical and operational measures to ensure coexistence and compatibility between MS in one country and MSS in another country.

ITU-R WP 5D is responsible for the studies related to the protection of the terrestrial component of IMT, taking into account the technical and operational characteristics of satellite systems provided by ITU-R WP 4C. Similarly, the ITU-R WP 4C is responsible for the studies related to the protection of the satellite component of IMT, taking into account the technical and operational characteristics of terrestrial IMT systems provided by ITU-R WP 5D. An ITU-R report or recommendation will be prepared based on the studies. CPM text will be jointly developed by these two working parties.

The bands 1 980-2 010 MHz and 2 170-2 200 MHz overlap with parts of existing commercial mobile bands in some countries in the frequency ranges 1 850-1 920 / 1 930-2 000 MHz, 1 710-1 780 / 2 110-2 180 MHz and 2 000-2 020 / 2 180-2 200 MHz (see [ITU-R Recommendation M.1036](#)), in which terrestrial IMT systems exist or are expected to be deployed. The band 2 000-2 020 / 2 180-2 200 MHz is also licensed for MSS use in some countries. CITELE PCC.II has conducted a survey entitled "Request for information about the current and planned use of the bands 1 980-2 025 MHz and 2 160-2 200 MHz by the OAS/CITELE administrations for terrestrial and satellite services" in February 2015 (see Decision PCC.II/DEC. 173 (XXV-15) in [CCP.II-RADIO/doc. 3857/15 rev.1](#)).¹, which may be relevant for the studies under this issue.

¹ The responses from different Administrations received to-date are available in [CCP.II-RADIO/doc. 3988/15 rev.1](#) (Argentina, Brazil, Canada, Costa Rica, Ecuador, Guatemala, Jamaica, Panama and Nicaragua) and [CCP.II-RADIO/doc. 4054/16](#) (Colombia).

Also, CITELE adopted a recommendation on the frequency arrangement for the use of the 1 710-1 780 / 2 110-2 180 MHz band for broadband mobile services, recommending CITELE administrations that plan to use this spectrum do so by adding additional contiguous bandwidth as an expansion of the existing bands in the 1 710-1 770 / 2 110-2 170 MHz or 1 710-1 755 / 2 110-2 155 MHz in some countries (see Decision PCC.II/REC. 43 (XXIII-14) in [CCP.II-RADIO/doc.3597 /14 rev.1](#)).

ISSUES

- Determination of appropriate technical and operational measures from the studies being conducted within ITU-R to ensure coexistence and compatibility between the terrestrial component of IMT (in the mobile service) in one country and the satellite component of IMT (in the mobile-satellite service) in another country in the frequency bands 1 980-2 010 MHz and 2 170-2 200 MHz.

PRELIMINARY VIEWS

Canada

There should not be any impact from the outcome of these studies on the existing use of the frequency bands by the terrestrial component of IMT in 2 170-2 180 MHz (part of the 1 710-1 780 / 2 110-2 180 MHz IMT frequency band) nor on flexible MS/MSS use in 2 000-2 010 & 2 180-2 200 MHz.

Mexico

For the administration of Mexico, it is important to know the outcomes of these studies, since the bands 1710 - 1780/2110 - 2180 MHz and 1850 - 1920/1930 - 2000 MHz are designated for the terrestrial component of IMT in Mexico. The segmentation specified for these bands is based on an FDD scheme in which the 1710-1780 MHz and 1850-1920 MHz segments are used for base-mobile transmission and the 2110-2180 MHz and 1930-2000 MHz segments are used for base-mobile transmission. In addition, Mexico is authorized to exploit the emission and reception rights of signals and frequency bands associated with foreign satellite systems that cover—and can provide services within—its national territory at the 2000-2010/2190-2200 MHz frequency band.

Accordingly, if the 1 980-2 000 MHz and 2 170-2 190 MHz frequency bands were used for the satellite component of IMT in a country with which Mexico shares borders, it would be necessary to set out the technical and operational measures to ensure coexistence and compatibility between the two IMT components.

USA

Support studies of technical and operational measures under agenda item 9.1/issue 9.1.1 in accordance with Resolution **212 (Rev. WRC-15)**, with the objective of ensuring compatible operations of both the terrestrial component of IMT in the mobile service and the satellite component of IMT in the mobile-satellite service in neighboring countries, without undue constraints on either service, in the frequency bands 1 980-2 010 MHz and 2 170-2 200 MHz.