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| A close up of a sign  Description automatically generated | **World Radiocommunication Conference (WRC-23) Dubai, 20 November - 15 December 2023** | |  |
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| PLENARY MEETING | | **Addendum 11 to Document 44(Add.27)-E** | |
|  | | **13 October 2023** | |
|  | | **Original: English** | |
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| Member States of the Inter-American Telecommunication Commission (CITEL) | | | |
| PROPOSALS FOR THE WORK OF THE CONFERENCE | | | |
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| Agenda item 10 | | | |

10to recommend to the ITU Council items for inclusion in the agenda for the next world radiocommunication conference, and items for the preliminary agenda of future conferences, in accordance with Article 7 of the ITU Convention and Resolution **804 (Rev.WRC‑19)**,

Part 11

Background

The landscape of the mobile-satellite service (MSS) is witnessing a transformative evolution. There is an escalating demand propelling the need for additional spectrum, particularly in the lower bands where a significant shortfall continues. This increasing demand requires the allocation of more MSS spectrum to enable service expansion and meet future needs. The proposal envisions studying and potentially allocating additional frequency bands 2 010-2 025 MHz, 2 120-2 160 MHz, and 2 160-2 170 MHz, to further enhance MSS capabilities.

Multiple factors drive this surge in MSS demand. Primarily, it is the growing need for increased mobility in satellite services, alongside the demand for expanded capacity to extend existing and introduce new services. Moreover, the imperative requirement for improved coverage in remote and underserved regions is also a significant catalyst.

In addition, technical advancements and recent external standards organization work have fostered new terminal designs and opportunities, that can significantly intensify MSS traffic demand by bringing services direct to consumer electronic small devices for voice and data services.

Furthermore, as recognized in numerous UN and ITU reports, there is still a connectivity gap which has led to increasing reliance on satellites for consistent connectivity. This has resulted in compelling synergies into new industry sectors including agriculture, energy, environment, healthcare, logistics, real estate, retail, and transportation. Notably, it is also playing a pivotal role in enhancing safety services like the aeronautical mobile-satellite (R) service (AMS(R)S) and Global Maritime Distress and Safety System (GMDSS). By bolstering emergency communication capabilities, MSS is becoming indispensable for disaster management and relief operations, hence underscoring the urgency for more MSS spectrum.

Significant strides have been made since the last MSS allocations in 2003, with MSS systems now significantly evolved, especially in the realm of continuous data communications.

This proposal, in tune with these advancements, aims to study the sharing and compatibility considerations of adding primary MSS spectrum allocations in the mentioned frequency bands. As existing MSS allocations may fall short of accommodating future applications, additional spectrum should be studied to address the growing spectrum needs.

At the same time, in all bands proposed for study for potential MSS allocations, the importance of protecting incumbent services is acknowledged. The overall aim is to fully leverage the evolving dynamics of MSS by providing additional spectrum, without imposing additional constraints on the existing services.

Proposals

CITEL proposes a new WRC-27 agenda item to consider possible allocations and global harmonization of the frequency bands 2 010-2 025 MHz, and 2 160-2 170 MHz in Regions 1 and 3, and 2 120-2 160 MHz in all Regions to the MSS and, based on the results of sharing and compatibility studies with incumbent services, consider new or amended allocations to the MSS.

ADD IAP/44A27A11/1

Draft New Resolution [IAP-10-MSS] (WRC‑23)

Potential new and amended frequency allocations to the mobile-satellite service in the frequency bands 2 010-2 025 MHz and 2 160-2 170 MHz in Regions 1 and 3, and 2 120-2 160 MHz in all Regions for the future development of MSS systems

The World Radiocommunication Conference (Dubai, 2023),

considering

*a)* that demand for mobility communications has driven an increasing demand for mobile-satellite services and connectivity anywhere;

*b)* that the mobile-satellite service (MSS) is a proven, practical, and profitable method to provide telecommunication services to remote and rural areas;

*c)* that recent developments in technology design and external standards organization work are facilitating the integration of mobile-satellite solutions into new design types to address connectivity to consumer electronic small devices including for consumers, agriculture, business and other industry sectors, which significantly increases the market of potential users of MSS services;

*d)* that MSS communications contribute to world economic and social development, especially in remote and rural communities;

*e)* that MSS communications are effective in reducing the digital divide;

*f)* that the number of mobile-satellite systems and the demand for spectrum allocations for the MSS are increasing;

*g)* that MSS communications have the capability of overcoming practical and logistic difficulties associated with terrestrial infrastructure;

*h)* that no new MSS allocations have occurred since WRC‑03 and therefore the spectrum shortfall for MSS applications requires attention;

*i)* that the contiguous spectrum for the MSS shall help ensure spectrum management efficiency;

*j)* that there is a need for regulatory certainty in connection with the available spectrum to design and plan terrestrial and satellite stations;

*k)* that the range of MSS applications has expanded manyfold since the last MSS allocations were made, and the number of MSS systems is growing and the spectrum demand for suitable MSS allocations is increasing; and

*l)* that existing MSS allocations are heavily oversubscribed,

considering also

*a)* that MSS allocations in the frequency bands 2 010-2 025 MHz and 2 160-2 170 MHz in Regions 1 and 3, and 2 120-2 160 MHz in all Regions may help address MSS spectrum demands; and

*b)* that MSS characteristics can be found in ITU‑R Recommendations and Reports, such as Recommendation ITU‑R M.1184, but characteristics of new systems are evolving,

noting

*a)* that Report ITU‑R M.2218 estimated the spectrum requirement for MSS broadband between 240 MHz and 355 MHz; and

*b)* that Report ITU‑R M.2218 suggests that the operational characteristics of incumbent MSS systems may constrain and effectively hamper the sharing of existing MSS spectrum, resulting in a requirement for additional spectrum for new applications,

recognizing

*a)* that the growth in demand for mobile-satellite systems is increasing traffic to the point of spectrum congestion, making it difficult to sustain MSS services on a long-term basis in the existing bands;

*b)* that mobile-satellite systems implementing various applications, including data applications, to the communities in remote and underserved areas require additional spectrum;

*c)* that some existing satellite allocations may be adapted to provide further MSS capacity;

*d)* that the frequency band 2 010-2 025 MHz is allocated to MSS on a primary basis for Earth-to-space operations in Region 2;

*e)* that the frequency band 2 120-2 160 MHz is allocated to MSS on a secondary basis for space-to-Earth operations in Region 2;

*f)* that the frequency band 2 160-2 170 MHz is allocated to the MSS on a primary basis for space-to-Earth operations in Region 2;

*g)* that the frequency bands 2 010-2 025 MHz, 2 120-2 160 MHz, and 2 160-2 170 MHz are adjacent to bands allocated to the MSS on a primary basis;

*h)* that the introduction of applications of the possible new allocation of the MSS should not impose constraints on other existing primary services allocated in the frequency bands being considered and adjacent frequency bands that operate in application of the Radio Regulations,

resolves to invite the ITU Radiocommunication Sector

1 to conduct and complete on time for WRC‑27 the appropriate studies on technical, operational, and regulatory matters in connection with the possible allocation to the MSS in the frequency bands 2 010-2 025 MHz, and 2 160-2 170 MHz in Regions 1 and 3, and 2 120-2 160 MHz in all Regions, taking into account:

– the technical, sharing, coexistence, and protection features for the current allocations in the above-mentioned bands;

– the needs of developing countries; and

– the period of time the spectrum would be needed;

2 to conduct and complete for WRC‑27 appropriate coexistence and compatibility studies on possible new allocations to the MSS in the frequency bands under study to ensure the protection of existing services allocated on a primary basis and also, as applicable, in adjacent frequency bands, without imposing additional constraints on them,

resolves

to invite WRC‑27 to consider, on the basis of the results of studies, additional spectrum allocations to the MSS on a primary basis,

invites administrations

to actively participate in these studies by submitting their contributions to the ITU Radiocommunication Sector.

ATTACHMENT

Potential New and Amended Frequency Allocations to the mobile-satellite service in the frequency bands 2 010-2 025 MHz and 2 160-2 170 MHz in Regions 1 and 3, and 2 120-2 160 MHz in all Regions for the future development of MSS systems

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| **Subject:** This is a proposal for a new agenda item for WRC-27 to adopt new mobile-satellite service (MSS) allocations. | |
| **Origin:**  CITEL | |
| ***Proposal*:**  Potential new allocations and global harmonization of the frequency bands 2 010-2 025 MHz, and 2 160-2 170 MHz in Regions 1 and 3, and 2 120-2 160 MHz in all Regions to the mobile-satellite service and, based on the results of sharing and compatibility studies with incumbent services, consider new or amended allocations to the MSS. | |
| ***Background/reason:***  Allocating more MSS spectrum is necessary to address the increasing demand for mobile satellite applications (and satellite mobility generally), a persistent MSS spectrum shortfall, and crowding in lower bands. MSS can provide coverage to underserved and remote areas, support evolving technologies, and facilitate the integration into new terminals. | |
| ***Radiocommunication services concerned*:**  Fixed service, mobile service | |
| ***Indication of possible difficulties*:**  none foreseen | |
| ***Previous/ongoing studies on the issue*:**  none | |
| ***Studies to be carried out by*:**  ITU‑R Working Party 4C | ***with the participation of*:**  Administrations and Sector Members of the ITU‑R |
| ***ITU‑R study groups concerned*:**  ITU‑R Study Groups 4, 5 | |
| ***ITU resource implications, including financial implications (refer to CV126)*:**  This proposed agenda item will be studied within the normal ITU‑R procedures and planned budget. | |
| ***Common regional proposal*:** Yes/No | ***Multicountry proposal*:** Yes/No  ***Number of countries*:** |
| ***Remarks*** | |

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