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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 3 to Document 100(Add.27)-E** | |
|  | | **27 October 2023** | |
|  | | **Original: English** | |
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| Arab States Common Proposals | | | |
| PROPOSALS FOR THE WORK OF THE CONFERENCE | | | |
|  | | | |
| 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)**,

Introduction

The above co-signatories propose a modification on agenda item for the 2027 World Radiocommunication Conference regarding the potential new frequency allocations to the mobile-satellite service (MSS) in the frequency bands below 5 GHz. The proposal is to consider the feasibility of additional allocations for MSS in frequency bands below 5 GHz on a primary basis to enable satellite communication service providers to deploy direct-to-device communication systems that would complement existing terrestrial networks.

ADD ARB/100A27A3/1

Draft New Resolution [ARB‑AI 10 MSS in Frequency bands below 5 GHz] (WRC‑23)

Potential new frequency allocations to the mobile-satellite service in the frequency bands below 5 GHz on a primary basis

The World Radiocommunication Conference (Dubai, 2023),

considering

*a)* that there is a need to allocate additional frequency bands to the mobile-satellite service (MSS) to accommodate growing number of MSS applications and users;

*b)* that recent technological developments have facilitated the integration of mobile-satellite connectivity into mobile user equipment, drastically increasing the market of potential users of MSS services;

*c)* that integration of mobile-satellite connectivity into mobile user equipment allows MSS system operators to provide direct-to-device (D2D) mobile-satellite connectivity service to end users to complement the terrestrial IMT coverage;

*d)* that the range of MSS applications has grown significantly since the last MSS allocations were made at WARC‑92 and WRC‑95;

*e)* that existing MSS allocations are heavily over-subscribed;

*f)* that the frequency bands 2 500-2 520 MHz and 2 670-2 690 MHz are allocated to MSS (space-to-Earth) and MSS (Earth-to-space) respectively in ITU‑R Region 3,

noting

*a)* that Report ITU-R M.2077 indicated a shortfall of spectrum available for the satellite component of IMT and systems beyond IMT‑2000 of more than 144 MHz (space-to-Earth); and more than 19 MHz (Earth-to-space);

*b)* that Report ITU‑R M.2218 estimated the spectrum requirement in the frequency range 4-16 GHz for MSS broadband applications between 240 MHz and 355 MHz;

*c)* that Recommendation ITU‑R M.1167 established a framework for the satellite component of International Mobile Telecommunications-2000 (IMT‑2000);

*d)* that Recommendation ITU‑R M.818‑2 set the conditions for the satellite operation within International Mobile Telecommunications-2000 (IMT‑2000);

*e)* that Recommendation ITU‑R M.1182‑1 provides levels of different architecture for the integration of MSS systems with terrestrial cellular network;

*f)* that Recommendation ITU‑R M.816‑1 established as a general access requirement that IMT‑2000 should allow operation either directly or indirectly via satellite and that mobile terminals of IMT‑2000 may be used to access mobile-satellite systems for use on land, ships, and aircraft,

recognizing

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

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

*c)* that the development of [consumer mobile equipment/mobile user equipment] with the capability of accessing mobile-satellite systems is resulting in an unexpected growth in new traffic demand;

*d)* that global harmonization of some of the regional MSS allocations may need to be considered noting the global nature of MSS systems;

*e)* that new allocation to MSS would be consistent with the ITU’s objective of promoting access to telecommunication services, particularly in remote and rural areas,

resolves to invite the ITU Radiocommunication Sector

to complete, for WRC‑27, studies of possible new primary allocations to the MSS in the following frequency bands below 5 GHz, taking into account sharing, compatibility, and protection of existing allocations in the referenced bands:

– 1 427-1 517 MHz (space-to-Earth/Earth-to-space) or parts thereof;

– any other appropriate band identified for IMT below 5 GHz,

invites the 2027 World Radiocommunication Conference

to consider, on the basis of the studies conducted under *resolves to invite the ITU Radiocommunication Sector* above, appropriate allocations and associated regulatory conditions for the MSS while ensuring the protection of existing primary services,

invites administrations

to participate in the studies by submitting contributions to the ITU‑R.

ATTACHMENT

Proposal for an additional agenda item for potential new frequency allocations to the mobile-satellite service in the frequency bands   
below 5 GHz on a primary basis

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| **Subject:**  Potential new frequency allocations to the mobile-satellite service in the frequency bands below 5 GHz. | |
| **Origin:**  Arab States | |
| ***Proposal*:**  to consider the feasibility of additional allocations for MSS in bands below 5 GHz on a primary basis. | |
| ***Background/reason*:**  Recently some mobile phone and chip manufacturers as well as MNOs have partnered with existing satellite system operators to provide direct-to-device (D2D) satellite communication services when the end users are out of terrestrial IMT and/or Wi-Fi coverage.  This contribution invites member states to consider a new WRC‑27 agenda item to study the feasibility of additional allocation(s) for MSS in the frequency bands below 5 GHz on a primary basis that would enable more sophisticated D2D services.  The spectrum needs and coexistence with incumbent services can be studied during the next cycle of WRC to ensure efficient use of spectrum and protection of existing services. While some intend to use spectrum allocated for MSS for this service in accordance with the Frequency Allocation Table (Article **5** of the RR), others aim to use mobile service (MS) bands in agreement with MNOs which is a non-compliant use of radio spectrum. If not studied properly, non-compliant use of spectrum may lead to interference to other services within the country planning to allow such use and to the services of neighbouring countries in cross border scenarios.  The proposed MSS allocation would also be consistent with the International Telecommunication Union's (ITU) objective of promoting access to telecommunication services, particularly in remote and rural areas. | |
| ***Radiocommunication services concerned*:**  mobile-satellite service and any other radiocommunication services allocated below the 5 GHz frequency band. | |
| ***Indication of possible difficulties*:**  TBD | |
| ***Previous/ongoing studies on the issue*:**  WRC‑12 agenda item 1.25 | |
| ***Studies to be carried out by*:**  SG 4, SG 5, SG 7 | ***with the participation of*:**  Other relevant WPs, Administrations, Sector Members |
| ***ITU‑R study groups concerned*:**  None | |
| ***ITU resource implications, including financial implications (refer to CV126)*:**  None | |
| ***Common regional proposal*:** Yes | ***Multicountry proposal*:**  TBD  ***Number of countries*:**  TBD |
| ***Remarks*** | |

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