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**PLENARY MEETING**

**Addendum 14 to  
Document 6445(Add.24)-  
E  
10 September 2019  
Original: English**

**Member States of the Inter-American Telecommunication Commission (CITEL)**

**PROPOSALS FOR THE WORK OF THE CONFERENCE**

**Agenda item 10**

*{Temporary information note to be deleted before the submission via CPI of this document to the WRC-19 Secretariat: In accordance with Resolution 804 (Rev. WRC-12), Administrations are invited to use the template provided in Annex 2 to that Resolution (TIES-protected) when proposing agenda items for WRCs. This template may be filled out for each of the proposed WRC agenda item and annexed to this document.}*

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.

**BACKGROUND**

WRC-19 will seek to identify mmWave spectrum for IMT to support high-performance, high-capacity 5G. In order to ensure 5G is available in all areas, lower frequencies in the in the range between the limitations of WRC-15 (upper limit 3.7 GHz) and WRC-19 (lower limit 24 GHz), should also be examined. This paper lays out bands which are supported by industry or by countries / regions.

Early 5G commercial adoption has demonstrated upcoming challenges for spectrum managers. 5G data usage has tripled, according to SK Telecom, in comparison with 4G. LG Uplus is seeing 1.3 gigabytes of data a day per subscriber in the early days of its 5G launch. While capacity issues are supported by sufficient access to mmWave bands, better propagation and indoor coverage will be required in tight unison with mmWave capacity.

In the 3 GHz band, 100 MHz of contiguous spectrum is required per operator for network deployments to fully benefit from the 5G technology. A similar amount of spectrum with similar

propagation characteristics is likely to be required for high-performance capacity 5G enhancement in the future. In some countries spectrum in the same range is being set aside for other purposes such as verticals, which further reduces the amount available for 5G networks. 5G NR will create massive new connectivity between things, unified under one technology and all this will require mid-band spectrum.

Although CITELE has identified a frequency range in the attached proposal, CITELE is of the view that only a subset of the range should be selected for studies. Additionally, some of the potential frequency bands within the 3 300 MHz-15.35 GHz range may be unacceptable for possible study and identification.

**ADD IAP/6445A24A14/1**

DRAFT NEW RESOLUTION [IAP/10(N)-2023] (WRC-19)

**Agenda for the 2023 World Radiocommunication Conference**

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**1.IMT** to consider identification of specific frequency bands in the range [3 300 MHz-15.35 GHz] for the future development of International Mobile Telecommunications (IMT), including possible additional allocations to the mobile service on a primary basis, in accordance with Resolution [IAP/10(N)-IMT-WRC-23] (WRC-19).

**Reasons:** To satisfy additional need for spectrum for IMT for the range above.

**ADD IAP/6445A24A14/2**

DRAFT NEW RESOLUTION [IAP/10(N)/IMT-WRC-23] (WRC-19)

**Additional frequency bands for the terrestrial component of IMT  
between [3 300 MHz and 15.35 GHz]<sup>1</sup>**

The World Radiocommunication Conference (Sharm el-Sheikh, 2019),

*considering*

- a) that International Mobile Telecommunications (IMT) is intended to provide telecommunication services on a worldwide scale, regardless of location and type of network or terminal;
- b) that IMT systems have contributed to global economic and social development;
- c) that IMT systems are now being evolved to provide diverse usage scenarios and applications such as enhanced mobile broadband, massive machine-type communications and ultra-reliable and low-latency communications;
- d) that there is a need to continually take advantage of technological developments in order to increase the efficient use of spectrum and facilitate spectrum access;
- e) that adequate and timely availability of spectrum and supporting regulatory provisions is essential to realize the objectives in Recommendation ITU-R M.2083;
- f) that harmonized worldwide bands and harmonized frequency arrangements for IMT are highly desirable in order to achieve global roaming and the benefits of economies of scale;
- g) that identification of frequency bands allocated to mobile service for IMT may change the sharing situation regarding applications of services to which the frequency band is already allocated, and may require additional regulatory actions,

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<sup>1</sup> NOTE: CITEL is of the view that the study for IMT identification at WRC-23 of any frequency bands outside of the 3 300 MHz-15.35 GHz frequency range is not supported by Region 2. This does not apply to items on the provisional agenda for WRC-23 for other regions.

*noting*

- a) that IMT encompasses both IMT-2000, IMT-Advanced, and IMT-2020 collectively, as described in Resolution ITU-R 56-2;
- b) Recommendation ITU-R M.2083, on the framework and objectives of the future development of IMT for 2020 and beyond;
- c) that Report ITU-R M.2320 addresses future technology trends of terrestrial IMT systems;
- d) Report ITU-R M.2376, on technical feasibility of IMT in the frequency bands above 6 GHz;
- e) that Report ITU-R M.2370 analyses trends impacting future IMT traffic growth beyond the year 2020 and estimates global traffic demands for the period 2020 to 2030,

*recognizing*

- a) that there is a lead time between the allocation of frequency bands by world radiocommunication conferences and the deployment of systems in those bands, and that timely availability of wide and contiguous blocks of spectrum is therefore important to support the development of IMT;
- b) that frequency bands allocated to passive services on an exclusive basis are not suitable for an allocation to the mobile service;
- c) that any identification of frequency bands for IMT should take into account the use of the bands by other services and the evolving needs of these services;
- d) that there should be no additional regulatory or technical constraints imposed to services to which the band is currently allocated on a primary basis;
- e) that bands allocated to the passive services adjacent to bands considered for IMT must be protected,

*resolves to invite ITU-R*

1 to conduct and complete in time for WRC-23 the appropriate studies to determine the spectrum needs for the terrestrial component of IMT in the frequency range between [3 300 MHz and 15.35 GHz], taking into account:

- technical and operational characteristics of terrestrial IMT systems that would operate in this frequency range, including the evolution of IMT through advances in technology and spectrally efficient techniques;
- the deployment scenarios envisaged for IMT-2020 systems and the related requirements of high data traffic such as in dense urban areas and/or in peak times;
- the needs of developing countries;
- the time-frame in which spectrum would be needed;

2 to conduct and complete in time for WRC-23 the appropriate sharing and compatibility studies in potential candidate frequency bands, or portions thereof, in the range [3 300 MHz to 15.35 GHz]:

- TBD;

[CITEL Note: Although CITEL has identified a frequency range in the attached proposal, CITEL is of the view that only a subset of the range should be selected for studies. Additionally, some of the

potential frequency bands within the 3 300 MHz-15.35 GHz range may be unacceptable for possible study and identification.]

*further resolves*

to invite WRC-23 to consider, based on the results of the above studies, additional spectrum allocations to the mobile service on a primary basis and to consider identification of frequency bands for the terrestrial component of IMT; the bands to be considered being limited to part or all of the bands listed in *resolves to invite ITU-R 2*,

*invites administrations*

to participate actively in these studies by submitting contributions to ITU-R.

**Reasons:**

**ANNEX**

**Subject: Proposal for WRC-23 Agenda Item**

**Origin: The CITEL Member States**

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**Proposal:**

To consider identification to IMT in specific frequency bands in the range between [3 300 MHz and 15.35 GHz] in accordance with Resolution [IMT-WRC-23] (WRC-23).

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***Radiocommunication Services concerned:***

Fixed Service, Fixed Satellite Service and other services

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***Indication of possible difficulties:***

The proposed bands are used by other services.

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***Previous/ongoing studies on the issue:***

Related studies have been already commenced and are now ongoing in the ITU-R WP 5D.

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<b><i>Studies to be carried out by:</i></b>	<b><i>with participation of:</i></b>
ITU-R WP 5D	Administrations and Sector members of the ITU-R

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***ITU-R Study Groups concerned:***

SG5 and other groups

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***ITU resource implications, including financial implications (refer to CV 126):***

This proposed agenda item will be studied within the normal ITU-R procedures and planned budget. As the responsible group on IMT studies, ITU-R WP 5D usually have meetings three times a year which last 6 days each.

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<b><i>Common regional proposal:</i></b>	<b><i>Multicountry Proposal: Yes/No</i></b>
Yes/No	<b><i>Number of countries:</i></b>

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***Remarks***

