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| **World Radiocommunication Conference (WRC-19) Sharm el-Sheikh, Egypt, 28 October – 22 November 2019** |  |
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| PLENARY MEETING | **Addendum 15 to Document 16-E** |
|  | **7 October 2019** |
|  | **Original: English** |
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| European Common Proposals | |
| Proposals for the work of the conference | |
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| Agenda item 1.15 | |

1.15 to consider identification of frequency bands for use by administrations for the land-mobile and fixed services applications operating in the frequency range 275-450 GHz, in accordance with Resolution **767 (WRC-15)**;

Introduction

This agenda item proposes to consider identification for use by administrations for the land mobile service (LMS) and fixed service (FS) applications operating in the frequency range 275-450 GHz, while maintaining protection of the passive services identified in No. **5.565** of the Radio Regulations (RR) and take appropriate action.

Sharing studies undertaken in accordance with Resolution **767 (WRC-15)** have shown that in the frequency bands 296-306 GHz, 313-318 GHz and 333-356 GHz, compatibility between FS/LMS and earth exploration-satellite service (EESS) (passive) cannot be ensured and hence that these bands cannot be made available to the FS whereas in the remaining parts of the 275-450 GHz range, FS identification can be envisaged.

Therefore, CEPT supports the inclusion of a new footnote to Article **5** of the RR identifying the following frequency bands for fixed and land mobile service applications in the range 275-450 GHz while maintaining the protection of the passive services identified in RR No. **5.565**:

– 275-296 GHz

– 306-313 GHz

– 318-333 GHz

– 356-450 GHz

With a total bandwidth of 137 GHz proposed to be identified above 275 GHz, CEPT stresses that this is exceeding the assessed spectrum requirements of 50 GHz for the land mobile and fixed services, each (with possibility of overlap). In particular, the frequency band 356-450 GHz provides a large contiguous bandwidth of 94 GHz and, with the 23 GHz already allocated to land mobile and fixed services in the lower adjacent band 252-275 GHz, the identification of the frequency band 275-296 GHz also allows to providing a large contiguous bandwidth of 44 GHz.

On the basis of the results of compatibility studies with EESS (passive), CEPT does not support land mobile and fixed services identification in the EESS (passive) bands 296-306 GHz, 313‑318 GHz and 333-356 GHz (as identified in RR No. **5.565**) due to their incompatibility with EESS (passive) in these parts of the spectrum.

Active services other than land mobile and fixed services are not subject to WRC-19 agenda item 1.15. Consequently CEPT is of the view that the corresponding regulatory provisions to other active services in RR No. **5.565** have to remain unchanged.

This European Common Proposal is hence consistent with Method E of the CPM Report which provides a clear guidance to administrations in which bands land mobile and fixed services applications should operate.

Proposals

ARTICLE 5

Frequency allocations

Section IV – Table of Frequency Allocations  
(See No. 2.1)

MOD EUR/16A15/1#49817

248-3 000 GHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 275-3 000 (Not allocated) MOD 5.565 ADD 5.A115 | | |

**Reasons:** To introduce the new footnote for the identification of land mobile and fixed services applications.

ADD EUR/16A15/2

5.A115 The frequency bands 275-296 GHz, 306-313 GHz, 318-333 GHz and 356-450 GHz are identified for use by administrations for the implementation of land mobile and fixed services applications.

Administrations wishing to make these above-mentioned frequency bands available for land-mobile and/or fixed service applications are urged to take all practicable steps to protect passive services operating according to No. 5.565 until the date when the Table of Frequency Allocations is established in the 275-1 000 GHz frequency range. Considering the protection of the Earth exploration-satellite service (passive), the bands 296-306 GHz, 313-318 GHz, 333-356 GHz are not suitable for land mobile and fixed service applications.

In the frequency bands 275-296 GHz, 306-313 GHz, 318- 323 GHz, 327-333 GHz , 356-371 GHz, 388-424 GHz and 426-442 GHz, some specific conditions (e.g. minimum separation distances and/or avoidance angles) may be necessary to ensure protection of radio astronomy sites from land mobile and/or fixed service applications, on a case-by-case basis.

**Reasons:** Studies that evaluated the entire 275-450 GHz range show that sharing is feasible between fixed service/land mobile service applications and the EESS (passive)/radio astronomy service (RAS) in the particular bands proposed to be identified in RR No. **5.A115**. For the other frequency bands current studies have shown that sharing between fixed service/land mobile service applications and EESS (passive)/RAS applications is not feasible. The amount of spectrum (in total 137 GHz) for use by land mobile and fixed services applications is exceeding the current spectrum needs of 50 GHz for each service (with possibility of overlap). RR **No.** **5.A115** above provides a clear guidance to administrations in which frequency bands land mobile and fixed services applications should operate.

MOD EUR/16A15/3

5.565 The following frequency bands in the range 275-1 000 GHz are identified for use by administrations for passive service applications:

– radio astronomy service: 275-323 GHz, 327-371 GHz, 388-424 GHz, 426‑442 GHz, 453‑510 GHz, 623-711 GHz, 795-909 GHz and 926-945 GHz;

– Earth exploration-satellite service (passive) and space research service (passive): 275-286 GHz, 296-306 GHz, 313-356 GHz, 361-365 GHz, 369-392 GHz, 397‑399 GHz, 409-411 GHz, 416‑434 GHz, 439-467 GHz, 477-502 GHz, 523‑527 GHz, 538-581 GHz, 611-630 GHz, 634‑654 GHz, 657-692 GHz, 713‑718 GHz, 729-733 GHz, 750-754 GHz, 771-776 GHz, 823‑846 GHz, 850‑854 GHz, 857-862 GHz, 866-882 GHz, 905-928 GHz, 951-956 GHz, 968‑973 GHz and 985-990 GHz.

The use of the range 275-1 000 GHz by the passive services does not preclude use of this range by active services. Administrations wishing to make frequencies in the 275-1 000 GHz range available for active service applications are urged to take all practicable steps to protect these passive services from harmful interference until the date when the Table of Frequency Allocations is established in the above-mentioned 275-1 000 GHz frequency range.

The use of the range 275-450 GHz by land mobile and fixed services applications is subject to No. **5.A115**.

All frequencies in the range 1 000-3 000 GHz may be used by both active and passive services.     (WRC‑19)

**Reasons:** Consequential to the addition of No. **5.A115**.

SUP EUR/16A15/4

RESOLUTION 767 (WRC-15)

Studies towards an identification for use by administrations for land-mobile and fixed services applications operating in the frequency range 275-450 GHz

**Reasons:** No further studies needed.

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