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PROPOSAL ON DEVELOPMENT OF APT RECOMMENDATION ON FREQUENCY ARRANGEMENT FOR THE BAND 4 800 – 4 990 MHZ

1 Introduction

1.1 At AWG-26 a proposal to develop a recommendation on frequency arrangement for the band 4 800 - 4 990 MHz was receive and considered. Subsequently, at AWG-28 the SWG SA&H agreed to the new studies on NEW APT RECOMMENDATION ON FREQUENCY ARRANGEMENT FOR IMT IN THE FREQUENCY BAND 3 300 – 3 400 MHZ and 4 800 – 4 990 MHZ, according to the workplan as in AWG-28/TMP-49

2 Discussion

2.1 Footnote 5.442

According to footnote 5.442, in the frequency bands 4 825-4 835 MHz and 4 950-4 990 MHz, the allocation to the mobile service is restricted to the mobile, except aeronautical mobile, service. This may be considered in the implementation of IMT in this frequency band.

2.2 Public Protection and Disaster Relief (PPDR) in 4 940-4 990 MHz

APT recommendation No. APT/AWF/REC-01(Rev.1) on Use of the band 4940-4990 MHZ for PPDR applications, recommends, for guidance of APT member administrations, that the frequency band 4940-4990 MHz or parts thereof may be used to support broadband networks designed for PPDR high-rate data and video information transfer.

In ITU Region 3, Resolution 646 (Rev.WRC-19) *resolves 3* encourage administrations to also consider parts of the range 4 940- 4 990 MHz for their PPDR applications.

Both, APT recommendation and Resolution 646, should be recognized in support of the need to harmonize the frequency band 4 800-4 990 MHz for IMT so that PPDR users in Region 3 may benefit from economies of scale and availability of low-cost user equipment through the harmonized use of the frequency band.

2.3 Radio altimeter operating in the band 4200-4400MHz

The frequency band 4 200-4 400 MHz is allocated to aeronautical radionavigation service on a primary basis and the frequency band is reserved exclusively for radio altimeters installed on board aircraft and for the associated transponders on the ground.

In 2021, in a ITU Region 2 country, concerns were raised on the possibility of harmful interference to the radio altimeters from IMT base stations operating in frequencies up to 3 980 MHz.

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A compatibility study between the operation of IMT base stations operating in the frequency band 4 800-4 990 MHz and radio altimeters operating in the frequency band 4 200-4 400 MHz may be needed to allay the concern of IMT base station causing harmful interference to radio altimeters.

3 Proposal

3.1 Take into consideration that the frequency bands 4 825-4 835 MHz and 4 950-4 990 MHz, the allocation to the mobile service is restricted to the mobile, except aeronautical mobile, service.

3.2 Recognize that PPDR users in 4 940-4 990 MHz can benefit from the harmonization of the frequency band 4 800-4 990 MHz.

3.3 Consider conducting a compatibility study to allay concern that the operation of IMT base stations in the frequency band 4 800-4 990 MHz may cause harmful interference to the operation of radio altimeters in the frequency band 4 200-4 400 MHz.

Attachment 1 below contain proposed changes to the working document.

ATTACHMENT 1

WORKING DOCUMENT TOWARD A PRELIMINARY DRAFT APT RECOMMENDATION ON 'FREQUENCY ARRANGEMENTS FOR THE IMPLEMENTATION OF IMT IN THE BAND 4 800 – 4 990 MHZ'

The Asia-Pacific Telecommunity (APT),

considering

a) that the frequency band 4 800 –4 900 MHz is allocated to the mobile services on a primary basis in some countries in the Region 3;

b) that the harmonized frequency arrangements in the band of 4 800–4 990 MHz for mobile services will facilitate global roaming, economies of scale and availability of low-cost user equipment;

c) that APT Report APT/AWG/REP-103 is on the harmonized frequency arrangements for IMT in this frequency band;

d) that APT Report APT/AWG/REP-[YY] shows the sharing and compatibility study results between IMT in this band and other services in related bands, including aeronautical radionavigation service in the band 4 200-4 400 MHz;

e) that 3GPP has developed radio interface specifications using a band plan for TDD (Band n79 for NR);

f) that in the frequency bands 4 825-4 835 MHz and 4 950-4 990 MHz, the allocation to the mobile service is restricted to the mobile, except aeronautical mobile, service.

recognising

a) the needs of countries for large economy of scale and low-cost mobile user equipment.

b) APT RECOMMENDATION No. APT/AWF/REC-01(Rev.1) on Use of the band 4940-4990 MHZ for Public Protection and Disaster Relief (PPDR) Applications, recommends,for guidance of APT member administrations, that the frequency band 4940-4990 MHz or parts thereof may be used to support broadband networks designed for PPDR high rate data and video information transfer.

c) in ITU Region 3, RESOLUTION 646 (REV.WRC-19) *resolves 3* encourage administrations to also consider parts of the range 4 940- 4 990 MHz for their PPDR applications.

recommends that APT administrations:

1 adopt the harmonized frequency arrangements given in Annex 1 for the deployment of IMT systems in the band 4 800–4 990 MHz;

2 take into account the implementation aspects detailed in Annex 2 when implementing the frequency arrangements given in Annex 1;

3 coordinate the use of TDD schemes to minimize interference between neighbouring countries;

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ANNEX 1

Harmonized frequency arrangements for the band 4 800–4 990 MHz

This Annex describes a harmonized frequency arrangement for IMT systems in the 4 800–4 990 MHz frequency band.

Figure 1: Harmonised band plan for4800– 4990 MHz band

ANNEX 2

Implementation aspects applicable to the frequency arrangements of 4 800–4 990 MHz

[TBD]

---------- End of Attachment 1 ----------

---------- End of Attachment 2 ----------

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