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|  | ASIA-PACIFIC TELECOMMUNITY |
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**DRAFT APT RECOMMENDATION ON FREQUENCY ARRANGEMENTS FOR IMPLEMENTATION OF IMT IN THE BAND 698 - 806 MHz**

1. **Scope**

This Recommendation provides frequency arrangements for implementation of IMT in the band 698 - 806 MHz.

1. **Introduction**

AWG has completed studies related to the development and use of 698 - 806 MHz for IMT systems, to support specification work of radio interface as well as the allocation of frequencies. The LTE radio specifications have been done by 3GPP as Band 28 for FDD and Band 44 for TDD. This recommendation assists administrations in implementing the band 698 - 806 MHz for use by IMT systems, and to provide guidance to external organizations for development of associated technical standards.

The Asia-Pacific Telecommunity (APT),

*considering*

*a)* that the frequency band 698 - 806 MHz is allocated for mobile services on a primary basis in the Region 3 for long time;

*b)* that the harmonized frequency arrangements in the band of 698 - 806 MHz for mobile services will facilitate global roaming, economies of scale and availability of low-cost user equipment;

*c)* that the harmonized frequency arrangements included in APT Report APT/AWF/REP-14 are globally being considered and adopted;

*d)* that during WRC-15, 26 countries in Region 3 have identified this band or portions of this band for IMT;

*e)* that the 700 MHz has low loss propagation properties enabling good coverage performance;

*f)* that 3GPP has developed radio interface specifications using a band plan for FDD (Band 28), 703 - 748 / 758 - 803 MHz (UL/DL) , and TDD (Band 44), 698 - 806 MHz, based on the APT studies;

*g)* that there is a need ensure a common deployment strategy between neighboring countries to reduce the risk of interference between Broadcasting and Mobile services if migrating is not done at same time.

 *recognising*

*a)* the needs of countries for low-cost mobile user equipment.

 *recommends that APT Members*

1 adopt the harmonized frequency arrangements given in Annex 1 for the deployment of IMT systems in the band 698 - 806 MHz;

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

3 coordinate with neighboring countries to avoid risk of interference between Broadcasting and IMT use in this band;

4 coordinate the use of duplex schemes (FDD and TDD) to minimize interference between neighboring countries;

5 avoid use of both duplex schemes (FDD and TDD) in the same country.

ANNEX 1

**Harmonized frequency arrangements for the band 698 - 806 MHz**

This Annex describes two harmonized frequency arrangements for IMT systems in the 698 - 806 MHz frequency band.

45 MHz

45 MHz

*Figure 1: Harmonized FDD Arrangement of 698-806 MHz band*

698 MHz

806 MHz

694 MHz

*PPDR/LMR*

*DTTV*

*10 MHz centre gap*

5 MHz

3 MHz

Taking into consideration the capabilities of state-of-the-art filter technology, and to maximize the size of upper/lower protective guard-bands, it was agreed that the 2 x 45 MHz FDD arrangement should include a 10 MHz centre-band gap.

The dual-duplexer arrangement is needed to facilitate the mobile terminal implementation while the overlap affords flexibility to administrations in their national spectrum planning.

*PPDR/LMR*

806 MHz

*DTTV*

698 MHz

694 MHz

*Figure 2: Harmonized TDD Arrangement of 698-806 MHz band*

ANNEX 2

**Implementation aspects applicable to the frequency arrangements of 698 - 806 MHz**

**1. Channel bandwidth**

Use of a 5 MHz block approach which is similar to the recognized mobile systems to be used in the band 698 - 806 MHz. Channel bandwidth should be multiple of 5 MHz.

**2. Out of band emissions limit**

It is noted that the specification of appropriate UE out of band emission limits to ensure the coexistence of mobile services with adjacent broadcasting services below the 698 MHz spectral boundary is an important aspect of the conventional duplex arrangement in the band 698 - 806 MHz.

Refers to the [APT/AWG/REP-24](http://www.apt.int/sites/default/files/Upload-files/AWG/APT-AWG-REP-44-APT_Report_on_Spec_Coexistence_between_services_at_the_700_MHz_and_800_MHz_boundary.docx) “Implementation issues associated with use of the band 698 - 806 MHz by mobile services” or some other documents if it is feasible.

**ATTACHMENT**

**Related Reports**

[Report APT/AWG/REP-24](http://www.apt.int/sites/default/files/Upload-files/AWG/APT-AWG-REP-24_APT_Report_698-806_Band_Implementation_UHF_0.doc): Implementation issues associated with use of the band 698 - 806 MHz by mobile services.

[Report APT/AWG/REP-44](http://www.apt.int/sites/default/files/Upload-files/AWG/APT-AWG-REP-44-APT_Report_on_Spec_Coexistence_between_services_at_the_700_MHz_and_800_MHz_boundary.docx): Coexistence between services at the boundary of the 700 MHz and 800 MHz bands

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