

**PCC.II/REC. 8 (IV-04)<sup>1</sup>**

**FREQUENCY ARRANGEMENTS FOR IMT-2000 IN THE BANDS 806 TO 960 MHZ, 1710 TO 2025 MHZ, 2110 TO 2200 MHZ AND 2500 TO 2690 MHz**

The IV Meeting of the Permanent Consultative Committee II: Radiocommunications including Broadcasting,

**CONSIDERING:**

- a) That the ITU Radio Regulations identify the bands 806-960 MHz, 1 710-1 885 MHz, 1 885-2 025 MHz, 2 110-2 200 MHz and 2 500-2 690 MHz as intended for use on a worldwide basis by administrations wishing to implement IMT-2000;
- b) That CITEL Recommendation PCC.III/REC.12 (III-95) "Designation of Spectrum for Personal Communications Systems in the Americas in the 2GHz Band" recommends that PCS systems consider strategies for the evolution towards 3G;
- c) That CITEL Recommendation PCC.II/REC.7(III-04) "Frequency Arrangements for Implementation of the Terrestrial Component of International Mobile Telecommunication 2000 (IMT-2000) in the Bands 2500-2690 MHz" provides recommendations for planning the implementation of IMT-2000 in the band 2500-2690 MHz;
- d) That IMT-2000 represents an opportunity for a major improvement in mobile or portable communication services for individuals or businesses which would be integrated into a variety of competing networks;
- e) That spectrum arrangements should be defined which are technology neutral i.e. any of the proposed IMT-2000 technologies can be used in these bands;
- f) That the bands identified for IMT-2000 should be considered on a global basis as a set, to achieve a comprehensive, global solution that will ensure that there is an approach that meets all requirements and that a significant level of interoperability is achieved;
- g) That Administrations should harmonize frequency arrangements to the greatest extent possible to facilitate worldwide compatibility, global roaming and create economies of scale;
- h) That common frequency bands and duplex separation are desirable to enable economies of scale in the implementation of IMT-2000 networks;
- i) That evolution from pre-IMT-2000 systems to IMT-2000 is enabled by providing compatible frequency arrangements thus leading to flexible regulatory approach;
- j) That indication of mobile transmit or base transmit operation does not preclude the use of these frequency bands for TDD applications;
- k) That the IMT-2000 identified bands are shared on a co-primary basis with other Services, which should be protected accordingly, and
- l) That CITEL members may have different requirements for the use of these bands,

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<sup>1</sup> CCP.II-RAD/ doc. 578/04 rev. 2

## **RECOGNIZING:**

That some administrations have not finalized their decisions regarding spectrum to be made available for IMT-2000. Consequently, further revisions to these frequency arrangements may be required in order to maximize the harmonization of spectrum within the Region,

## **RECOMMENDS:**

1. That CITEL Member States consider identifying spectrum for IMT-2000 systems based on the following principles :
  - a) Maximize harmonization of the IMT-2000 identified bands with existing 2G and 3G band plan pairings for implementation of IMT-2000 services;
  - b) Maximize harmonization with the global 2110-2170 MHz Base Transmit Band;
  - c) Facilitate global roaming;
  - d) Minimize equipment costs.
2. That for the purpose of economies of scale, and roaming, CITEL Member States that consider using only one part of one frequency band, take into account that channel pairing should be consistent with the duplex frequency separations of the full frequency arrangement.
3. That CITEL Member States consider selecting some of the following pairing options of frequency bands (see Note 1).

## **DECIDES:**

To revoke Recommendation PCC.III/REC. 70 (XXI-02).

### **ANNEX TO RESOLUTION PCC.II/REC. 8 (IV-04)**

#### **Recommended Frequency Arrangement Options<sup>2</sup>**

Figures 1, 2 and 3 show the recommended spectrum band pairing options.

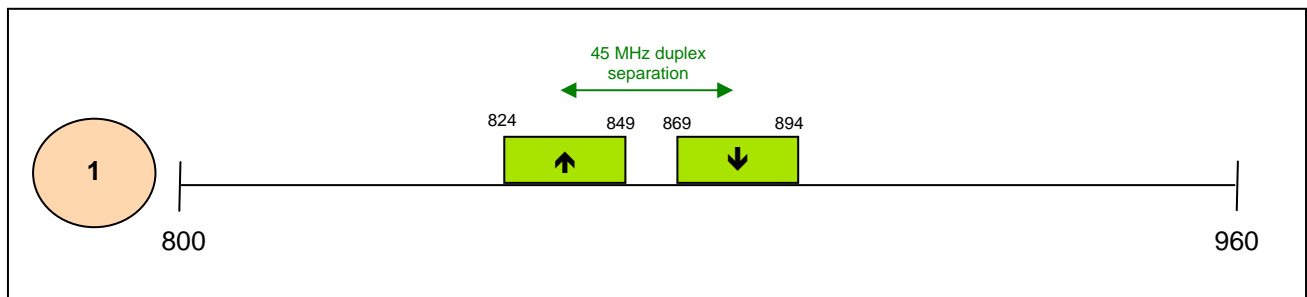
- 1) Mobile transmit band starting at 824 MHz paired with a base transmit band starting at 869 MHz, consistent with a duplex separation of 45 MHz.
- 2) Mobile transmit band 1 920-1 980 MHz, paired with the global base transmit band 2 110 2 170 MHz, with a 190 MHz duplex separation - some countries may wish to implement part of the band.
- 3) Mobile transmit band 1 710-1 785 MHz, paired with a base transmit band 1 805-1 880 MHz, consistent with a duplex separation of 95 MHz (aligned with GSM1800 bandplan). For countries having implemented option 3, the upper edge for the mobile transmit band is 1 755 MHz and for the base transmit band is 1 850 MHz.

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<sup>2</sup> Timing and availability may vary by country.

- 4) Mobile transmit band 1 850-1 910 MHz, paired with a base transmit band 1 930-1 990 MHz, consistent with a duplex separation of 80 MHz (aligned with PCS1900 bandplan).
- 5) Mobile transmit band 1 710-1 770 MHz, paired with the global base transmit band 2 110-2 170 MHz, consistent with a duplex separation of 400 MHz.
- 6) Mobile transmit band 2 500-2 570 MHz paired<sup>3</sup> with a base transmit band 2 620–2 690 MHz, consistent with a duplex separation of 120 MHz.
  - Any guard band should be kept to a minimum and taken from the centre portion.

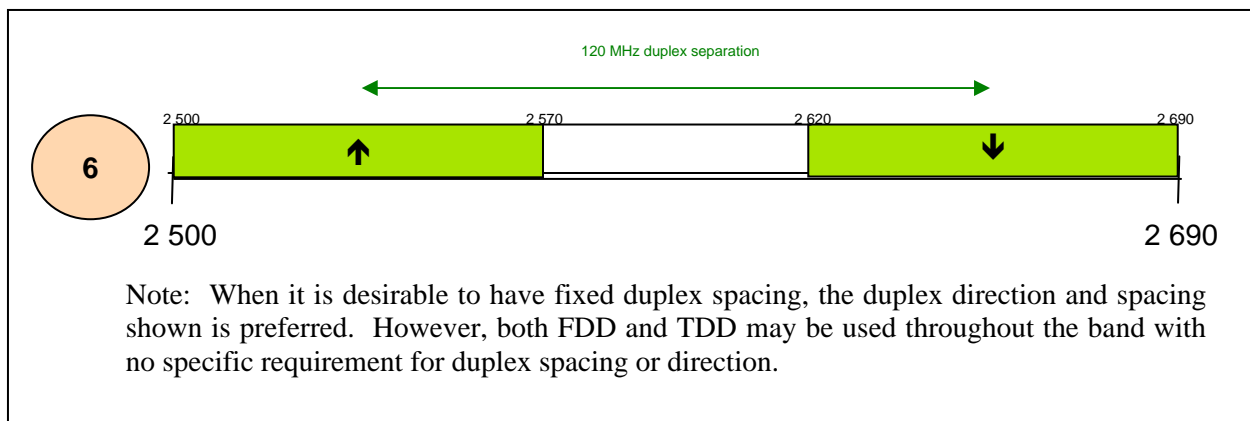
**Note 1:** Administrations can implement all or parts of these frequency arrangements, taking into account other services allocated in the 2 500-2 690 MHz band.



**Figure 1: Recommended Frequency Arrangement (806-960 MHz Band)**

<sup>3</sup> When it is desirable to have fixed duplex spacing, the duplex direction and spacing in Figure 3 is preferred. However, both FDD and TDD may be used throughout the band with no specific requirement for duplex spacing or direction.





**Figure 3: Recommended Frequency Arrangement Options (2 500-2 690 MHz Band)**

