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| China (People's Republic of) | |
| Proposal for THE draft revision of  recommendation ITU-R M.1036-4 | |
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# 1 Introduction

During this study period for WRC-15, the revision of Recommendation ITU-R M.1036-4 was initiated by Working Party 5D and proposals for frequency arrangements for implementation of the terrestrial component of IMT were developed. In particular, the bands 1 980-2 010 MHz and 2 170-2 200 MHz correspond to the mobile-satellite service (hereinafter IMT-2.1G).

In Working Party 5D and Study Group 5, no consensus was achieved on whether the draft revision should include the IMT-2.1G bands. Opposite views exist between Working Parties 4B, 4C and 5D, and very different opinions exist between Study Groups 4 and 5 (Docs. 5D/727, 5D/729, 5/129, 5/212, 5D/727, 5D/729, 5D/1039). Moreover, Study Group 4 does not concur with Study Group 5 in their joint purview of this Recommendation. Working Party 5D therefore decided to forward this draft revision to Study Group 5 (Doc. 5/213) and further decided to refer it to RA-15 for consideration (Doc. 5/1008).

In accordance with Resolution **212 (Rev.WRC-07)**, Resolution **223 (Rev.WRC-12)** and Resolution **225 (Rev.WRC-12)**, the IMT-2.1G bands have been identified for use by the satellite component of IMT since WARC-92 and are currently the only available resource for implementing the satellite component of IMT in practical terms. So far 26 countries have submitted 331 coordinations for satellite networks using the IMT-2.1G bands, and 18 of those satellite networks have been brought into use. Also, mobile-satellite systems from several countries including China have tested and operated in orbit using such bands. In the near future, more satellite systems are to be deployed. It is known that some European satellite operators have been licensed to use part of the IMT-2.1G bands.

Studies presently show that severe harmful interference will be suffered between the terrestrial and satellite components of IMT in the IMT-2.1G bands in co-frequency and co-coverage areas or even adjacent areas (ITU-R M.687-2, Doc. 4C/403).

More importantly, the Radio Regulations contain no regulatory procedures enabling effective coordination between the mobile-satellite service and mobile service. This issue has been included in the Report of the Director of the Radiocommunication Bureau to WRC-15 (Doc. WRC15/4), and will be discussed and resolved at WRC-15.

# 2 Proposal

China considers that, before adopting the draft revision of Recommendation ITU-R M.1036-4 dealing with the IMT-2.1G bands, the following issues should be resolved:

– clarify understandings regarding the issue of inconsistency encountered in application of the Radio Regulations regarding use of the IMT-2.1G bands;

– carry out studies to develop technical conditions for co-existence between the terrestrial and satellite components of IMT, and enable reasonable and efficient use of the IMT-2.1G bands;

– proceed with the revision of the Recommendation dealing with the IMT-2.1G bands and reach an agreement under the joint purview of Study Groups 4 and 5;

– establish appropriate regulatory procedures facilitating coordination between the satellite and terrestrial components of IMT.

Until these issues have been resolved, China objects to the draft revision of Recommendation ITU‑R M.1036-4, particularly the addition of B6 and B7 for new frequency arrangements and the extensions of B3 and B5 for existing arrangements. The draft revision of Recommendation ITU‑R M.1036-4 should be revised in accordance with Attachment 1 to this document before its adoption and approval.

ATTACHMENT 1

*[Editor’s note: Only the relevant section of the draft revision of Recommendation ITU-R M.1036-4 is presented. No changes for other parts of the draft revision. The proposed changes are marked with turquoise.]*

SECTION 3

Frequency arrangements in the band 1 710-2 200 MHz[[1]](#footnote-1)

The recommended frequency arrangements for implementation of IMT in the band 1 710-2 200 MHz are summarized in Table 4 and in Fig. 4, noting the guidelines in Annex 1 above.

TABLE 4

Frequency arrangements in the band 1 710-2 200 MHz

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Frequency  arrangements | Paired arrangements | | | | Un-paired arrangements  (e.g. for TDD) (MHz) |
| Mobile station transmitter (MHz) | Centre gap (MHz) | Base station transmitter (MHz) | Duplex separation (MHz) |
| B1 | 1 920-1 980 | 130 | 2 110-2 170 | 190 | 1 880-1 920; 2 010-2 025 |
| B2 | 1 710-1 785 | 20 | 1 805-1 880 | 95 | None |
| B3 | 1 850-1 910 | 20 | 1 930- 1 990 | 80 | 1 920-1 930 |
| B4 (harmonized with  B1 and B2) | 1 710-1 785 1 920-1 980 | 20 130 | 1 805-1 880 2 110-2 170 | 95 190 | 1 880-1 920; 2 010-2 025 |
| B5 (harmonized with B3 and partially harmonized with the downlink of B1 and the uplink of B2) | 1 850-1 910 1 710-1 770 | 20 340 | 1 930- 1 990 2 110-2 170 | 80 400 | 1 920-1 930 |
| *Notes to Table 4:*  NOTE 1 – In the band 1 710-2 025 MHz and 2 110-2 200 MHz three basic frequency arrangements (B1, B2 and B3) are already in use by public mobile cellular systems including IMT. Based on these three arrangements, different combinations of arrangements are recommended as described in B4 and B5. The B1 arrangement and the B2 arrangement are fully complementary, whereas the B3 arrangement partly overlaps with the B1 and B2 arrangements.  For administrations having implemented the B1 arrangement, B4 enables optimization of the use of spectrum for paired IMT operation.  For administrations having implemented the B3 arrangement, the B1 arrangement can be combined with the B2 arrangement. B5 is therefore recommended to optimize the use of the spectrum:  – B5 enables the use of spectrum to be maximized for IMT in administrations where B3 is implemented and where the band 1 770‑1 850 MHz is not available in the initial phase of deployment of IMT in this frequency band.  NOTE 2 – TDD may be introduced in unpaired bands and also under certain conditions in the uplink bands of paired frequency arrangements and/or in the centre gap between paired bands.  NOTE 3 – If selectable/variable duplex technology is implemented within terminals as the most efficient way to manage different frequency arrangements, the fact that neighbouring administrations could select B5 will have no impact on the complexity of the terminal. Further studies are necessary. | | | | | | |

FIGURE 4   
(See notes to Table 4)



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1. The 2 025-2 110 MHz band is not part of this frequency arrangement. [↑](#footnote-ref-1)