

**RADIO SPECTRUM AND TECHNICAL STANDARDS  
ADVISORY COMMITTEE**

**Proposed Allocation of the 11.7 – 12.2 GHz Band  
to the Fixed-Satellite Service**

**Introduction**

This paper seeks Members' views on the proposed allocation of the 11.7 – 12.2 GHz band ("the 12 GHz band") to the fixed-satellite service ("FSS") in the space-to-Earth direction ("downlink") on top of the existing allocations.

**Background**

2. According to the Radio Regulations ("RR") of the International Telecommunication Union ("ITU"), the 12 GHz band is allocated to the fixed, mobile except aeronautical mobile, broadcasting and broadcasting-satellite services on a co-primary basis in Region 3 (Asia, east of and including Iran, and most of Oceania)<sup>1</sup>. According to footnote 5.487A of RR, the 12 GHz band is also allocated to the FSS (space-to-Earth) on a primary basis, limited to non-geostationary systems and subject to application of the relevant provisions of RR for coordination with other non-geostationary-satellite systems in the FSS. In addition, according to footnote 5.487 of RR, the FSS, fixed, mobile except aeronautical mobile and broadcasting services in the 11.7 – 12.5 GHz band in Region 3 shall not cause harmful interference to, or claim protection from, the broadcasting-satellite stations operating in accordance with the Region 3 Plan in Appendix 30<sup>2</sup> of RR. The relevant ITU allocations are summarised in **Annex**.

3. In Hong Kong, the 12 GHz band is allocated to the fixed, mobile except aeronautical mobile, broadcasting and broadcasting-satellite services on a co-primary basis and this band is vacant at present. Details can be found

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<sup>1</sup> ITU divides the world into Region 1, Region 2 and Region 3 for the purpose of radio spectrum management. Hong Kong situates in Region 3.

<sup>2</sup> Appendix 30 (Rev. WRC-23) of RR is entitled "Provisions for all services and associated Plans and List for the broadcasting-satellite service in the frequency bands 11.7-12.2 GHz (in Region 3), 11.7-12.5 GHz (in Region 1) and 12.2-12.7 GHz (in Region 2)".

from the Hong Kong Table of Frequency Allocations<sup>3</sup>.

4. In the Mainland, the 12 GHz band is also allocated to the FSS (space-to-Earth) on a primary basis in accordance with footnote 5.487A of RR in addition to allocations to fixed, mobile except aeronautical mobile, broadcasting and broadcasting-satellite services on a co-primary basis.

5. The Office of the Communications Authority (“OFCA”) received an application from a satellite operator for provision of satellite broadband services in Hong Kong by using low earth orbit (“LEO”) satellites with customer premises equipment/user terminals operating in the 10.7 – 12.7 GHz band (i.e. covering the 12 GHz band) for FSS downlink. To facilitate the development of FSS (space-to-Earth), allocation of the 12 GHz band to the FSS should be made as proposed in **Annex**.

## **Proposed Frequency Allocation**

### Additional Allocation

6. As mentioned in paragraph 2 above, the proposed additional allocation of the 12 GHz band to FSS downlink with details in **Annex** is in compliance with the ITU frequency allocations.

7. Having considered the spectrum demand in the 12 GHz band for provision of satellite broadband services from LEO satellite operators in Hong Kong, its compliance with the ITU frequency allocations and the current utilisation of the band, it is recommended that the 12 GHz band be allocated to FSS downlink on top of the existing allocations as shown in **Annex**.

## **Advice Sought**

8. Members are invited to offer comments on the proposed additional allocation of the 12 GHz band to FSS downlink. OFCA will take into account Members’ comments and make a recommendation to the Communications Authority for the aforesaid frequency allocation to take effect.

**Office of the Communications Authority**  
**July 2025**

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<sup>3</sup> The Hong Kong Table of Frequency Allocations can be downloaded from the following hyperlink – [https://www.ofca.gov.hk/filemanager/ofca/en/content\\_144/hk\\_freq\\_table\\_en.pdf](https://www.ofca.gov.hk/filemanager/ofca/en/content_144/hk_freq_table_en.pdf).

## Annex

### Region 3 and Hong Kong Allocation of the 11.7 – 12.2 GHz Band

REGION 3 ALLOCATION	HONG KONG ALLOCATION	
	EXISTING	PROPOSED
<b>11.7 - 12.2 GHz</b> [2][3] FIXED MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE	<b>11.7 - 12.2 GHz</b> FIXED MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE	<b>11.7 - 12.2 GHz</b> FIXED <u>FIXED-SATELLITE</u> <u>(space-to-Earth)</u> MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE
<p><b>Note:</b>            Services in “capitals” : primary services</p> <p>[2] The band 11.7 – 12.2 GHz is also allocated to the fixed-satellite (space-to-Earth) service on a primary basis, limited to non-geostationary systems. <u>No. 5.487A of the Radio Regulations refers.</u></p> <p>[3] In the band 11.7 – 12.5 GHz, the fixed, fixed-satellite, mobile except aeronautical mobile, and broadcasting services, shall not cause harmful interference to, or claim protection from, broadcasting-satellite stations. <u>No. 5.487 of the Radio Regulations refers.</u></p>		