

**RADIO SPECTRUM AND TECHNICAL STANDARDS  
ADVISORY COMMITTEE**

**Proposed Allocation of the 7235 – 7250 MHz and 9300 – 9900 MHz Bands  
to Earth Exploration-Satellite Service**

**Introduction**

This paper seeks Members' views on the proposed allocation of the 7235 – 7250 MHz ("7.2 GHz") and 9300 – 9900 MHz ("9.6 GHz") bands to Earth Exploration-Satellite Service ("EESS") on top of the existing allocations, with details in **Annex**.

**Background**

2. According to the Radio Regulations ("RR") of the International Telecommunication Union ("ITU"), in Region 3<sup>1</sup>, the 7.2 GHz band is allocated to EESS (Earth-to-space), fixed and mobile services on a co-primary basis. For the 9.6 GHz band, the 9300 – 9800 MHz band is allocated to radiolocation, radionavigation and space research (active)<sup>2</sup> services as well as EESS (active), all on a co-primary basis, while the 9800 – 9900 MHz band is allocated to radiolocation service on a primary basis and EESS (active) on a secondary<sup>3</sup> basis. Accordingly to footnote 5.460A in RR, use of the 7.2 GHz band for EESS (Earth-to-space) shall be limited to the tracking, telemetry and command for the operation of EESS satellites, as well as stations on board EESS satellites operating in the 7.2 GHz band shall not claim protection from existing and future stations in the fixed and mobile services. As per footnote 5.476A in RR, EESS (active) stations operating in the 9300 – 9800 MHz band shall not cause

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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> "Active" refers to the use of active sensors in the space research service or in EESS which obtain information by transmission and reception of radio waves.

<sup>3</sup> Radio stations of a secondary service shall neither cause harmful interference to radio stations of primary services to which frequencies are already assigned or to which frequencies may be assigned at a later date, nor claim protection from harmful interference from radio stations of a primary service to which frequencies are already assigned or may be assigned at a later date.

harmful interference to, nor claim protection from, stations of the radionavigation and radiolocation services. The relevant ITU allocations are summarised in **Annex**.

3. In Hong Kong, the 7.2 GHz band is currently allocated to fixed and mobile services on a co-primary basis. Ultra-wideband devices are allowed to operate in the 6000 – 8500 MHz band, covering the 7.2 GHz band, on condition that the requirements stipulated in the Class Licence for Short Range Device<sup>4</sup> are fulfilled. As for the 9.6 GHz band, the 9300 – 9800 MHz band is allocated to and being used for radiolocation and radionavigation services on a co-primary basis whereas the 9800 – 9900 MHz band is currently unplanned, i.e. it is not allocated to any service and cannot be assigned for use by any user before an allocation is made. More information on frequency allocations is given in the Hong Kong Table of Frequency Allocations<sup>5</sup>.

4. The Office of the Communications Authority (“OFCA”) has recently received a request for using the 7.2 GHz and 9.6 GHz bands for provision of EESS involving the establishment of the associated earth station in Hong Kong with uplinks in the 7.2 GHz band for controlling a constellation of low earth orbit EESS satellites operating in the 9.6 GHz band. As the 7.2 GHz and 9.6 GHz bands are not allocated to EESS (Earth-to-space) and EESS (active) respectively, before such use might be allowed, the allocation of these bands in Hong Kong needs to be amended as detailed in **Annex**.

### **Proposed Frequency Allocation**

5. As mentioned in paragraph 2 above, the proposed allocations of the 7.2 GHz and 9.6 GHz bands to EESS (Earth-to-space) and EESS (active) respectively with details in **Annex** are in compliance with the ITU frequency allocation.

6. OFCA will ensure electromagnetic compatibility of the stations of legitimate services and the proposed earth station of EESS satellites in Hong Kong when handling the relevant applications for licence and frequency assignment. Having duly considered the electromagnetic compatibility among EESS and the relevant services, and their compliance with the ITU frequency allocations, it is recommended that the 7.2 GHz and 9.6 GHz bands be allocated to EESS (Earth-to-space) and EESS (active) respectively on top of the existing

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<sup>4</sup> See [https://www.coms-auth.hk/filemanager/common/licensing/SRD\\_Class\\_Licence\\_\(Eng\).pdf](https://www.coms-auth.hk/filemanager/common/licensing/SRD_Class_Licence_(Eng).pdf)

<sup>5</sup> The Hong Kong Table of Frequency Allocations can be downloaded from the following hyperlink: [https://www.ofca.gov.hk/filemanager/ofca/common/Industry/broadcasting/hk\\_freq\\_table\\_en.pdf](https://www.ofca.gov.hk/filemanager/ofca/common/Industry/broadcasting/hk_freq_table_en.pdf)

allocations, as summarised in **Annex**.

### **Advice Sought**

7. Members are invited to offer comments on the proposed allocations as detailed in **Annex**. OFCA will take into account Members' comments and make a recommendation to the Communications Authority for the aforesaid frequency allocations to take effect.

Office of the Communications Authority  
June 2022

**Region 3 and Hong Kong Allocations of  
the 7235 – 7250 MHz and 9300 - 9900 MHz Bands**

REGION 3 ALLOCATION	HONG KONG ALLOCATION	
	EXISTING	PROPOSED
<b>7235-7250 MHz</b> EARTH EXPLORATION-SATELLITE (Earth-to-space) FIXED MOBILE	<b>7235-7250 MHz</b> FIXED MOBILE	<b>7235-7250 MHz</b> <u>EARTH EXPLORATION-SATELLITE</u> (Earth-to-space) FIXED MOBILE
<b>9300-9800 MHz</b> EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION SPACE RESEARCH (active)	<b>9300-9800 MHz</b> RADIOLOCATION RADIONAVIGATION	<b>9300-9800 MHz</b> <u>EARTH EXPLORATION-SATELLITE</u> (active) RADIOLOCATION RADIONAVIGATION
<b>9800-9900 MHz</b> RADIOLOCATION Earth exploration-satellite (active) Space research (active) Fixed	<b>9800-9900 MHz</b> TO BE PLANNED	<b>9800-9900 MHz</b> <u>Earth exploration-satellite (active)</u>
<b>Note:</b> Services in “capitals” : primary services Services in “normal characters” : secondary services		