

**RADIO SPECTRUM AND TECHNICAL STANDARDS ADVISORY COMMITTEE**

**Review of Channel Arrangement in the 38 GHz Band**

**Purpose**

This paper reviews the channel arrangement in the 37 – 39.5 GHz band (the “38 GHz band”).

**Background**

2. The 38 GHz band is a globally harmonised band for fixed links and is divided into the lower half band (37.058 – 38.178 GHz) and the upper half band (38.318 – 39.438 GHz) with a 140 MHz guard band. Fixed links operating in this band have an effective transmission path length of a few kilometres only.

3. The International Telecommunication Union Radiocommunication Sector (“ITU-R”) issued ITU-R Recommendation F.749-1 in 1994 that specified the channel arrangement in the 38 GHz band. The channel widths in this band could be arranged in steps of 3.5 MHz, 7 MHz, 14 MHz, 28 MHz, 56 MHz and 140 MHz. Hong Kong adopted the same channel arrangement in end 1995.<sup>1</sup>

4. Since the ITU-R has updated the concerned ITU-R Recommendation to a new version F.749-3 in early 2012, the proposed channel arrangement for the 38 GHz band is reviewed in this paper.

**Proposed Channel Arrangements**

5. ITU-R Recommendation F.749-3 maintains the use of 3.5 MHz

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<sup>1</sup> Relevant consultation has been arranged through the Radio Spectrum Advisory Committee (“RSAC”), the predecessor of SSAC regarding radio spectrum matters, with RSAC Paper 14/1995 that may be downloaded at [http://tel\\_archives.ofca.gov.hk/en/ad-comm/rsac/paper/rs95p14.html](http://tel_archives.ofca.gov.hk/en/ad-comm/rsac/paper/rs95p14.html).

interval as the building block of channels. The channel arrangement followed the previous one, except that the 140 MHz channel width was replaced by 112 MHz, as the latter has been more widely implemented. The standardised channel widths are accordingly arranged in steps of 3.5 MHz, 7 MHz, 14 MHz, 28 MHz, 56 MHz and 112 MHz. The number of channels available with respect to different channelling plans is listed below:

Channel width (MHz)	<b>3.5</b>	<b>7</b>	<b>14</b>	<b>28</b>	<b>56</b>	<b>112</b>
Number of paired channels	320	160	80	40	20	10

6. To be in line with the latest ITU Recommendation, it is proposed that the channelling plan outlined in ITU-R Recommendation F.749-3 be adopted in Hong Kong. The proposed channel arrangement details are given at [Annex 1](#).

### **Advice Sought**

7. Members are invited to offer their views and comments on the proposed channel arrangement of the 38 GHz band as set out in paragraph 6 above.

**Office of the Communications Authority**  
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