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September 2, 2016

VIA E-MAIL TO [SPENO@OFCA.GOV.HK](mailto:SPENO@OFCA.GOV.HK)

Office of the Communications Authority  
29/F Wu Chung House  
213 Queen's Road East  
Wanchai, Hong Kong

Attention: Senior Telecommunications Engineer  
(Spectrum Planning) 1

Re: *Creation of a Class Licence for Regulating the Use of and Trade in 60 GHz Devices under Section 7B(2) of the Telecommunications Ordinance (Chapter 106), Consultation Paper, 5 August 2016*

Dear Sir or Madam:

Wi-Fi Alliance®<sup>1/</sup> is a global, non-profit industry association of over 700 leading companies from dozens of countries devoted to seamless interoperability. With technology development, market building, and regulatory programs, Wi-Fi Alliance has enabled widespread adoption of Wi-Fi® worldwide, certifying thousands of Wi-Fi products each year. The Consultation Paper issued by the Communications Authority ("CA") proposes to create a class licence pursuant to section 7B(2) of the Telecommunications Ordinance (Chapter 106) ("TO"). With the modifications suggested below, Wi-Fi Alliance strongly supports the proposed rules.

## **I. MAKING 60 GHz SPECTRUM AVAILABLE**

As the CA notes,<sup>2/</sup> in 2013 the Wireless Gigabit ("WiGig®") Alliance, which developed and promoted communications technologies, principally for the 57-64 GHz band, united with

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<sup>1/</sup> Wi-Fi®, the Wi-Fi logo, the Wi-Fi CERTIFIED logo, Wi-Fi Protected Access® (WPA), WiGig®, the Wi-Fi ZONE logo, the Wi-Fi Protected Setup logo, Wi-Fi Direct®, Wi-Fi Alliance®, WMM®, and Miracast® are registered trademarks of Wi-Fi Alliance. Wi-Fi CERTIFIED™, Wi-Fi Protected Setup™, Wi-Fi Multimedia™, WPA2™, Wi-Fi CERTIFIED Passpoint™, Passpoint™, Wi-Fi CERTIFIED Miracast™, Wi-Fi ZONE™, WiGig CERTIFIED™, Wi-Fi Aware™, Wi-Fi HaLow™, the Wi-Fi Alliance logo and the WiGig CERTIFIED logo are trademarks of Wi-Fi Alliance.

<sup>2/</sup> *Creation of a Class Licence for Regulating the Use of and Trade in 60 GHz Devices Under Section 7B(2) of the Telecommunications Ordinance (Chapter 106), Consultation Paper, Hong Kong Communications Authority, at 3 (Aug. 5, 2016), available at [http://www.coms-auth.hk/filemanager/en/content\\_711/cp20160805\\_e.pdf](http://www.coms-auth.hk/filemanager/en/content_711/cp20160805_e.pdf) ("Consultation").*

Wi-Fi Alliance, thereby consolidating 60 GHz technology and certification development in Wi-Fi Alliance. As the next frontier in unlicensed technologies, WiGig makes use of spectrum in, among others, the 60 GHz bands to support very high data rates of up to 7 gigabits per second.<sup>3/</sup> Enabling much higher speeds than even the latest Wi-Fi technologies and with very low latency, WiGig applications extend from the familiar (*i.e.*, networking) to instant wireless synchronization and docking between personal devices, ultra-high-definition video streaming, and cordless computing.<sup>4/</sup> Indeed, “WiGig-enabled devices will be able to instantly wirelessly connect PC devices and peripherals . . . ushering in the age of a truly wireless office.”<sup>5/</sup> In addition to these indoor applications, WiGig may facilitate outdoor point-to-point and point-to-multipoint systems for backhaul links and other uses well-suited to the millimeter wave bands.<sup>6/</sup> International standards organizations are actively developing use cases for the next generation of WiGig, such as the mobile use of high-end augmented or virtual reality headsets and other wearables, backup inter-rack connectivity for data centers, and mass video or data distribution to devices in classrooms, exhibition halls, or airplane or train cabins.<sup>7/</sup> Wi-Fi Alliance therefore generally endorses the CA’s proposal to make the 60 GHz band available in Hong Kong to meet these developing needs and technologies.

It also supports making the spectrum available pursuant to a class licence. Based on many of the anticipated use cases of 60 GHz products, Wi-Fi Alliance agrees with the CA that “[a] requirement to license individually the sheer number of 60 GHz Devices for use in Hong Kong will take time and create administrative burden on both the applicants and the CA as the licensing authority.”<sup>8/</sup> Moreover, as the CA notes, many other countries permit use of the 60 GHz band without a licence, or under a light-licensing regime.<sup>9/</sup>

Further, Wi-Fi Alliance agrees with the CA that the class licence should also cover various trading activities, including related sale and demonstration activities, which would otherwise be subject to individual licensing requirements under the radio dealers licensing regime.<sup>10/</sup> The CA is correct that a large share of the market for 60 GHz Devices will likely be for consumer and home use, with products widely available in numerous retail outlets.

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<sup>3/</sup> See Wi-Fi Alliance, *WiGig ® and the Future of Seamless Connectivity*, at 2-4 (2013), available at <http://www.wi-fi.org/file/wigig-and-the-future-of-seamless-connectivity-2013>.

<sup>4/</sup> See *id.* at 8; *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services, et al.*, Notice of Proposed Rulemaking, 30 FCC Rcd. 11878, ¶ 58 (2015) (“NPRM”). See also Wi-Fi Alliance, *Discover Wi-Fi, WiGig CERTIFIED*, <http://www.wi-fi.org/discover-wi-fi/wigig-certified> (last visited Sept. 1, 2016).

<sup>5/</sup> Lindsey Kratochwill and Matt Safford, *WiGig: The Fastest Wireless*, POPULAR SCIENCE (2014), <http://bestofwhatsnew.popsi.com/wigig>.

<sup>6/</sup> NPRM ¶¶ 22, 310.

<sup>7/</sup> See IEEE 802.11 TGay Use Cases (IEEE 802.11-2015/0625r3), at 7-12 (Sept. 2015), available at <https://mentor.ieee.org/802.11/dcn/15/11-15-0625-03-00ay-ieee-802-11-tgay-usage-scenarios.pptx>.

<sup>8/</sup> Consultation at 4.

<sup>9/</sup> *Id.*

<sup>10/</sup> *Id.*

Just as it would be cumbersome to require a licence for *use* of 60 GHz Devices, it would also be burdensome to require a licence for *trading activities*.

## II. POWER LIMITS

The draft Schedule to the proposed Class Licence would limit the maximum power of 60 GHz Devices to 40 dBm Equivalent Isotropically Radiated Power (“EIRP”). Wi-Fi Alliance proposes that the CA consider increasing the power limit to 82 dBm for certain outdoor applications. The higher proposed power would facilitate longer-distance communications in the 60 GHz band, making certain 60 GHz devices appropriate for backhaul applications. As noted above, many 60 GHz Devices will operate like today’s Wi-Fi in homes and offices. However, with the appropriate power, 60 GHz can also be used to transmit significant amounts of data traffic across campuses and in similar applications, avoiding the need for potentially-disruptive fiber installation. These uses can be accomplished with point-to-point devices operating with up to 82 dBm power.

This approach would be similar to limits imposed in the United States, which recently expanded access from the 57-64 GHz band to the entire 57-71 GHz band under harmonized rules.<sup>11/</sup> The U.S. Federal Communications Commission adopted rules that provide as follows (in addition to rules that generally provide that the average power shall not exceed 40 dBm and the power shall not exceed 43 dBm):

For fixed point-to-point transmitters located outdoors, the average power of any emission shall not exceed 82 dBm, and shall be reduced by 2 dB for every dB that the antenna gain is less than 51 dBi. The peak power of any emission shall not exceed 85 dBm, and shall be reduced by 2 dB for every dB that the antenna gain is less than 51 dBi.<sup>12/</sup>

In order to facilitate the use of 60 GHz Devices for backhaul, the CA should adopt similar rules.

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<sup>11/</sup> Wi-Fi Alliance proposes that the CA take a similar approach and consider expanding access to the entire 57-71 GHz band now or in the future.

<sup>12/</sup> *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services, et al.*, Report and Order and Further Notice of Proposed Rulemaking, GN Docket No. 14-177, *et al.*, FCC 16-89, at 187 (rel. July 14, 2016) (updating Section 15.255(b)(1)(ii) of the Federal Communications Commission’s rules).

### III. CERTIFICATION

As the CA notes, suppliers or manufacturers of radiocommunications apparatus may apply for certification of their apparatus against the Hong Kong Telecommunications Equipment Evaluation and Certification (“HKTEC”) Scheme.<sup>13/</sup> Under the HKTEC Scheme, “radio equipment is classified under the ‘Voluntary Certification Scheme’ (VCS) or the ‘Compulsory Certification Scheme’ (CCS). . . . In general, voluntary type-approval applies to radio equipment which is exempted from licensing under the Telecommunications Ordinance.”<sup>14/</sup> Voluntary type-approval should apply to 60 GHz Devices, just as it applies to 2.4 GHz and 5 GHz band Wi-Fi devices.<sup>15/</sup> As discussed above, Wi-Fi Alliance envisions 60 GHz Devices to both further extend the wireless networking capabilities of today and enable entirely new applications for the mass market. By making certification of 60 GHz Devices voluntary under the HKTEC Scheme, the CA will lay the foundation for a new market to flourish as the Wi-Fi device market has.

\* \* \*

Wi-Fi Alliance supports the CA’s efforts to facilitate use of 60 GHz Devices in Hong Kong. Accordingly, to maximize the potential of the 60 GHz band spectrum and the market for 60 GHz Devices, the CA should make the spectrum available pursuant to a class licence, permitting a power limit of 82 dBm for certain outdoor applications, and permit voluntary certification of those devices under the HKTEC Scheme. The CA should also consider extending rules governing the 60 GHz band through 71 GHz (so the band would cover the entire 57-71 GHz spectrum), consistent with actions recently taken by the U.S. FCC.

Respectfully submitted,



**WI-FI ALLIANCE**

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<sup>13/</sup> See [Draft] *Performance Specification for Radiocommunications Apparatus Operating in the 60 GHz Band (HKCA 1074, Issue 1)*, Hong Kong Communications Authority, at i, attached as Appendix 2 to Consultation.

<sup>14/</sup> *How to Apply for Type-Approval or Type-Acceptance of Radio Equipment (OFCA I 401(16), Issue 21)*, Hong Kong Communications Authority, at 1-2 (July 2016), available at <http://www.ofca.gov.hk/filemanager/ofca/common/Industry/telecom/standard/i401e.pdf>.

<sup>15/</sup> See *Technical Performance for Radiocommunications Apparatus Covered by the Telecommunications (Telecommunications Apparatus) (Exemption from Licensing) Order in Hong Kong (OFCA I 402(16), Issue 8)*, Hong Kong Communications Authority, at Schedule (May 2016), available at <http://www.ofca.gov.hk/filemanager/ofca/common/Industry/telecom/standard/i402e.pdf>.