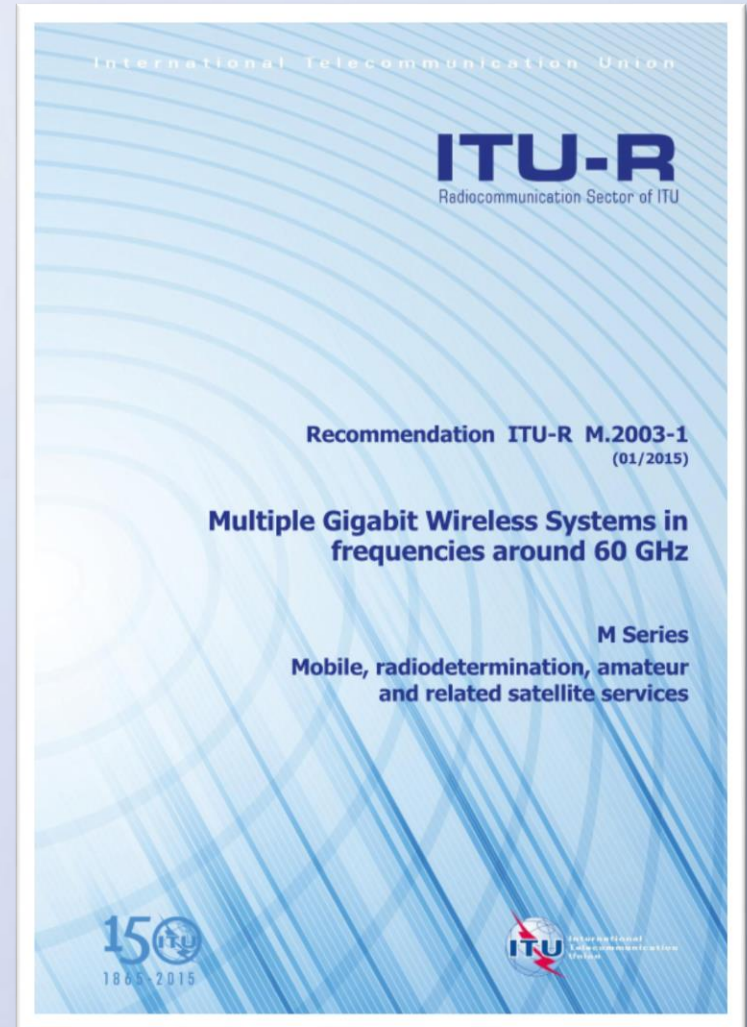


Use of the 60 GHz Band for Deployment of Multiple Gigabit Wireless Systems

Telecommunications Regulatory Affairs Advisory Committee
13 April 2017

60 GHz Devices - Industry and Market Development (1)

- In 2015, ITU published its Recommendation ITU-R M.2003-1 entitled “*Multiple Gigabit Wireless Systems in Frequencies around 60 GHz*” setting out the following standards to facilitate development of 60 GHz Devices:
 - IEEE 802.11ad (for WiGig)
 - IEEE 802.15.3c (for WirelessHD)
 - ISO/IEC 13156 (for ECMA-387)



60 GHz Devices - Industry and Market Development (2)

	WiGig	WirelessHD	ECMA-387
Developed by	Former Wireless Gigabit Alliance (now subsumed by the Wi-Fi Alliance)	WirelessHD Consortium	ECMA International
Usage	Extending Wi-Fi capacity to support multiple gigabit data rate applications	Support transmission of high-definition video signal	Short range, high data rate transfer and multimedia streaming applications
Already available in the market	Notebook computer, wireless router, computer peripherals	TV set, video player, video projector	Little presence of commercial products

Class Licence for 60 GHz Device



The Communications Authority (CA) conducted a public consultation on “Creation of a Class Licence for Regulating the Use of and Trade in 60 GHz* Devices under Section 7B(2) of the Telecommunications Ordinance”

- The CA decided to create the proposed class licence to facilitate the use and trade of 60 GHz Devices in Hong Kong
- Class licence was gazetted
- Technical specification (HKCA 1074) was published

Highlights of the Class Licence (1)

- Subject to the terms and conditions of the Class Licence, a person is licensed to establish, maintain, possess, use, deal in the course of trade or business in and demonstrate, with a view to sale in the course of trade or business, the 60 GHz Device (Condition 2.1)
- Licensees shall take reasonable measures to prevent harmful interference with any lawful telecommunications service or apparatus (Condition 5.1)
- Licensees should be aware that the frequencies allocated to the 60 GHz Device are shared with other applications in an uncoordinated manner and not protected from harmful interference caused by other telecommunications installations / radio equipment (Condition 5.4)

Highlights of the Class Licence (2)

- Technical criteria for 60 GHz Device

Frequency band	57 – 66 GHz
Maximum power	40 dBm Equivalent Isotropically Radiated Power (EIRP)
Technical specification	HKCA 1074

60 GHz Band

Technical Requirements set out in HKCA 1074

- Equipment shall meet the **technical requirements** and **power levels** in accordance with one of the following standards –

Technical standard	ETSI EN 302 567	ETSI EN 305 550-2	Title 47, Code of Federal Regulations, Part 15.255
Maximum power level (in EIRP)	40 dBm	20 dBm	40 dBm

Use of the 60 GHz Band for Deployment of Multiple Gigabit Wireless Systems (MGWS)

- 60 GHz devices (such as notebook computers, wireless routers and computer peripherals) are available in the market
- More such devices which support MGWS in the 60 GHz band are expected to come



Provision of Public Telecommunications Service using MGWS

- Under the Class Licence for 60 GHz Device, licensees shall **not** use the 60 GHz Device to provide a public telecommunications service, except under and in accordance with an appropriate licence granted by the CA (Condition 4.3)
- Licensing regime for public telecommunications service using MGWS will need to be further developed taking into account
 - Nature of the proposed public telecommunications service
 - Fixed or mobile services
 - Coverage of the concerned service

Reference to Existing Licences for the Provision of Public Wireless LAN Services

- At present, 2.4 GHz and 5 GHz licence exempt bands have been authorized for provision of public wireless local area network (LAN) services (e.g. public Wi-Fi services) under
 - **Class Licence** (mainly for indoor coverage with installations and radio path not to cross public street or unleased Government land)
 - **Unified Carrier Licence** (territory wide coverage)
- If a public wireless telecommunications service using the 60 GHz band is like a high speed version of the existing public wireless LAN services, a similar licensing regime may be developed to facilitate its deployment

Way Forward

- OFCA and the industry should continue monitoring the latest development of 60 GHz MGWS
- Service providers intending to use the 60 GHz band to support multiple gigabit applications may provide more information to OFCA including the nature and scope of the proposed services
- Subject to the feedback from the industry, OFCA is minded to examine whether and how the current regulatory regime should be updated to facilitate the deployment of such systems for provision of public telecommunications services in Hong Kong

Thank you