

RADIO SPECTRUM AND TECHNICAL STANDARDS
ADVISORY COMMITTEE

Minutes of the twelfth Meeting
held at 2:30 p.m., Thursday, 2 June 2016
in Conference Room 2020, Wu Chung House, Wanchai

Present

Mr C K Cheng	Chairman (OFCA staff)
Mr Desmond Chan	Representative of Wharf T&T Limited
Mr Henry Chan	Representative of Hutchison Telephone Company Limited / Hutchison Global Communications Limited
Mr Raymond Chan	Representative of Hong Kong Cable Television Limited
Mr Alex Cheng	Representative of China Mobile Hong Kong Company Limited / China Mobile Hong Kong Corporation Limited
Ms C K Chu	Representative of Radio Television Hong Kong
Mr Carlson Chu	Representative of PCCW Media Limited
Mr Joseph Ho	Representative of Civil Aviation Department
Mr H C Hung	Representative of licensees not providing domestic retail fixed services as a group / licensees providing external fixed services as a group
Mr Kan Kan	Representative of the Hong Kong Police Force
Mr Cyrus Lai	Representative of SmarTone Communications Limited / SmarTone Mobile Communications Limited
Mr Richard Leung	Representative of Hong Kong Broadband Network Limited / New World Telecommunications Limited
Ir Dr C K Li	Representative of the Hong Kong Institution of Engineers
Mr Keith Li	Representative of the local industry associations as a group
Mr George Mak	Representative of Consumer Council
Ms P Y Ngai	Ad Personam
Mr S M Shuen	Representative of Hong Kong Telecommunications (HKT) Limited / PCCW-HKT Telephone Limited and Hong Kong Telecommunications (HKT) Limited / Genius Brand Limited
Mr Johnny Siu	Representative of amateur radio societies as a group
Ir Dr K F Tsang	Representative of the Institution of Engineering and Technology Hong Kong
Mr W L Tse	Representative of Independent Commission Against Corruption
Mr Raymond Wong	Representative of local certification bodies as a group
Ms Vicky Wong	Representative of Asia Satellite Telecommunications Company Limited
Mr L H Ting	Secretary (OFCA staff)

Absent with Apologies

Mr Tim Chan	Representative of Digital Broadcasting Corporation Hong Kong Limited
Mr Y C Chan	Representative of Television Broadcasts Limited / TVB Network Vision Limited
Mr S M Ko	Representative of Metro Broadcast Corporation Limited
Mr Paul Lam	Representative of Hong Kong Commercial Broadcasting Company Limited
Mr Michael Lee	Representative of EU ICT Council Hong Kong and Macau
Mr Barry Ng	Representative of services-based operators (MVNO and ETS operators only) as a group
Mr Karson Ng	Representative of licensees not providing domestic retail fixed services as a group
Mr Ken Yiu	Representative of Hong Kong Mobile Television Networks Limited

In Attendance

Mr P H Ma	OFCA staff
Mr Warren Kwok	OFCA staff
Mr K K Wong	OFCA staff
Mr C H Chan	OFCA staff
Mr S Y Yung	OFCA staff
Mr Kent Yu	OFCA staff

Observer

Mr Brian Chan	Representative of 21 Vianet Group Limited
Mr Larry Chan	Representative of Hong Kong Productivity Council
Mr W L Ho	Representative of amateur radio societies as a group
Mr K H Yip	Representative of Traxcomm Limited
Mr Ricky Yiu	Representative of APT Satellite Company Limited

Agenda Item 1: Matters Arising from the Previous Meeting**Item 3 of the 11th SSAC Meeting (Proposed Revisions to HKCA Specifications related to the Withdrawal of Licensing Exemptions for Personal Handy Phone System (PHS) Radiocommunications Apparatus)**

1. The Secretary reported that OFCA received no comment on the proposed cancellation of HKCA 1027 and revision of HKCA 1035 after the last meeting. Following the withdrawal of licensing exemption for PHS apparatus

on 10 May 2016, HKCA 1027 had been cancelled and the revised HKCA 1035 had been adopted. The relevant information as published in OFCA's website had been updated accordingly.

Item 4 of the 11th SSAC meeting (Proposed Spectrum Release Plan for 2016-18)

2. The Secretary reported that OFCA received no further comment on the proposed Spectrum Release Plan for 2016-18 after the last meeting. Subsequently, the Communications Authority ("CA") approved the Spectrum Release Plan for 2016-18 and it had been posted on the websites of CA and OFCA in March 2016.

Agenda Item 2: Proposed Performance Specification for Radiocommunications Apparatus Operating in the 60 GHz Band (SSAC Paper 5/2016)

3. Mr S Y Yung introduced [SSAC Paper 5/2016](#) that proposed adoption of a new specification HKCA 1074 for radiocommunications equipment operating in the 57 – 66 GHz band ("the 60 GHz band"). He said that the 60 GHz band could accommodate four radio channels, each with a maximum bandwidth of 2160 MHz. Leveraging on the large bandwidth, the 60 GHz band could support wireless applications at multi-gigabit data rate within a short distance of typically 10 metres. Based on the recent market development, wireless products with gigabit communications capability using the 60 GHz band were gradually launched on the market. The adoption of the proposed HKCA 1074 specification would facilitate the introduction of new wireless products in the local market to better serve consumers. In line with the arrangement for other short-range devices operating at the 433 MHz band, it was proposed that wireless products complying with the proposed specification HKCA 1074 would be classified under the Voluntary Certification Scheme.

4. The Chairman said that compared with Wi-Fi equipment currently operating in the 2.4 GHz or 5 GHz bands, which provides a maximum data rate of about 1 Gbit/s, WiGig equipment operating in the 60 GHz band could boost the data rate up to 7 Gbit/s which would facilitate the development of more advanced and/or innovative applications. He invited Members to provide comments on the proposed new specification HKCA 1074 within two weeks by 16 June 2016.

Agenda Item 3: Proposed Performance Specification for Short-Range Radar Equipment Operating in the 79 GHz Band (SSAC Paper 6/2016)

5. Mr Warren Kwok introduced [SSAC Paper 6/2016](#) that proposed adoption of a new specification HKCA 1075 for short-range radars operating in the 77 – 81 GHz band (“the 79 GHz band”). He said that following the decision of the World Radiocommunication Conference (“WRC”) of the International Telecommunication Union (“ITU”) held in 2015 that allocated, among other things, the band 77.5 – 78 GHz to radiolocation service, the whole band 77 – 81 GHz would be available for use by short-range radars for ground-based applications after 1 January 2017. In particular, this band would be used for the operation of high resolution automotive radars on a global basis. The adoption of the proposed HKCA 1075 specification would facilitate the deployment of high resolution automotive radars in Hong Kong. In line with the arrangement for other automotive radars operating in the 76 – 77 GHz band, it was proposed that short-range radars operating in the 79 GHz band would be classified under the Voluntary Certification Scheme.

6. Mr Henry Chan asked if the proposed specification HKCA 1075 would adopt also the relevant technical standards of the United States and Japan. Mr Warren Kwok replied that both of the said administrations had not yet developed relevant standards for automotive radars operating in the 79 GHz band. The Chairman said that OFCA would keep in view the development in other major economies in this regard and consult Members in due course on any proposed updating of HKCA 1075 as applicable to Hong Kong.

7. The Chairman invited Members to provide comments on the proposed new specification HKCA 1075 within two weeks by 16 June 2016.

Agenda Item 4: Proposed Performance Specification for Digital Multipoint Radio Equipment Operating in the 2.3 GHz Band (SSAC Paper 7/2016)

8. Mr Warren Kwok introduced [SSAC Paper 7/2016](#) that proposed adoption of a new specification HKCA 1076 for digital multipoint radio equipment operating in the 2.3 GHz band. He said that a licensed network operator, 21 Vianet, would provide wireless fixed services targeting village houses in the rural and remote areas. The proposed specification HKCA 1076 was necessary for the required equipment certification by 21 Vianet. In line with the arrangement for other radio base stations of public radiocommunications networks operating in various frequency bands, it was proposed that digital multipoint radio equipment would be classified under the Compulsory Certification Scheme.

9. Mr Brian Chan said that 21 Vianet welcomed the proposed new specification HKCA 1076 and they would ensure compliance with the said specification in respect of radio equipment employed in their fixed wireless network.

10. Mr S M Shuen raised a concern about potential interference between the existing TD-LTE mobile networks and 21 Vianet's fixed wireless network. The Secretary said that there should not be any co-channel interference because the operators concerned were using different frequency blocks in the 2.3 GHz band. As regards adjacent channel interference, the relevant operator should coordinate its base station installations with other operators concerned to avoid potential mutual interference. Mr Carlson Chu cited a field test conducted in Malaysia in which adjacent channel interference was found between an LTE network and a fixed wireless network, both operating in frequency division duplex mode in the 3.5 GHz band. Mr Henry Chan said that network synchronisation requirement, which was essential to adjacent channel operation of different TD-LTE systems, was not available for adjacent channel operation of TD-LTE networks and fixed wireless networks. The Chairman invited Mr Carlson Chu to provide a copy of the field test report for Members' reference.

[Post-meeting note: Mr Carlson Chu offered the following two documents relating to "mitigation of Adjacent Channel Interference between TDD systems" for Members' reference –

- (a) "Assessment of Capacity Impacts with Various TD-LTE Block Configurations"
(http://stakeholders.ofcom.org.uk/binaries/consultations/pssr-2014/annexes/Capacity_Impacts.pdf)
- (b) "Toward Coexistence and Sharing between IMT-Advanced and Existing Fixed Systems"
(<http://www.cscjournals.org/manuscript/Journals/IJCSS/Volume2/Issue3/IJCSS-42.pdf>)]

11. Mr P H Ma pointed out that adoption of HKCA specifications and technical coordination of radio base stations were separate issues. He opined that any potential interference should be resolved through coordination among operators concerned. Mr Brian Chan shared Mr P H Ma's view and said that 21 Vianet would scan all frequencies on-site prior to adopting that site for radio station in order to avoid causing interference to any existing TD-LTE network. Mr Brian Chan emphasised that 21 Vianet would work to coordinate with the operators concerned to resolve any interference issues.

12. The Chairman said that the proposed HKCA specification was necessary for equipment certification purpose. He invited Members to provide comments on the proposed new specification HKCA 1076 within two weeks by 16 June 2016.

Agenda Item 5: Update on Development of International Mobile Telecommunications (“IMT”) for 2020 and Beyond (SSAC Paper 8/2016)

13. Mr C H Chan introduced [SSAC Paper 8/2016](#) that covered the latest development of International Mobile Telecommunications for 2020 and beyond (“IMT-2020”) in ITU and the related works by various promotion groups including the Third Generation Partnership Project (“3GPP”).

14. Mr C H Chan said that ITU outlined its vision on IMT-2020 in Recommendation ITU-R M.2083 which covered spectrum needs, application and technology trends, etc. In addition, Agenda Item 1.13 of the coming WRC to be held in 2019 would consider the identification of frequency bands on a primary basis in portions of the frequency range between 24.25 GHz and 86 GHz for future development of IMT-2020.

15. Mr C H Chan said that 3GPP produced study reports on the draft scope and technical requirements under specifications of 3GPP Series 38, and released a tentative timeline for its 5G standardisation work. Mr C H Chan further briefed Members on the recent development of various national and regional promotion groups on IMT-2020 including “5G PPP” led by the European Commission, “5G Americas” led by the United States, “IMT-2020 Promotion Group” led by Mainland China, “5G Forum” led by South Korea and “5G Mobile Communications Promotion Forum” led by Japan.

16. Ir Dr K F Tsang said that 5G would support massive deployment of Internet of Things (“IoT”) and that there were currently several technologies on narrowband IoT such as SigFox, LoRa and TV whitespace. He asked about the spectrum availability for narrowband IoT in Hong Kong. Mr C H Chan said that technologies such as LoRa and IEEE 802.11ah primarily made use of unlicensed bands below 1 GHz, including the 868 MHz band (in Europe), the 920 MHz band (in United States) and the 433 MHz band (in Europe). In Hong Kong, there was a class licence covering the use of short-range devices operating in the 433 MHz band. The Chairman said that Hong Kong would review in 2017-18 the target for switching off the analogue TV services by 2020. Nonetheless, under the present circumstances, the availability and usability of TV whitespace in Hong Kong would be adversely constrained by the overspill signals of TV broadcast from the neighbouring Guangdong province.

17. Ir Dr K F Tsang and Mr Carlson Chu asked about the regulatory requirements on the deployment of narrowband IoT. The Chairman explained that the class licence covering 433 MHz short-range devices allowed private use of such devices by the public but did not cover the provision of public telecommunications services. The Secretary said that the 2.4 GHz and 5 GHz bands being used for Wi-Fi and the 868 MHz and 920 MHz bands as mentioned above were licence-exempted bands covered in the Telecommunications (Telecommunications Apparatus) (Exemption from Licensing) Order (Cap 106Z), which also did not cover the provision of public telecommunications services. In this regard, a proper licence or new conditions to be incorporated in existing licences would be required for the provision of public radiocommunications services using the licence-exempted bands, if applicable.

Agenda Item 6: Any Other Business

18. There being no other business, the meeting was adjourned at 4:05 p.m.

**Office of the Communications Authority
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