

RADIO SPECTRUM AND TECHNICAL STANDARDS
ADVISORY COMMITTEE

Minutes of the Tenth Meeting
held at 2:30 p.m., Wednesday, 15 October 2015
in Conference Room 2020, Wu Chung House, Wanchai

Present

Mr P H Ma	Chairman (OFCA staff)
Mr Desmond Chan	Representative of Wharf T&T Limited
Ms Diana Chan	Representative of the Hong Kong Police Force
Mr Henry Chan	Representative of Hutchison Telephone Company Limited / Hutchison Global Communications Limited
Mr Raymond Chan	Representative of Hong Kong Cable Television Limited
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 Y H Chan	Representative of Asia Satellite Telecommunications Company Limited
Mr Alex Cheng	Representative of China Mobile Hong Kong Company Limited / China Mobile Hong Kong Corporation Limited
Dr Lawrence Cheung	Representative of Hong Kong Productivity Council
Ms C K Chu	Representative of Radio Television Hong Kong
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 S H Hung	Representative of amateur radio societies as a group
Mr Kan Kan	Representative of the Hong Kong Police Force
Mr S M Ko	Representative of Metro Broadcast Corporation Limited
Mr Cyrus Lai	Representative of SmarTone Communications Limited / SmarTone Mobile Communications 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 W C Lee	Representative of the Institution of Engineering and Technology Hong Kong

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
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
Ms P Y Ngai	Ad Personam
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 Adam Wong	Representative of Hong Kong Telecommunications (HKT) Limited / PCCW-HKT Telephone Limited and Hong Kong Telecommunications (HKT) Limited / Genius Brand Limited
Mr S C Wong	Representative of Asia Television Limited
Dr S M Wong	Representative of Independent Commission Against Corruption
Ms Vicky Wong	Representative of Asia Satellite Telecommunications Company Limited
Mr L H Ting	Secretary (OFCA staff)

Guest Speaker

Dr Eddy Chiu	Representative of the Hong Kong Applied Science and Technology Research Institute
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Absent with Apologies

Mr Xun Chen	Representative of APT Satellite Company Limited
Mr Kelvin Hong	Representative of Hong Kong Broadband Network Limited
Mr Raymond Wong	Representative of local certification bodies as a group
Mr Ken Yiu	Representative of Hong Kong Mobile Television Networks Limited
Mr Terence Yiu	Representative of Phoenix U Radio Limited

In Attendance

Mr Warren Kwok	OFCA staff
Mr Sammy Li	OFCA staff
Mr K K Wong	OFCA staff
Ms Annie Lo	OFCA staff
Mr C H Chan	OFCA staff
Mr W K Leung	OFCA staff
Mr Kent Yu	OFCA staff
Mr S Y Yung	OFCA staff

Observer

Mr Eric Chau	Representative of Traxcomm Limited
Mr W L Ho	Representative of amateur radio societies as a group
Mr Ken Lam	Representative of the Hong Kong Applied Science and Technology Research Institute
Mr C F Liu	Representative of New World Telecommunications Limited
Mr Kenneth Wong	Representative of PCCW Media Limited
Mr K H Yip	Representative of Traxcomm Limited

Agenda Item 1: Matters Arising from the Previous Meeting

Item 3 of the 9th SSAC Meeting (Proposed Revision to HKCA 1039 Performance Specification for Radiocommunications Apparatus Operating in the 2.4 GHz or 5 GHz Band and Employing Frequency Hopping or Digital Modulation)

1. The Secretary reported that OFCA had received no further comment on the proposed revised specification HKCA 1039 after the last meeting. The specification HKCA 1039 had been adopted and posted on OFCA's website.

Agenda Item 2: Result of Technical Trial on 80 GHz Fixed Link

2. Dr Eddy Chiu introduced the result of the technical trial on 80 GHz fixed link conducted by the Hong Kong Applied Science and Technology Research Institute ("ASTRI") from November 2014 to May 2015.

3. Dr Eddy Chiu said that the trial covered one fixed link set up in the Science Park, with a path length of about 180 metres. With a channel bandwidth of 500 MHz and using vertical polarisation, the system could achieve throughputs up to 700 Mbit/s under good weather conditions with manual configuration of the modulation and coding scheme. With adaptive modulation enabled, the achievable throughputs were up to 300 Mbit/s. On a day with heavy rainfall, the throughputs dropped to 75 – 200 Mbit/s. As regards the achievable path length, Dr Chiu said that the reliable operating range was about 600 – 700 m.

4. Dr Eddy Chiu said that, in term of throughput, the transmission operating at the lower frequency band (i.e. the 71 – 76 GHz band) had slightly better performance than that operating at the upper band (i.e. the 81 – 86 GHz band) under rainy condition. He said that, with a beamwidth of about 0.8°, extra efforts were needed to achieve optimum antenna alignment.

5. In response to Dr K F Tsang, Dr Eddy Chiu said that potential applications of 80 GHz fixed links included backhaul links of mobile network, point to point links for video surveillance, etc. Dr K F Tsang asked if circular polarisation had been used to achieve better performance in rainy conditions, and if higher order modulation such as 256QAM had been used during the trial. Dr Chiu said that the equipment used in the trial only supported vertical polarisation and modulation up to 64QAM.

6. In response to Mr Michael Lee, Dr Eddy Chiu said that non-ionizing radiation level measurement might be conducted in future trial. Dr Chiu expected that the off-axis signal level would drop significantly due to the narrow beamwidth of 80 GHz antenna.

7. In response to the enquiry of Dr Simon Wong, Dr Eddy Chiu clarified that the 50 mm rainfall condition during the trial was the average daily rainfall rate published by the Hong Kong Observatory rather than the hourly rainfall rate. Dr Chiu pointed out that this figure did not necessarily reflect the rainfall condition at the location of the trial link. He requested Members to take note of this test condition when making reference to the trial results.

8. Mr Henry Chan, Mr Alex Cheng, Mr Cyrus Lai and Mr Adam Wong shared the view that there was an increasing trend for deployment of small cells by mobile network operators to cope with the growing mobile traffic demand. The availability of additional spectrum for short haul link would facilitate such

deployment. Mr Henry Chan said that when considering the use of 80 GHz backhaul for small cells, considerations should also be given to the fact that the link performance would depend on the environmental factors.

Agenda Item 3: Proposed Revision to HKCA 1065 Performance Specification for Multi-Standard Radio (MSR) Base Station (SSAC Paper 4/2015)

9. Mr S Y Yung introduced [SSAC Paper 4/2015](#) that proposed the adoption of the revised specification HKCA 1065 for Multi-Standard Radio (“MSR”) base station. The revision was made to include the 2300 – 2390 MHz unpaired band (“the 2.3 GHz band”) assigned for TDD radio access in Hong Kong in the HKCA specification. He said that the frequency bands included in the current issue of HKCA 1065 were based on the European standard EN 301 908-18 in force in early 2013, which did not cover the 2.3 GHz band. The recent version of EN 301 908-18 had incorporated the 2.3 GHz band for UTRA TDD and E-UTRA TDD radio access standards.

10. The Chairman said that the 2.3 GHz band had been assigned to mobile network operators for the provision of E-UTRA TDD mobile service. The proposed revision to HKCA 1065 would address the demand of the mobile industry for MSR base stations operating in the 2.3 GHz band. He invited Members to give their views on the proposed revision of HKCA 1065 within two weeks by 29 October 2015.

Agenda Item 4: Hong Kong’s Positions on Agenda Items for World Radiocommunication Conference 2015 (SSAC Paper 5/2015)

11. Ms Annie Lo and Mr W K Leung introduced [SSAC Paper 5/2015](#) that outlined the Hong Kong positions on issues related to the WRC-15 agenda items. Of these agenda items, Members expressed their views as outlined in the following paragraphs.

12. Concerning WRC-15 agenda item 1.3 about PPDR, Mr Michael Lee asked about the possibility of ITU allocating the 746 – 806 MHz band for PPDR applications. He pointed out that the propagation characteristics of this band could benefit the coverage of PPDR applications. The Chairman said that OFCA would keep in view the relevant development at WRC-15.

13. Concerning WRC-15 agenda item 1.5 about the use of FSS spectrum for unmanned aircraft systems, Ms Annie Lo said that relevant ITU-R studies were still outstanding and OFCA supported ITU-R to complete these studies. Mr Y H Chan supplemented that, according to latest information of the concerned ITU-R study groups, it was uncertain whether such studies would be continued.

Agenda Item 5: Proposed Allocation of the 60 GHz Band to the Mobile and the Fixed Services (SSAC Paper 6/2015)

14. Mr C H Chan introduced [SSAC Paper 6/2015](#) that proposed the allocation of the 57 – 66 GHz band to the mobile and the fixed services.

15. The Chairman said that the proposed allocation of the 60 GHz band to the mobile and the fixed services was to facilitate the use of this band for short range applications. Relevant industry standards for Multiple Gigabit Wireless Systems (“MGWS”), WiGig and WirelessHD, were introduced to Members at previous SSAC meetings. In response to the question of Mr Michael Lee about the channel plan, Mr C H Chan said that both WiGig and WirelessHD standards specified an operating band of 57 – 66 GHz, within which there were four channels, each with channel width of more than 2 GHz.

16. Mr Adam Wong said that frequency bands above 6 GHz might be suitable for IMT applications. He opined that consideration should also be given to the possibility of using the 60 GHz band for IMT in future. The Chairman said that identification of spectrum above 6 GHz for mobile service might be discussed in a WRC likely to be held in 2019. He said that OFCA would closely monitor the development on this issue.

17. The Chairman invited Members to give their views on the proposed allocation within two weeks by 29 October 2015.

Agenda Item 6: Update on Testing and Certification of Telecommunications Equipment (SSAC Paper 7/2015)

18. Mr Warren Kwok introduced [SSAC Paper 7/2015](#) that provided an update on the testing and certification of telecommunications equipment under the Hong Kong Telecommunications Equipment Evaluation and Certification

Scheme (“HKTEC”) and the APEC Mutual Recognition Arrangement for Conformity Assessment of Telecommunications Equipment (“APEC TEL MRA”). Under the HKTEC scheme, testing agencies providing equipment testing service for the Hong Kong market should obtain ISO/IEC 17025 accreditation with their testing scope covering HKCA specifications or equivalent specifications. For certification bodies, they should obtain ISO/IEC 17065 accreditation in order to demonstrate their technical competence in providing certification service.

19. As regards testing and certification of equipment of overseas market, Mr Warren Kwok said that testing agencies in Hong Kong could apply through OFCA as Conformance Assessment Bodies to perform testing and certification to technical regulations of APEC economies under the APEC TEL MRA scheme. He said that information about testing and certification arrangement of the HKTEC and APEC TEL MRA schemes was posted at OFCA website. Interested parties could visit the following web page for further information:

http://www.ofca.gov.hk/en/industry_focus/telecommunications/standards/telecom/index.html

Agenda Item 7: Any Other Business

20. There being no other business, the meeting was adjourned at 4:35 p.m.

**Office of the Communications Authority
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