

RADIO SPECTRUM AND TECHNICAL STANDARDS ADVISORY COMMITTEE

Minutes of the First Meeting held at 9:30 a.m., Friday, 29 June 2012 in Function Room 2501, Wu Chung House, Wanchai

Present

Mr T F So	Chairman (OFCA staff)
Mr Desmond Chan	Representative of Wharf T&T Limited
Mr Henry Chan	Representative of Hutchison Telephone Company Limited and Hutchison Global Communications Limited
Mr Kenneth Chan	Representative of services-based operators (MVNO and ETS operators only) as a group
Mr Raymond Chan	Representative of Hong Kong Cable Television Limited
Mr Tim Chan	Representative of Metro Broadcast Corporation Limited
Mr Y C Chan	Representative of Television Broadcasts Limited and TVB Pay Vision Limited
Mr Eric Chau	Representative of TraxComm Limited
Mr Alex Cheng	Representative of China Mobile Hong Kong Company Limited and China Mobile Hong Kong Corporation Limited
Mr Brian Cheng	Representative of Consumer Council
Mr H M Cheung	Representative of the Hong Kong Police Force
Mr Carlson Chu	Representative of PCCW Media Limited
Ms C K Chu	Representative of Radio Television Hong Kong
Mr Simon Heung	Representative of Digital Broadcasting Corporation Hong Kong Limited
Mr John Ho	Representative of the Institution of Engineering and Technology Hong Kong
Mr H C Hung	Representative of Reach Networks Hong Kong Limited
Mr Bruce Kwok	Representative of local industry associations as a group
Mr Cyrus Lai	Representative of SmarTone Communications Limited and SmarTone Mobile Communications Limited
Mr Jimmy Lee	Representative of Telstra International HK Limited and Telstra International Limited
Mr Michael Lee	Representative of EU ICT Council in Hong Kong and Macau
Mr Kenneth Ng	Representative of New World Telecommunications Limited
Ms P Y Ngai	Ad Personam

Mr K S Poon	Representative of Metro Broadcast Corporation Limited
Ir Wallace Poon	Representative of the Hong Kong Institution of Engineers
Mr Ken Sit	Representative of Local Certification Bodies as a group
Mr Johnny Siu	Representative of amateur radio societies as a group
Mr Jing Su	Representative of APT Satellite Company Limited
Dr K F Tsang	Representative of Institution of Engineering and Technology Hong Kong
Mr Fred Vong	Representative of Asia Satellite Telecommunications Company Limited and External FTNS / Fixed Carrier / Unified Carrier (External Fixed Services) Licensees as a group
Mr Chris Wong	Representative of ComNet Telecom (HK) Limited
Mr Christopher Wong	Representative of CSL Limited
Mr S C Wong	Representative of Asia Television Limited
Dr Simon Wong	Representative of Independent Commission against Corruption
Ms Vicky Wong	Representative of Asia Satellite Telecommunications Company Limited and External FTNS / Fixed Carrier / Unified Carrier (External Fixed Services) Licensees as a group
Mr Charles Yeung	Representative of Hong Kong Broadband Network Limited
Mr C K Yuen	Representative of Civil Aviation Department
Mr L H Ting	Secretary (OFCA staff)

Absent with Apologies

Mr Raymond Chiu	Representative of Hong Kong Productivity Council
Mr Clifford Ho	Representative of Towngas Telecommunications Fixed Network Limited
Mr Paul Lam	Representative of Hong Kong Commercial Broadcasting Company Limited
Mr Albert Luk	Representative of HKC Network Limited
Mr Adam Wong	Representative of Hong Kong Telecommunications (HKT) Limited, PCCW-HKT Telephone Limited and Hong Kong Telecommunications (HKT) Limited and Genius Brand Limited
Mr Terence Yiu	Representative of Phoenix U Radio Limited

In Attendance

Mr P H Ma	OFCA staff
Mr W K Luk	OFCA staff
Mr W K Leung	OFCA staff

Mr K L Tang	OFCA staff
Mr C H Chan	OFCA staff
Mr Michael Leung	OFCA staff
Ms Christine Chim	OFCA staff

Observer

Mr Peng Li	Representative of APT Satellite Company Limited
Mr Sheldon Yau	Representative of Hong Kong Telecommunications (HKT) Limited, PCCW-HKT Telephone Limited and Hong Kong Telecommunications (HKT) Limited and Genius Brand Limited

1. The Chairman welcomed Members to the first meeting of the Radio Spectrum and Technical Standards Advisory Committee (“SSAC”). He said that SSAC was a new advisory committee established under OFCA, with its terms of reference and composition largely following those of the Radio Spectrum Advisory Committee (“RSAC”) and the Technical Standards Advisory Committee (“TSAC”) previously set up under OFTA. The Secretary briefed Members on the membership composition of the SSAC. The Chairman noted that SSAC Members would be consulted on relevant subject matters, after which OFCA would consider Members’ view and make recommendation to the Director-General of Communications or the Communications Authority (“CA”) as appropriate. The Chairman invited Ms Christine Chim to brief Members on establishment of the CA, OFCA and the new advisory committees set up under the CA and OFCA.

2. Ms Christine Chim outlined the background of the establishment of CA and OFCA, their functions and composition / organisation structure, as well as the committees established under the CA and OFCA. Noting that the SSAC was one of the three advisory committees established under OFCA, she also briefed Members on the terms of reference for the SSAC.

Agenda Item 1: Review of channel arrangement in the 38 GHz band (SSAC Paper 1/2012)

3. Mr W K Leung introduced [SSAC Paper 1/2012](#) that covered a proposal to revise the band plan of the 38 GHz band. A new ITU-R Recommendation F.749-3 was issued in early 2012. It recommends, among

other things, the change of the maximum channel width of fixed links operating in that frequency band from 140 MHz (as stated in the previous version) to 112 MHz. OFCA considered that there was a need to revise the corresponding channelling plan in Hong Kong accordingly. As other channel widths of 3.5 MHz, 7 MHz, 14 MHz, 28 MHz and 56 MHz were maintained in the new ITU-R Recommendation, there was no change for those channel widths.

4. The Chairman said that OFCA had a role in devising proper band plan for efficient spectrum utilisation. He pointed out that there were currently few spectrum users operating fixed links in the 38 GHz band, but the frequency band would be suitable for short fixed links and should be deployed to meet the market demand. OFCA would draw reference to the latest ITU-R Recommendations in devising the band plan and making revision as required.

5. While no participant offered comment on the proposed revision to the 38 GHz band plan over the meeting, the Chairman invited comment from Members on the proposal within 2 weeks, i.e. any comment should be submitted to the Secretary by 14 July 2012.

Agenda Item 2: Channel arrangement in the 26 GHz band (SSAC Paper 2/2012)

6. Mr K L Tang introduced [SSAC Paper 2/2012](#) that covered a proposal to revise the band plan of the 26 GHz band. The 26 GHz band was previously allocated to local wireless fixed telecommunications network services. As some spectrum in that frequency band was currently unassigned, the vacant spectrum might be deployed for fixed link services to meet the market demand. A channelling plan for fixed links based on ITU-R Recommendation F.748-4 was proposed, with the maximum channel width capped at 28 MHz, in line with the 23 GHz channelling plan for fixed links.

7. The Chairman pointed out that there was already much utilisation of the 23 GHz band for fixed link deployment. The 26 GHz band as released through that exercise might serve an alternative band for fixed links of similar nature to meet the market demand.

8. While no participant offered comment on the proposed revision to the 26 GHz band plan, the Chairman invited comment from Members on the proposal within 2 weeks, i.e. any comment should be submitted to the Secretary by 14 July 2012.

Agenda Item 3: Review of path lengths of fixed links operating above 10 GHz (SSAC Paper 3/2012)

9. Mr W K Leung introduced [SSAC Paper 3/2012](#) that covered a revised path length benchmark for fixed links operating above 10 GHz, which was last reviewed by the RSAC in 2010. The ITU-R Recommendations related to the calculation of rain attenuation on fixed links have been revised lately, and the revision of ITU-R Recommendation P.530 gave rise to higher calculated values of rain attenuation, in particular on fixed links operating in lower frequency ranges. Accordingly the achievable path length was shortened. A revision to the path length benchmark was therefore proposed.

10. The new benchmark covered a new 26 GHz band for fixed links, which was addressed by the SSAC Paper 1/2012 as discussed earlier. In comparison with the previous benchmark, the indicative path lengths of fixed links operating in 18 GHz and 23 GHz bands were reduced, while those for other frequency bands remained unchanged. The new indicative path lengths were as follows,

<i>Frequency band (GHz)</i>	<i>11</i>	<i>13</i>	<i>18</i>	<i>23</i>	<i>26/28</i>	<i>38</i>
<i>Antenna size (m)</i>	1.2	1.2	0.6	0.6	0.6	0.6
<i>Path length (km)</i>	16 (16)	10 (10)	5 (6)	3 (4)	3 (3)	2 (2)

Previous indicative path lengths given in brackets for reference

11. The Chairman said that the new indicative path lengths given would serve as reference in future frequency assignment for fixed links. Dr Simon Wong expressed that the difference of unavailable time for availabilities 99.99% and 99.999% was quite significant and asked whether the indicative path lengths could meet more stringent reliability requirement as demanded by mission critical networks. Mr L H Ting replied that the indicative path lengths were already close to or even shorter than those of horizontal polarisation

operating under an availability of 99.999%, thus allowing for high reliability requirement. He noted that the reliability performance of fixed links would be affected by other factors such as modulation scheme and antenna size. While the indicative path lengths served as benchmark for reference, frequency assignment for fixed links would be considered on a case by case basis.

12. Ir Wallace Poon asked whether local rainfall data, instead of the data offered by the European Centre of medium-range Weather Forecast, could be used for calculating the rain attenuation. Mr W K Leung replied that data supplied by the European Centre was based on a global perspective with worldwide data sources, and 40 years of long-term rainfall data have been adopted to develop the statistical model of rain attenuation, while the current rainfall data of Hong Kong did not meet the requirement of long-term statistics. The indicative path lengths should therefore be based on the rainfall data given by the latest version of ITU-R Recommendation P.837.

13. Dr K F Tsang opined that digital modulation 256 QAM and circular polarisation should be considered in the analysis of indicative path lengths. Mr L H Ting responded that the indicative path lengths, which were based on 128 QAM, were meant to cover commonly deployed fixed links. While the highest modulation state of 256 QAM allowed for the highest data throughput, it would be less robust than 128 QAM in practical situation. For circular polarisation, he noted that there was only limited deployment among fixed links in Hong Kong. Mr Ting said that 256 QAM and circular polarisation might be considered in subsequent analysis, but the achievable path length based on 256 QAM would serve little value in setting a reference benchmark.

14. The Chairman concluded that forthcoming frequency assignment for fixed links should follow the revised indicative path lengths in general, while those with special requirements such as critical Government applications would be considered on individual merit. He invited comment from Members on the proposed revision to the indicative path lengths within 2 weeks, i.e. any comment should be submitted to the Secretary by 14 July 2012.

Agenda Item 4: Update on development of Next Generation Networks (“NGN”) (June 2012 Issue) (SSAC Paper 4/2012)

15. Mr C H Chan introduced [SSAC Paper 4/2012](#) that updated Members on the development of NGN in ITU and ETSI.

16. The Chairman welcomed views from the industry on the need of NGN standards, such as those for NGN interconnection. Discussion would then be initiated in the SSAC with a view to achieving a common standard to facilitate NGN operation and service provision.

Agenda Item 5: Developments in international/regional standards organisations (June 2012 Issue) (SSAC Paper 5/2012)

17. Mr W K Luk introduced [SSAC Paper 5/2012](#) that updated Members on the development of telecommunications standards in ITU, ETSI and IEEE. The latest IEEE development on the subjects of body area networks, TV White Spaces (“TVWS”) and wireless LAN was outlined.

18. The Chairman noted that the subject of TVWS had been reviewed lately in the last RSAC meeting in early 2012. He said that the TV band was being used intensively in Hong Kong, so the use of TVWS should be carefully considered. He welcomed views from the members on that subject.

Agenda Item 6: Proposed revision to HKCA 1052 technical standard for Medical Implant Communication Systems (SSAC Paper 6/2012)

19. Mr Michael Leung introduced [SSAC Paper 6/2012](#) that covered a proposal revision to HKCA 1052 technical standard.

20. Ir Wallace Poon said that the Medical Device Control Office (“MDCO”) under the Department of Health watched over the safety of medical devices. He suggested that the MDCO be consulted on the proposed revised specification HKCA 1052. The Chairman thanked Ir Poon for his suggestion and invited him to offer the relevant contact information of MDCO after the meeting.

21. The Chairman invited comment from Members on the proposed revision to HKCA 1052 within 2 weeks, i.e. any comment should be submitted to the Secretary by 14 July 2012.

Agenda Item 7: Any Other Business

22. Mr Brian Cheng raised some questions on radiation safety associated with base stations of public mobile services installed near residential buildings, covering the safety standard adopted by OFCA, appropriateness of the safety limit, as well as the related monitoring and regulatory measures.

23. In response, Mr Alex Tang said that the level of radio frequency electromagnetic radiation, which was a kind of non-ionising radiation (“NIR”), emitted by mobile base station should be in compliance with the exposure limit stipulated by the International Commission on Non-Ionising Radiation Protection (“ICNIRP”). The exposure limit was recommended by the World Health Organisation as a safety limit. The ICNIRP limit was also adopted by Australia, South Korea and the European Union, among others.

24. Mr Tang said that installation of public mobile base station in Hong Kong needed to be approved by OFCA. OFCA’s approval process required the operators of mobile base stations to ensure that their base stations comply with the NIR safety requirement. OFCA also conducted sample checks of public mobile base stations and measurements at residential flats. Over the last three years OFCA had conducted around one thousand measurements. The results indicated that the radiation levels measured at residential flats were all well below the ICNIRP limit.

25. The Chairman added that the Department of Health had been consulted on the adoption of the ICNIRP limit. OFCA would continue to work with the Department of Health and keep in view the latest standard applicable. OFCA had also arranged for the related publicity to ease public concern, including publication of information leaflet on radio frequency electromagnetic radiation. The Chairman said that an information paper on that subject would be tabled at the next SSAC meeting.

26. The Chairman noted that there had been two standing working groups under the previous TSAC. Based on the current work in hand, there was no concrete need to create a standing working group under the SSAC at

the moment. Instead, ad hoc working groups might be established as required to support the SSAC in respect of specialised matters demanding extended discussion and review with industry participation. The formation of the working groups would be less formal than that of the SSAC, and the subject matters might be related to radio spectrum or technical standards. Members concerned would be invited to join the ad hoc working groups as the case arose. The Chairman opined that ad hoc working groups, instead of a standing working group, would address the current need of the SSAC. He invited Members' view on that issue.

27. In concluding the meeting, the Chairman announced that the next SSAC meeting would be convened around three months later. There being no other business, the meeting was adjourned at 12:05 p.m.

Office of the Communications Authority
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