

Telecommunications Regulatory Affairs Advisory Committee

Minutes of the Twelfth Meeting

**Held on Thursday, 8 December 2016 at 2:30 p.m.
in OFCA Conference Room, 20/F Wu Chung House**

Present

Mr Chaucer Leung	Office of the Communications Authority (OFCA) (Chairman)
Mr Sanda Cheuk	OFCA (Secretary)
Ms Agnes Tan	Wharf T&T Limited (Wharf T&T)
Mr Alan Choi	Hong Kong Cable Television Limited (HKCTV)
Mr Gilbert Chan	Communications Association of Hong Kong
Mr Peter Lam	PCCW-HKT Telephone Limited, Hong Kong Telecommunications (HKT) Limited and PCCW Global (HK) Limited (PCCW)
Mr Richard Leung	Hong Kong Broadband Network Limited and HKBN Enterprise Solutions Limited (HKBN)
Ms Juliana Wong	Hutchison Global Communications Limited, Hutchison Telephone Company Limited and Genius Brand Limited (Hutchison)
Mr TL Or	SmarTone Communications Limited and SmarTone Mobile Communications Limited (SmarTone)
Mr York Mok	Ad personam
Mr Brian Chan	21 ViaNet Group Limited (21 ViaNet)
Ir Kelvin Ma	The Institution of Engineering and Technology Hong Kong (IETHK)
Mr Raphael Ho	Equinix Hong Kong Limited
Mr Sutton Cheung	ComNet Telecom (HK) Limited (ComNet)
Mr Allen Law	External Telecommunications Services (ETS) operators as a group
Mr Karson Ng	China Telecom Global Limited
Mr Fred Lam	Hong Kong Police Force

Mr Robert Sia	Paging operators as a group
Prof Xu Yan	Ad personam
Ir Dr Peter Chiu	The Hong Kong Institution of Engineers (HKIE)
Mr Andrew Hung	HKC Network Limited
Mr Chris Tsang	APT Satellite Company Limited (APT)
Ms Susana Halliday	Superloop (Hong Kong) Limited (Superloop)
Ms Jacqueline Leung	Towngas Telecommunications Fixed Network Limited
Mr Alex Cheng	China Mobile Hong Kong Company Limited
Mr Brian Ho	TraxComm Limited
Dr Victor Hung	Consumer Council

In Attendance

Mr Malcolm Leong	Wharf T&T
Mr WH Tang	PCCW
Ms Abbie Lo	HKBN
Mr Michael Xue	Hutchison
Mr Alan Choi	SmarTone
Mr YK Ho	21 ViaNet
Dr Kevin Hung	IETHK
Mr Charles Yip	ETS operators as a group
Ir Dr Philip Pong	HKIE
Ms Elaine Hui	OFCA
Mr SK Yiu	OFCA
Mr Kingsley Yeung	OFCA
Mr Desmond Young	OFCA
Mr Sidney Tsan	OFCA
Ms Yolanda Ma	OFCA
Mr Wilson Lee	OFCA
Ms Vera Chung	OFCA
Mr John Wong	OFCA
Ms Tara Ng	OFCA
Ms Andrea Lau	OFCA
Ms Maggie Fung	OFCA

Absent with Apologies

Mr Simon Leung	Hong Kong Mobile Television Network Limited
Mr Patrick Ng	NTT Com Asia Limited
Ms Claretta Chia	Verizon Hong Kong Limited
Mr Cliff Wong	TVB Network Vision Limited
Mr Paul Abfalter	Telstra International HK Limited and Telstra International Limited
Mr Alex Kun	Hong Kong Wireless Technology Industry Association
Mr Stephen Chan	Services-based operators (SBOs) as a group
Ms Eva Chan	Ad personam
Dr Andrew Simpson	Ad personam

The Chairman welcomed Members to the new term of 2016/2018 under the Telecommunications Regulatory Affairs Advisory Committee (TRAAC). He introduced eight new participants who attended the meeting, namely, Ir Dr Peter Chiu and Ir Dr Philip Pong from HKIE, Dr Kevin Hung from IETHK, Mr Alan Choi from HKCTV, Mr Michael Xue from Hutchison, Ms Susana Halliday from Superloop, Mr Chris Tsang from APT and Mr Charles Yip as the representative from ETS operators as a group.

2. The Chairman briefed Members that the TRAAC served to provide a forum for the industry and interested parties to discuss a variety of telecommunications regulatory issues. He said that the meetings would generally be held three times a year. In general, OFCA would propose items for discussions, and Members would also be welcome to propose other discussion topics.

Item 1 Confirmation of Minutes of Last Meeting

3. The Chairman advised that the draft minutes of the eleventh meeting had been circulated to Members for comment on 2 August 2016. As there was no comment received from Members, the minutes of the eleventh meeting were confirmed without amendment.

Item 2 Matters Arising

Progress of the Next Generation Network (NGN) and the Technical Regulatory Working Group (TRWG)

4. At the invitation of the Chairman, the Secretary reported that OFCA had been collecting relevant NGN indicators from the operators and had shared them with the industry in the form of a summary. He updated Members that OFCA had collected the latest set of data in September 2016 and would share the results with the industry after compilation. Since the data would be updated on a half-yearly basis, OFCA would ask for further inputs from the industry in the end of March 2017.

5. The Secretary informed Members that the TRWG which had been established took over all the work of the NGN Working Group. In the new term of the TRAAC, 28 representatives were nominated by Members to join the TRWG which would provide a platform for discussions on a wider scope of technical regulatory matters in addition to the NGN issues.

Item 3 Review of the Number of Public Payphones under Universal Service Obligation (USO) (TRAAC Paper No. 8/2016)

6. The Chairman introduced the item by recapitulating Members' consensus reached at the last meeting that, regarding the universal service contribution (USC) issue, the OFCA would consider a review of the reasonable number of public payphones eligible for USC and report the progress of work to Members at subsequent meetings.

7. Mr Desmond Young gave a presentation on the need to conduct a public payphone review in Hong Kong and provided a summary of the overseas practices adopted for the removal of public payphones¹. He advised Members that the Communications Authority (CA) would make a

¹ The presentation slides are available at http://www.ofca.gov.hk/filemanager/ofca/en/content_757/traac8_2016_p.pdf.

decision on the implementation of the review. Members would be briefed about how the review would proceed at the next meeting.

8. The Chairman added that the review would require feedbacks from all relevant stakeholders. He invited views from Members before OFCA would finalise the plan for consideration by the CA.

9. Ms Juliana Wong considered that the current rental fee of \$207 per month for using public payphone kiosks for deployment of Wi-Fi service was too low and should be reviewed. Ms Elaine Hui replied that the review of public payphones would be focused on developing a set of guiding principles to facilitate determination of whether specific public payphones should be eligible for USC. The Wi-Fi rental fee level was a different issue and it would be more relevant to review the fee level at the yearly review of the USC level. The Chairman said that Ms Wong's comment would be taken into account for the purpose of the yearly review of the USC level, and she was welcome to provide market data to facilitate consideration in this regard.

10. Ms Agnes Tan was concerned that it would take a long time to work out the guiding principles, noting in particular of the need to consult relevant stakeholders. The Chairman replied that a set of guiding principles based on objective parameters (such as usage) taking into account local situations and overseas practices would be developed. In the process, apart from consulting the universal service provider (USP) and the industry through the TRAAC, the District Councils and the site owners (such as hospitals) would also be approached for comment before determining which public payphones located within the relevant district or site would not be eligible for USC. The process would take time but was inevitable. Ms Elaine Hui supplemented that while District Councils and site owners would be approached in batches, the exclusion of any public payphones identified to be excluded from USC would not wait until the completion of the whole review. Rather, after a relevant District Council or site owner was consulted, a decision would be made to determine which public payphones located within that district or site should not be eligible for USC.

11. Mr TL Or asked whether the public payphone kiosks could be used for installing radio base stations (RBSs) such that the rental fees paid by mobile network operators (MNOs) for installation could be used to reduce the USC. He also asked whether there were guidelines in place to ensure a fair allocation of payphone kiosks to MNOs for installation of RBSs. The Chairman replied that the matter was being considered by OFCA, but ultimately permission by the Lands Department would be required before the kiosks could be used for the proposed RBS installation. The Secretary said that whether the public payphone kiosks could be used for RBS installation was a separate matter from the public payphone review under discussion. Regarding RBS installation, he advised that PCCW had conducted trial installations at some public payphone kiosks and the trial report had been published at OFCA's website. The Chairman said that OFCA would play the coordination role to take the matter further and concrete proposals from MNOs were needed before OFCA could initiate the liaison process involving the Lands Department etc.

12. Mr Richard Leung considered that OFCA should use historical data to analyse public payphones usage because future data could be easily manipulated. The Chairman replied that OFCA would use historical data for the analysis.

13. Prof Xu Yan asked whether the USP had the right to continue to provide public payphone service for a particular payphone which was excluded from the USO. He also asked whether other operators had the right to provide public payphone service if they were interested. Ms Elaine Hui explained that the USP could, at its own cost, keep the public payphones which had been excluded from the USO. Further, the current licensing regime did not restrict other fixed network operators from providing public payphone service, and there was indeed a small number of public payphones currently provided by these operators. The payphones provided by these operators were however not eligible for USC compensation.

14. Dr Victor Hung asked whether there was a system in place to check whether the public payphones were working properly. Further, whilst he took note of the overseas practices, he considered that the local

cultural factor should be taken into account to decide whether a particular public payphone should be removed from USO in Hong Kong. The Secretary replied that the USP was obliged to ensure that a good, efficient and continuous public payphone service was provided, and would carry out routine checks of the payphones. OFCA would also conduct sample checks regularly and ask the USP to make rectifications when any malfunctioning was found. Ms Elaine Hui supplemented that faulty public payphones would be taken into account during the yearly review of the USC level so that the confirmed level would be a fair one to the USC contributing parties. The Chairman added that there was no intention to adopt the practice of a particular country in a straitjacket for the review. He emphasised that the guiding principles would be worked out based on local conditions with reference to overseas practices.

15. Ir Dr Philip Pong asked what benefit would bring to the general public by removing the uneconomic public payphones. He commented that public payphones should not be removed simply because they were used infrequently and uneconomic without considering the societal aspect. Things seemingly uneconomical (such as smoke detectors and sprinklers) were absolutely necessary and crucial despite their minimal usage most of the time. Moreover, if a public payphone was removed from a kiosk but the USP could continue to use that kiosk for other purposes, it would mean that a public facility was taken away by the USP to serve its own purposes.

16. The Chairman replied that there were divergent views on the demand for public payphones and there were complaints from the general public from time to time that public payphones had hygiene, illegal occupation or road blockage problems. The industry had also raised concerns about the high cost involved in subsidising the uneconomic public payphones, which would be borne by customers of fixed and mobile services ultimately. As such, there was a need to conduct a public payphone review to address the concern of these parties. He however emphasised that the frequency of use would be one out of many factors to be considered in setting the guiding principles. For example, even if all the public payphones in a hospital were uneconomic, it was contemplated that at least one public payphone would be retained to ensure that people in need would still have access to the service.

Moreover, he said that the use of public payphone kiosks for other purposes would only be considered if public payphone service was being provided at those kiosks. Such other usages would be subject to rental charges which would be channelled back to the USC scheme to reduce the USC. Ms Elaine Hui supplemented that an uneconomic public payphone could be retained if the stakeholders concerned could provide valid social or safety reasons, and that was why the concerned District Council or site owner would need to be consulted.

17. The Chairman concluded the item by inviting Members to submit any further comments in two weeks. Members would be briefed of the implementation plan of the review as approved by the CA at the next meeting.

[Post-meeting note: One submission was received within the submission period.]

Item 4 Proposed Revision to the Guidelines on the Security Aspects for the Design, Implementation, Management and Operation of Public Wi-Fi Service (TRAAC Paper No. 9/2016)

18. At the invitation of the Chairman, Mr Wilson Lee gave a presentation on OFCA's proposal to revise the "Guidelines on the Security Aspects for the Design, Implementation, Management and Operation of Public Wi-Fi Service" (Guidelines) with a view to adopting the proposed technical measures to enhance the security of public Wi-Fi service². The Chairman invited comments from Members on the three proposed technical measures, viz. (a) implementation of server certificate; (b) enabling Layer 2 isolation; and (c) tackling the risk of exhaustion of Internet Protocol (IP) addresses.

19. In response to Ms Agnes Tan's enquiry, Mr Wilson Lee said that individual public Wi-Fi service operator might not make available a large pool of IP addresses for the provision of public Wi-Fi

² The presentation slides are available at http://www.ofca.gov.hk/filemanager/ofca/en/content_757/traac9_2016_p.pdf.

service. According to the Office of the Government Chief Information Officer (OGCIO) and the major public Wi-Fi service operators, there was a possible risk of denial of service due to exhaustion of all IP addresses assigned for public Wi-Fi service. In order to minimise such a risk, OFCA considered that appropriate technical measures should be implemented by the operators to tackle the abovementioned problem.

20. Ir Kelvin Ma asked whether OFCA would specify the technical measures in the revised Guidelines for tackling the risk of exhaustion of IP addresses. Mr Wilson Lee replied that OFCA had held a meeting with OGCIO and the major public Wi-Fi service operators to discuss, among others, various approaches to tackle the abovementioned risk including applying a shorter release time, using a bigger IP address pool and/or implementing other appropriate measures. With a view to providing flexibility to the operators, OFCA considered that it would not be necessary to set out any specific means to implement the technical measures in the revised Guidelines such that the operators could implement their preferred solutions that best fitted the circumstances and needs of their own public Wi-Fi networks.

21. The Chairman said that OFCA had sought comments from the industry on the abovementioned proposal. Members were invited to submit further comments in two weeks from this meeting. OFCA would take into account all the views and comments received in finalising the revised Guidelines. The finalised revised Guidelines were expected to be issued around end of December 2016.

[Post-meeting note: As there was no comment received from Members within the submission period, the finalised revised Guidelines were uploaded on OFCA's website on 29 December 2016³.]

³ The finalised revised Guidelines are available at <http://www.coms-auth.hk/filemanager/statement/en/upload/388/gn182016e.pdf>.

Item 5 Technology Developments for Deployment of LTE in Unlicensed Bands (TRAAC Paper No. 10/2016)

22. Mr Sidney Tsan gave a presentation on the subject matter, with an overview of the emerging technologies that made use of the unlicensed bands, namely Licensed Assisted Access (LAA), LTE in Unlicensed Spectrum (LTE-U), LTE-WLAN Aggregation (LWA) and LTE Wi-Fi radio level integration with IPsec tunnel (LWIP)⁴. He highlighted the technical solutions to achieve coexistence between LTE and Wi-Fi in the unlicensed bands and gave a brief on the latest development of these technologies.

23. In response to Ir Kelvin Ma's enquiry whether the 5 GHz unlicensed bands were used by public safety agencies, the Secretary said that OFCA had not been in touch with public safety agencies about the subject and neither had they expressed interest in using the 5 GHz unlicensed bands to support their operation. The Chairman supplemented that dedicated frequencies had been assigned to the public safety agencies for supporting their daily operations. If such agencies intended to make use of the unlicensed bands to support their emergency services, they should be mindful of the potential congestion or interference in such bands as they were open for use by users without any need for a licence.

24. Ir Kelvin Ma asked if MNOs used the 5 GHz unlicensed band to provide LTE with the abovementioned new technologies, how OFCA would deal with the potential interference between LTE and Wi-Fi devices. The Secretary replied that one of the crucial issues that should be considered in relation to the deployment of LTE over the 5 GHz unlicensed band was the compatibility with other devices including Wi-Fi devices operating in this unlicensed band. OFCA had been monitoring the development of LTE in the unlicensed bands and the relevant regulatory regimes of overseas jurisdictions. OFCA would seek the industry's technical inputs to the interference and coexistence issues as well as the other relevant matters in due course. Mr Peter Lam indicated that PCCW had interest in deploying LTE in the unlicensed bands, and

⁴ The presentation slides are available at http://www.ofca.gov.hk/filemanager/ofca/en/content_757/traac10_2016_p.pdf.

would probably put up a proposal for conducting trials. The Chairman said that OFCA would facilitate such trials which could help ascertain any issues of interference and coexistence with other wireless technologies for deployment of LTE over unlicensed bands in the Hong Kong environment. The Secretary added that the relevant technologies were getting mature and availability of commercial products would be expected in 2017, and that technical trials and studies would provide solid information for reference by OFCA.

25. Mr T L Or expressed that the issue of potential interference with the existing Wi-Fi devices should not be a concern because the relevant products should comply with the international standards, such as those adopted by the Third Generation Partnership Project (3GPP), and 3GPP should have taken such issue into account before the standards were finalised. The Chairman said that technical trials or tests would still be necessary for making a prudent decision on deployment of public mobile services over the unlicensed bands in Hong Kong.

Item 6 Any Other Business

26. In concluding the meeting, the Chairman said that the next TRAAC meeting would be convened in April 2017 tentatively. There being no other business, the meeting was adjourned at 4:15 pm.

27. The Chairman wished Members a merry Christmas and a happy new year.

**Office of the Communications Authority
January 2017**