

Telecommunications Regulatory Affairs Advisory Committee

Minutes of the Second Meeting Held on Tuesday, 12 December 2012 at 2:30 p.m. in IPD Conference Room, 25/F Wu Chung House

Present

Mr Y K Ha	Office of the Communications Authority (OFCA) (Chairman)
Mr Danny Lau	OFCA (Secretary)
Ms Agnes Tan	Wharf T&T Limited
Mr Dennis Wong	Hong Kong Cable Television Limited
Mr Kenneth Lau	TraxComm Limited
Ms Alison Ko	CSL Limited (CSL)
Mr Charles Yeung	Hong Kong Broadband Network Limited
Ms Winne Ma	Hutchison Global Communications Limited and Hutchison Telephone Company Limited (Hutchison)
Mr Gilbert Chan	Communications Association of Hong Kong
Ir Johnny Poon	The Hong Kong Institution of Engineers
Ms Edith Wong	Towngas Telecommunications Fixed Network Limited
Mr York Mok	Ad personam
Mr Stephen Chan	External telecommunications services (ETS) providers as a group
Mr Raymond Wong	Paging operators as a group
Dr Andrew Simpson	Ad personam
Mr Marcus Vass	Hong Kong Telecommunications Users Group
Prof Xu Yan	Ad personam
Ms Eva Chan	Ad personam
Ms Fannie Cheung	Ad personam
Mr W Y Kwan	Services-based operators (SBOs) as a group
Mr Y H Chan	External fixed operators as a group
Mr Kenneth Kwok	ComNet Telecom (HK) Limited

Mr Vincent Lam	The Institution of Engineering and Technology Hong Kong
Mr T L Or	SmarTone Communications Limited and SmarTone Mobile Communications Limited (SmarTone)
Mr Fred Lam	Hong Kong Police Force
Mr Peter Lam	PCCW-HKT Telephone Limited, Hong Kong Telecommunications (HKT) Limited and Genius Brand Limited (HKT)
Dr Victor Hung	Consumer Council
Mr Richard Leung	New World Telecommunications Limited

In Attendance

Mr Desmond Young	CSL
Mr William Brown	Hutchison Whampoa Limited
Mr W H Tang	HKT
Mr Eric Lee	SmarTone
Mr Jordan Lee	Wharf T&T Limited
Mr T F So	OFCA
Mr T Y Chan	OFCA
Mr P H Ma	OFCA
Ms Elaine Hui	OFCA
Ms Helen Lai	OFCA
Mr Isaac Ip	OFCA
Ms Pancy Cheng	OFCA
Mr Andy Leung	OFCA
Ms Yolanda Ma	OFCA
Mr Wilson Lee	OFCA

Absent with Apologies

Mr Alex Cheng	China Mobile Hong Kong Company Limited (CMHK)
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Mr Charles Mok	Hong Kong Information Technology Federation
Mr Joseph Leung	Hong Kong Wireless Technology Industry Association
Mr K K Luk	HKC Network Limited
Ms Christine Lee	Mobile virtual network operators (MVNOs) as a group
Mr Eric Yeung	Small and Medium Enterprises
Ms Christy Ditchburn	Telstra International HK Limited and Telstra International Limited

The Chairman welcomed Members to the second meeting of the TRAAC. He introduced Ir Johnny Poon from Hong Kong Institution of Engineers, Mr Fred Lam from Hong Kong Police Force, Mr William Brown from Hutchison Whampoa Limited who was going to replace Ms Winnie Ma as TRAAC Member after she left by end 2012, Mr Dennis Wong from Hong Kong Cable Television Limited, as well as representatives of external fixed operators – Mr Y H Chan and paging operators – Mr Raymond Wong.

Item 1 Confirmation of Minutes of Last Meeting

2. As there were no comments received from the Members, the minutes of the first meeting held on 10 July 2012 were confirmed without amendment.

Item 2 Matters Arising

Progress of the Next Generation Network Working Group (NGNWWG)

3. The Chairman invited Mr T Y Chan, Chairman of the NGNWWG, to give a presentation on the progress of the works done by the NGNWWG and its subgroup. A copy of the presentation slides is given at **Annex A**.

4. The Chairman said that the NGNWWG had worked hard on the relevant matters, and noted that a subgroup was recently established

under the NGNWG to look into matters pertaining to NGN interconnection architecture and interconnection trial. Concerning the NGN interconnection trial, Mr T Y Chan said that some operators had expressed interest in conducting the trial and the subgroup would further discuss with the interested operators to work out the detailed arrangements. It was expected that the next round of trials would be commenced in around mid 2013. In summary, the Chairman said that OFCA would keep in view the progress and the NGNWG would report progress again in the TRAAC at an appropriate time in the future.

Voluntary Registration Scheme for Buildings with Optical Fibre Access Networks - Second Stage

5. At the invitation of the Chairman, Mr Isaac Ip gave an update on the implementation progress of the second stage of the registration scheme. A copy of the presentation slides is given at **Annex B**.

6. The Chairman said that OFCA would proceed with the implementation of the second stage to extend the scheme to cover non-residential buildings as planned. While there were only three fixed network operators (FNOs) participating in the second stage initially, drawing on the success of the first stage, he encouraged all major FNOs to join the second stage of the scheme at a subsequent period. With about 82% of households in Hong Kong now covered by the buildings registered under the scheme, the Chairman believed that Hong Kong would be at the forefront among advanced economies in terms of household penetration of fibre-to-the-home (FTTH) or fibre-to-the-building (FTTB) networks.

7. Dr Victor Hung queried whether or not there would be any guarantee in service provisioning of FTTH/FTTB services to every resident in the buildings which had been registered under the scheme. He said that he had a case where an operator was unable to deliver FTTH/FTTB services in a particular building. Mr York Mok asked whether or not it would be possible for some operators to provide FTTH/FTTB services in certain floors but not the whole building.

8. In response, Mr Isaac Ip said that a building would be classified

as FTTH/FTTB if optical fibres were already in place, while a FTTB building would be classified as a building readily with FTTH if operators could deliver FTTH services within one month for no less than 90% of service requests received over a period of one year. The Chairman added that OFCA had a stringent process in place to verify the information submitted by the operators, and OFCA would follow up the cases if operators were found to have failed to meet their service pledge. Concerning Mr Mok's query, Mr Danny Lau said that the classification of FTTH/FTTB in general applied to the building as a whole and not individual floors, though there may be practical implementation concerns such as spacing or trunking limitations within particular floors of a building which would constrain the provision of services in the circumstances.

9. In response to Mr York Mok's enquiry regarding the FNOs' participation in the second stage of the scheme, the Chairman said that the registration scheme would remain voluntary in nature and some FNOs had opted not to provide their non-residential records at this stage. While further queries about FNOs' concerns could be directed to the concerned operators, the Chairman concluded that the implementation of the second stage of the scheme was still at the early stage, and OFCA would continue to work with all relevant parties with an aim to bringing fruitful results in due course.

Item 3 Consultation on Draft Enforcement Guidelines in respect of the Fair Trading Sections in the Trade Descriptions (Unfair Trade Practices) (Amendment) Ordinance 2012

10. At the invitation of the Chairman, Ms Elaine Hui gave a brief account of the progress of the preparatory work for the commencement of the Trade Descriptions (Unfair Trade Practices) (Amendment) Ordinance 2012 (Amendment Ordinance).

11. Ms Hui explained that while the Customs and Excise Department (C&ED) would be the principal agency to enforce the new fair trading sections introduced to the Trade Description Ordinance (TDO)

by the Amendment Ordinance¹, concurrent jurisdiction would be conferred on the Communications Authority (CA) to enforce these sections in relation to the commercial practices of licensees under the Broadcasting Ordinance (BO) and the Telecommunications Ordinance (TO) that are directly connected with the provision of a broadcasting service or telecommunications service under the respective Ordinances. Upon coming into force of the Amendment Ordinance, section 7M of the TO will be repealed, subject to some transitional arrangements.

12. Ms Hui further explained that the C&ED and the CA had issued a joint consultation paper on 7 December 2012 to solicit public views and comments on the draft enforcement guidelines in respect of the fair trading sections introduced by the Amendment Ordinance.² The deadline of the consultation was 17 January 2013. A number of consultative sessions would be held during the consultation period to solicit views from various trade associations, trade sectors and the public. Specifically, a consultative session for telecommunications and broadcasting sectors had been scheduled for 19 December 2012 from 10:00 to 11:30am in the Auditorium, 15/F., Customs Headquarters Building at North Point. Members of the TRAAC were invited to join that session to share their views on the draft enforcement guidelines. Written submissions should be made to the postal or electronic address stated in the consultation paper.

13. Ms Agnes Tan asked whether the consultative session on 19 December 2012 would be conducted in English or whether there would be a separate session in English. Concerning concurrent jurisdiction, she queried how the two enforcement agencies viz. the CE&D and the CA would be able to ensure consistency in enforcing the relevant sections of the amended TDO.

14. In response to the enquiry regarding the language used in the consultative session on 19 December 2012, Ms Elaine Hui said that the

¹ Sections 4, 5, 7, 7A, 13E, 13F, 13G, 13H and 13I of the amended TDO, which include the prohibitions of false trade description in relation to goods and services; misleading omissions, aggressive commercial practices, bait advertising, bait-and-switch and wrongly accepting payment.

² A copy of the consultation paper can be downloaded from http://www.coms-auth.hk/filemanager/en/content_800/20121206_enforce_guide_en.pdf.

presentation would be conducted in Chinese with the presentation materials available for distribution in both English and Chinese, and OFCA would be prepared to answer questions in both English and Chinese. The Chairman said that there might be a number of representatives from small and medium enterprises (SMEs) who might not be able to converse fluently in English. As such, OFCA would have to be flexible with regard to the language used, and OFCA's colleagues would be prepared to answer questions and repeat them in either language if necessary. Concerning Ms Tan's other query, the Chairman said that the purpose of this agenda item was to advise members of the launch of the consultation. Detailed discussion of the issues under consultation would be more appropriately handled in the consultative session and he invited all Members to attend the session.

(Post Meeting Note: The deadline of the aforesaid consultation was extended by two months to 17 March 2013.)

Item 4 Establishment of the Telecommunications Numbering Working Group (TRAAC Paper No. 3/2012)

15. Mr Andy Leung gave a presentation³ on the proposed establishment of the Telecommunications Numbering Working Group (TNWG) to study the various telecommunications numbering related issues. In a gist, the TNWG was established to take up the functions which were previously handled by the Telecommunications Numbering Advisory Committee (NAC) and its working group under the former Office of the Telecommunications Authority (OFTA). Subgroups might also be formed within the TNWG to address specific issues which may arise.

16. The Chairman invited Members to make nominations for the TNWG. Each Member may nominate him/herself or a representative from their company/group to participate in the TNWG. OFCA might also invite other professional bodies and organisations to join the TNWG on a need basis.

³ The presentation slides are available at http://www.ofca.gov.hk/filemanager/ofca/en/content_757/traac03_2012_p.pdf.

17. OFCA would issue emails to Members after the meeting inviting them to make the nomination. Representatives would be informed of the date of the first TNWG meeting in due course.

(Post Meeting Note: The email was dispatched to Members on 20 December 2012.)

Item 5 Cloud Computing and Cloud Services (TRAAC Paper No. 4/2012)

18. At the invitation of the Chairman, Ms Pancy Cheng gave a presentation⁴ which contained a summary of OFCA's assessment on the benchmarking of Hong Kong's telecommunications regulatory measures *vis-à-vis* the "Best Practice Guidelines on Regulatory Approaches to Foster Access to Digital Opportunities through Cloud Services" issued by the International Telecommunication Union (ITU) in October 2012 (ITU Best Practices) (see Annex of TRAAC Paper No. 4/2012). Based on OFCA's assessment, the prevailing telecommunications regulatory measures have by and large fulfilled the ITU Best Practices.

19. The Chairman said that cloud computing had become a popular subject and trend in recent years in the information, communications and technology (ICT) industry. However, some of the practices stated in the ITU Best Practices did not fall within the purview of OFCA. Specifically, Mr Danny Lau said that areas concerning privacy and information technology would fall within the ambit of other Government departments or agencies such as the Office of the Privacy Commissioner for Personal Data and the Office of the Government Chief Information Officer, and referred Members to paragraphs 27 and 28 of the TRAAC Paper No. 4/2012 on some of the initiatives or works recently undertaken by the Government and the industry in relation to cloud development in Hong Kong. The Chairman drew Members' attention that Hong Kong currently ranked third among Asia Pacific economies on cloud readiness, and he encouraged Members providing cloud services in Hong Kong to

⁴ The presentation slides are available at http://www.ofca.gov.hk/filemanager/ofca/en/content_757/traac04_2012_p.pdf.

circulate a copy of the ITU Best Practices to their colleagues for reference and planning purposes.

20. As to whether or not the Government or the CA should prescribe regulation on cloud services, Mr Danny Lau said that based on OFCA's benchmarking with the ITU Best Practices as well as understanding of overseas regulatory regimes, it did not appear that a separate telecommunications regulatory or licensing regime for cloud services would be necessary at this juncture. Given technology neutrality and to a certain extent service neutrality of the prevailing regulatory regime, the Chairman believed that the current framework would be sufficiently robust to foster development of new technologies and innovative services. OFCA would keep in view the market development and appropriate updates would be made should situation warrant.

21. Mr York Mok queried whether a licence would be needed to 'broadcast' contents over a cloud. Dr Victor Hung added that there were many set-top boxes available nowadays (e.g. Apple TV) which could access contents over the internet. In response, the Chairman said that content providers do not need a telecommunications or broadcasting licence for provision of video content services over the internet or a cloud. As far as he was aware, there are many FNOs and mobile network operators (MNOs) currently offering video content services, and these services had not been regulated under the BO. Mr T F So said that content delivery over the internet is not regarded as a 'broadcasting service' or 'television programme service' as defined and regulated under the BO, and therefore does not require a broadcasting licence.⁵ In response to Mr York Mok's enquiry regarding the benefits of having a broadcasting licence, the Chairman and Mr Danny Lau said that based on their understanding, service providers might find it difficult to purchase certain content programmes from third-party content producers if these service providers did not have a valid broadcasting licence under the BO.

⁵ Under the Broadcasting Ordinance (Cap 562), broadcasting service (廣播服務) means-

- (a) a domestic free television programme service;
- (b) a domestic pay television programme service;
- (c) a non-domestic television programme service; or
- (d) an other licensable television programme service.

The definitions of different categories of television programme services can be found in section 2(1) of the BO. Pursuant to Clause 5 of Schedule 3 of the BO, any service provided on the service commonly known as the internet is not regarded as a television programme service.

As the BO was enacted more than 10 years ago when the broadband internet was still in the nascent stage of development, the Chairman believed that the Government would conduct a thorough review of the broadcasting licensing framework during the review of the BO in the near future. OFCA would keep in view the development and revisit the matter at an appropriate time.

22. In response to Ms Agnes Tan's enquiry concerning use of government premises and public facilities for network rollout, the Chairman and Mr Danny Lau said that over the years, the former OFTA and now OFCA had been working with relevant government departments in facilitating network rollout by the FNOs and MNOs. For example, OFCA had issued guidelines as well as established procedures for the MNOs to make use of highways facilities⁶ or access to government buildings, as the case may be, for installation of radio base stations at a nominal rate. As regards the FNOs, they are authorised under section 14 of the TO to place and maintain a telecommunications line in, over or upon any public land. There is also space reserved in buildings for the FNOs to establish telecommunications facilities and lay cables.

Item 6 Restriction of Certain Mobile Terminals in respect of LTE Networks (TRAAC Paper No. 5/2012 - Presentation Slides)

23. At the invitation of the Chairman, Ms Yolanda Ma gave a presentation⁷ on the recent arrangement made by Apple in respect of its long-term evolution (LTE)-enabled devices such as iPhone 5 and the latest iPad models. The Chairman invited Members to provide views and comments on the potential effects of Apple's arrangement as well as on the roles or actions which might be taken by the industry or by OFCA in respect of such practices.

24. Mr Peter Lam said that there were currently five MNOs

⁶ Highway facilities include lamp posts, flyovers, footbridges, etc.

A copy of the guidelines can be downloaded from

[http://www.coms-auth.hk/filemanager/statement/en/upload/119/MCBS-GN\(Issue4\)v4.pdf](http://www.coms-auth.hk/filemanager/statement/en/upload/119/MCBS-GN(Issue4)v4.pdf).

⁷ The presentation slides are available at

http://www.ofca.gov.hk/filemanager/ofca/en/content_757/traac05_2012_p.pdf.

operating 4G LTE networks in the 1800 MHz band. Among these five LTE networks, only three of them (viz. networks of CSL, Hutchison and SmarTone) were currently supported by Apple's iPhone 5, while two of them (viz. networks of Hutchison and SmarTone) were supported by the latest iPad models. The other two LTE networks, which are operated by CMHK and HKT, were not supported by these Apple's devices at this moment.

25. In Mr Lam's view, as these five LTE networks all conformed to the relevant international standard, they should be supported by these Apple's devices in a similar fashion. Mr Lam noted that this was the first time, as far as he was aware, that a customer premises equipment (CPE) vendor (i.e. Apple) had taken an initiative to test the networks of operators with which Apple had distribution agreement.

26. Given technology neutrality and conformance of these five LTE networks to international standard, Mr Lam was of the view that such testing approach was restrictive of customer choice. He quoted an example where a HKT customer, who had an iPhone 5 and a nano SIM card of HKT, was asked by Apple Shop to approach HKT to sort out why his iPhone 5 was unable to connect to HKT's LTE network. HKT replied to that customer that Apple had set up certain restrictions on the device for which its use on HKT's network was not allowed.

27. Mr Lam queried whether OFCA had asked Apple whether it had tested the LTE networks of CMHK and HKT. Although Apple had published information on its website⁸ about the networks which its devices could be connected to, the website had not provided information on the test criteria as well as the reason why the other two networks had not been tested. He said that the principles as set out in the Statement "Way Forward of 'SIM Lock'" issued by the former Telecommunications Authority in 1997⁹ should remain valid for customer protection and promotion of industry competition. Drawing on the analogy of the 'type approval process' for telecommunications equipment on Hong Kong

⁸ See <http://www.apple.com/iphone/LTE/> and <http://www.apple.com/ipad/LTE/> for iPhone 5 and the latest iPad models (including iPad mini) respectively.

⁹ A copy of the Statement can be accessed at http://tel_archives.ofca.gov.hk/en/tas/mobile/ta970220.html.

Telephone's network before market liberalisation, he doubted why Apple was allowed, even under a highly competitive market, to conduct testing with specific MNOs that it wished to test and disregarded the others (i.e. CMHK and HKT), insofar as he understood that the latter two MNOs had not entered into distribution agreement with Apple. With a valid licence granted by the regulator as well as a LTE network conformed to international standard, Mr Lam was doubtful why HKT's customers were unable to connect their Apple's devices (i.e. iPhone 5 or the latest iPad models) to the LTE network. He opined that Apple had engaged in 'anti-competitive' conduct by placing certain restrictions on its devices so that they were allowed to connect only to those LTE networks which had been pre-selected by Apple, but not the other LTE networks. Referring to slide 9 of the presentation slides, he added that the restriction behaviour by Apple was even more than the 'SIM Lock' arrangement, because Apple had not provided information to its customers on how to 'unlock' the device.

28. The Chairman clarified that OFCA had not hitherto given any permission to Apple or any company for undertaking the abovementioned arrangements, and that OFCA was not aware of the subject matter until reports were received from HKT and media. As there were no similar cases before, OFCA was still considering whether or not the 'SIM Lock' Statement would apply. Concerning the test criteria, OFCA had already written to Apple for clarification and was now awaiting its feedback.

29. In response to an enquiry by Dr Victor Hung, the Chairman clarified that equipment vendor such as Apple was exempted from licensing for the sale or marketing of mobile phones in Hong Kong, if such devices conformed to technical specifications issued by the CA.

30. From the consumer perspective, Dr Victor Hung said that there were only a few major smartphone vendors around the world and it would be reasonable for these vendors to leverage their market power to select their dealers/service providers which would give them the best commercial deal. In terms of transparency of information, Dr Hung considered that Apple should provide more information on its website about the 'pre-selection' arrangement. Information on any restriction imposed on their devices should be clearly stated by the equipment

vendors.

31. Dr Victor Hung further added that consumers nowadays would favour a particular type/model of mobile devices in preference to the services provided by an MNO. In his opinion, it was the device and not the services which had a decisive influence on the consumers' choice.

32. Prof Xu Yan said that it was not the first time for Apple to enter exclusive arrangement with an operator for distribution of its devices. For example, starting from the first generation of iPhone in the United States, Apple selected a specific operator for selling of bundled devices and services. Prof Xu shared the findings of a conference paper entitled "Emergence of iPhone and its Impact on Mobile Carriers and Handset Manufacturers: The case of USA, Europe and Japan".¹⁰ According to the study in the paper, Apple's share prices and profit increased dramatically after the debut of the iPhone. On the other hand, there were no significant changes in the shares of the MNOs irrespective of whether or not they were selected by Apple. In his view, Apple created 'scarcity' of its devices as a marketing strategy to build up a strong brand.

33. Based on the findings of the study, Prof Xu added on the Chairman's observation that Apple's approach might have no effect on competition among the industry in the long run (though this might be possible at the very beginning), if the financial performance of the MNOs was not affected. Dr Victor Hung said that a long-term study on the financial information of the companies would be needed as there may be a number of factors which would affect the share prices of a company. Prof Xu clarified that the study had analysed financial data over five years.

34. Mr York Mok asked whether there was any regulation on equipment vendors which required their devices to work with or launch on all LTE networks, or whether they could partner with an individual MNO for exclusive arrangement. The Chairman clarified that equipment vendors could freely enter into exclusive arrangement with any operator in Hong Kong. Under the principle of technology

¹⁰ A copy of the said paper is attached at **Annex C**. The paper was also circulated by Prof Xu to TRAAC Members on 13 December 2012.

neutrality, Prof Xu Yan was of the view that it would not be necessary to expressly state which particular types or vendors of devices have to or have not to be supported by a LTE network, so long that the devices were compatible with international standards. On the other hand, the Chairman was doubtful whether or not an average customer was knowledgeable enough to check the compatibility of his/her device with individual MNOs, as he/she might have an expectation that a mobile device marketed in Hong Kong would be able to run on any mobile network.

35. In response to Mr Peter Lam's view that customers may not be able to use LTE services on certain MNOs when they switched operator, Mr Danny Lau said that it was not uncommon that certain services of an MNO might not be provided by other MNOs. Dr Victor Hung was of the view that the subject matter would fall under the ambit of consumer protection rather than competition. In relation to information on restriction imposed by equipment vendors on their devices, he considered that such information should be provided to consumers in a manner as transparent as possible. Dr Hung opined that the matter should be a consumer issue and might not be within the scope of regulation of the CA.

36. Dr Andrew Simpson said that the matter in question would generally not be regarded as causing competition problem unless the vendors of one product were exercising market power forcing consumers to purchase another product. With competing products generally available in the market to date, it would be doubtful if any particular equipment vendor had such a market power. He noted that while there was currently not much information available on Apple's business strategies, he would be surprised by any comment that there were serious competition issues on the subject matter.

37. Mr Eric Lee said that there was a list on Apple's website¹¹ as well as keynote presentation¹² therein stating which LTE networks were compatible with or supported by iPhone 5. According to Mr Lee, the information was clear and transparent, and unlike the case of 'SIM Lock',

¹¹ See footnote 8.

¹² See <http://www.apple.com/apple-events/september-2012/>.

iPhone 5 could work with three LTE networks as well as all 2G and 3G networks. In his view, it might be Apple's intention to first test individual LTE networks with a view to ensuring customer experience of its devices, and that different equipment vendors might have different business strategies on rolling out their devices. Mr Lee pointed out that there was always choice for the MNOs (one MNO at the beginning followed by two MNOs) to enter into commercial arrangement with Apple, and the current situation was the result of normal commercial arrangements made between the MNOs and the concerned equipment vendor.

38. Ms Alison Ko said that there was confusion to consumers created by Apple to have only one MNO when it first launched iPhone 5 in Hong Kong. In her view, such an approach might give an impression to the consumers that only one MNO would have the LTE capability in its network. As Apple was the holder of the Radio Dealer Licence (Unrestricted)¹³ issued under the TO, Ms Ko suggested OFCA to work with Apple to follow up the matter.

39. Concerning the confusion which might have arisen, the Chairman said that OFCA had hitherto received two consumer complaints against the restriction arrangement by Apple. This however had not taken into account a number of complaints which were received during the period when consumers were asked by some MNOs to wait for four to six weeks after they had placed orders for the mobile device. Mr Danny Lau added that the subject matter did not happen only in Hong Kong but in other advanced economies as well, though the concern might be different depending on individual local mobile markets. OFCA would contact some overseas regulators to exchange views on how to handle the subject matter.

40. In sum, the Chairman said that OFCA had not arrived at any view and would be open-minded on the way-forward of the subject matter. OFCA would approach individual operators after the meeting for further discussion. As regards the testing criteria, OFCA was now awaiting Apple's feedback on the concerned information.

¹³ The concerned entity is Apple Asia Limited.
See http://www.coms-auth.hk/filemanager/common/licensing/telecom/radio_dealer/xru.pdf.

(Post Meeting Note: On 14 December 2012, OFCA received a letter from HKT which provided a summary of the views of Mr Peter Lam at the TRAAC meeting. A copy of HKT's letter was circulated by HKT to TRAAC Members on the even date. On 19 December 2012, OFCA received another letter on the subject matter from CMHK. With the agreement of CMHK, the letter was circulated to TRAAC Members on 11 January 2013. Copies of the two letters are attached at Annexes D and E respectively.)

Item 5 Any Other Business

41. The Chairman said that the next TRAAC meeting would tentatively be convened in around April 2013.

42. There being no other business, the meeting was adjourned at 5:00 pm.

**Office of the Communications Authority
January 2013**

Progress of Next Generation Network Working Group (NGN WG)

Telecommunications Regulatory Affairs Advisory Committee
12 December 2012

Background

- With Members' support, OFCA re-established the NGN WG following the last TRAAC meeting in July 2012.
- A total of 21 Members participated in the NGN WG
 - 8 local fixed and 5 mobile network operators; and
 - Representatives from SBOs, ETS operators, CAHK, HKTUG, HKWTIA, HKIE, IETHK, HKITF and ad-personam
- Two meetings were held in August and November 2012.

Summary of Views

- Regulatory guidance on IP voice interconnection

Members' views

- Lack of proven international standards on NGN interconnection
- Prefer a market-based approach
- Consider it premature for OFCA to consider and issue regulatory guidance for IP voice interconnection at this stage

Proposed way-forward

- OFCA would monitor the market development and would revisit this matter if there is a request from the industry.

Summary of Views (2)

- Number portability in IP-based NGN environment

Members' views

- Existing distributed database approach in administrative database (AD) and gateway number (GN) systems for number portability could equally serve both TDM- and IP-based networks
- No practical need to change the existing number portability architecture

Proposed way-forward

- In case operators would like to review the technical arrangements for implementing number portability for NGN in future, they could raise their request to the NGN WG or seek assistance from OFCA as appropriate.

Summary of Views (3)

- Indicators to reflect NGN Development in Hong Kong

Members' views

- Existing statistics collected by OFCA could be used as NGN development indicators
- OFCA should explore the latest development at ITU and other economies.

Proposed way-forward

- Pending the relevant ITU recommendations on NGN development indicators, OFCA would in the meantime follow the practices of other economies to use the number of fixed and mobile broadband penetration, VoIP and IPTV subscribers for monitoring the NGN development.

Summary of Views (4)

- NGN interconnection architecture & interconnection trial

Members' views

- Some operators expressed interest in conducting NGN interconnection trial
- Many of their NGN platforms would be ready for test by mid 2013.

Progress update

- A subgroup on NGN Interconnection Architecture has been set up to
 - coordinate NGN interconnection trial,
 - review the Test Plan, and
 - look into matters related to NGN interconnection architecture and interoperability
- A total of 11 representatives from 7 local fixed and 5 mobile operators.
- The 1st subgroup meeting was held on 5 December 2012.
 - Attendees agreed in principle to take part in NGN interconnection trial.
 - They were also requested to collect information on the relevant matters for further discussion in coming meetings.

Summary of Views (5)

- NGN Security Guidelines

Background

- A voluntary NGN Security Guidelines was issued by the former TA in April 2010.
- The Guidelines –
 - represents best internationally recognised security management practices
 - covers management, technical and operational measures and incident response

Progress update

- In order to enable the NGN WG to consider the appropriate way forward on NGN security as based on the consultant's recommendation (see next slide), we have requested operators to provide information on their status of compliance with the Guidelines.
- We are now awaiting feedbacks from the operators on the concerned information.

Other issues

- As recommended by the consultant, the NGN WG would continue to discuss with the industry on matters relating to -
 - Interconnection architecture of NGNs
 - The quality classes which might be used to enable minimum quality of services for end-to-end services involving interconnected NGNs
 - Minimum standards of network security and a compliance mechanism
- Subject to the works of the NGN WG and subgroup, we would brief the TRAAC on the progress of the relevant matter.

Thank you

Voluntary Registration Scheme for Buildings with Optical Fibre Access Networks

Second Stage

Telecommunications Regulatory Affairs Advisory Committee
12 December 2012

Background

- Update on the Registration Scheme
 - Covers residential buildings with FTTB (Fibre-to-the-Building) and/or FTTH (Fibre-to-the-Home) networks
 - Participants: HGC, HKBN, HKCTV, PCCW, NWT & WTT
 - About 13,500 buildings (covering 2.2M households or 82% of household coverage) registered under the Scheme as of Nov 2012
- OFCA proposed in the last TRAAC meeting extending the Scheme to cover non-residential buildings (“second stage”) by end 2012 (Paper No. 1/2012).
- After the meeting, OFCA invited fixed network operators’ (“FNOs”) views and participation in the second stage of the Scheme

Views of FNOs (1)

- Currently, the OFCA register only shows the number of FTTB and/or FTTH networks at individual buildings. The names of the concerned FNOs are not disclosed.
 - 1 FNO proposes to disclose the names of FNOs on the OFCA register, while 4 FNOs object to the proposal
 - Concerns on FNO adopting discriminatory pricing / marketing conducts
 - The proposal would divulge commercial sensitive information – FNO should decide whether such information will be provided for the public
- Considering that the OFCA register has generally served the public satisfactorily, OFCA shall continue the current practice of showing the total number of optical fibre access networks for each building listed in the register

Views of FNOs (2)

- Two FNOs consider that OFCA should accord sufficient resources to facilitate FNOs' access to government and private buildings before implementing the second stage of the Scheme
- These are separate matters. OFCA considers that the implementing of the second stage of the Scheme will not affect OFCA's continual effort to facilitate FNOs' access to buildings
- OFCA will proceed to implement the second stage of the Scheme

Views of FNOs (3)

- One FNO considers that the term FTTH is not applicable to units of non-residential buildings
- OFCA considers that the term FTTH is modelled on the definition of the FTTH Council, which defines the term “premises” as a home or place of business and the term “FTTH” as a communications architecture in which the final connection to the subscriber’s premises is optical fibre.
- OFCA will continue to deploy the term FTTH for the Scheme.

Views of FNOs (4)

- OFCA has invited all 18 FNOs to participate in the second stage of the Scheme
- OFCA has received 11 responses and the following FNOs agree to participate in the second stage of the Scheme
 - Hong Kong Broadband Network Limited
 - New World Telecommunications Limited
 - Towngas Telecommunications Fixed Network Limited
- OFCA welcomes other FNOs to participate in the Scheme in future

Implementation Progress

- OFCA has received network data information from the 3 participating FNOs
 - Verifying the submitted data
 - Updating OFCA register
 - Data ready for uploading to the online register by early 2013

Thank you

The 19th ITS Biennial Conference 2012

“Moving Forward with Future Technologies: Opening a Platform for All”

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COVER PAGE FOR PAPER SUBMISSION

The Emergence of iPhone and its Impact on Mobile Carriers and Handset Manufacturers - The case of USA, Europe and Japan -

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Date of Presentation (delete where applicable):	Monday, 19 Nov. 2012 Tuesday, 20 Nov. 2012 Wednesday, 21 Nov. 2012
Panel Assigned:	

The Emergence of iPhone and its Impact on Mobile Carriers and Handset Manufacturers
- The case of USA, Europe and Japan -

Shinichiro TERADA

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Abstract

This paper investigates the impact of iPhone, a representative of smartphones, on telecommunications carriers and handset manufacturers in U.S.A, Europe, and Japan. We choose the “event study” methodology to evaluate the impact of iPhone emergence. We also look at the financial profit of the carriers and manufacturers in order to confirm the financial impact of iPhone emergence. Our research question is “How does the emergence of iPhone generate the impact on the telecommunications carriers and the handset manufactures in U.S.A, Europe and Japan?” The results show that the impacts of iPhone present differently on the telecommunications carriers and the handset manufacturers. Regarding the impact on telecommunications carriers, 1) the results of event study show that the iPhone-affiliated-carriers, such as AT&T, Telefonica and Soft Bank, are neutral by the iPhone emergence, but non iPhone-affiliated-carriers have negative impact by the iPhone emergence. 2) the results of financial profits show that almost of all telecommunications carriers in U.S.A and Japan grow their profits after the iPhone emergence, but many of the telecommunications carriers in Europe reduce their profits after the iPhone emergence regardless of iPhone affiliation. Regarding the impact on handset manufacturers, the results of event study and financial profits show that 1) Apple, iPhone manufacture, have positive impact and grow profit by the iPhone emergence, but 2) many of other handset manufacturers have negative impact and reduce profit by the iPhone emergence.

1. Introduction

On January 9th, 2007, Apple announced the launch of 1st iPhone in the U.S.A. After the announcement, many experts from the telecommunications industry expressed the idea that iPhone and smartphones would not have substantial impact on mobile carriers.¹²³ However, the iPhone have had huge success. iPhone and other smartphones seem to influence the mobile industry.

2. Research Questions

In order to determine the impact of iPhone on the mobile industry, we set the research question of “How does the emergence of iPhone generate the impact on the telecommunications carriers and the handset manufactures in U.S.A, Europe and Japan?”

3. Methodology

For measuring the impacts of iPhone emergence, we choose the ‘event study’ methodology.⁴ Event study examines the behavior of firms’ stock prices when a certain event occurs. If a company has an impact by a certain event, there should be reactions, either positive or negative, on the company’s stock returns. Conversely, the change of stock returns indicates the significance of the event’s impact on the company. This is the idea of this methodology. Although there are some previous studies using the event study methodology to measure the impact on the information companies⁵⁶⁷, there is no study investigating the impacts of smartphones.

We also use the five-year financial profit data for describing the impact on telecommunications carriers and handset manufacturers by the iPhone emergence.⁸

4. Data

First, we research the first iPhone services in U.S.A, Europe and Japan. Then we also research the event dates that the iPhone service were announced, the stock returns data of telecommunications carriers and handset manufacturers, and financial profit data of the

¹ “I don’t think it(iPhone) changes the game plan.”(US Carrier, 2007)

² “....nothing to fear from the Apple’s iPhone/iTunes combination, Google’s Android, and even Nokia’s Ovi.”(Europe Carrier, 2007)

³ “Japanese feature phones are much easier to use than smartphones.”(Japan Carrier, 2008)

⁴ We employ the methodology from MacKinlay [1997], as presented in Appendix 1.

⁵ Trillas [2002] investigates the change of shareholders’ value of 12 telecommunications firm acquisitions in Europe.

⁶ Zhong, Cao, and Ning [2008] examines the impact of the Telecommunications Act of 1996 on the profitability and efficiency in the broadcasting industry.

⁷ Rieck [2010] examines the transformation of the telecom industry through diversification.

⁸ There is an alternative method to apply the “long-term event study” which examines the impact by the long-term financial data or stock returns data. However, academic literature explains that there are problems of robustness on the “long-term event study”. Therefore, we do not employ the “long-term event study” in this paper.

telecommunications carriers and the major handset manufactures.

Then, we measure the change of each company's stock returns around the event dates, by which we can estimate the impact of iPhone emergence on the telecommunications carriers and the handset manufacturers.

At last we examine the financial profit of the telecommunications carriers and the handset manufacturers for five years after the iPhone emergence.

5. Results

5-1. The Impact on telecommunications carriers measured by the Event Study methodology

5-1-1. U.S.A.

On January 9th, 2007, Apple and Cingular Wireless, AT&T's subsidiary at the time, announced the first iPhone launch and the exclusivity of Cingular as its iPhone service provider. Figure 1 shows the event study results by 1st iPhone in U.S.A. AT&T, an iPhone-affiliated-carrier, is neutral by the iPhone emergence but each of Verizon and Sprint Nextel, a non iPhone-affiliated-carrier, has statistically negative impact by the event. We also see that Apple, iPhone manufacturer, has statistically positive impact by the event.

[Figure 1]

5-1-2. Europe

On September 18th, 2007, Apple and O2, a subsidiary of Telefonica, announced the 1st iPhone service in UK and the O2's exclusivity as its iPhone service provider. This was the 1st iPhone service announcement in Europe. Figure 2 shows the event study results by 1st iPhone in Europe. Telefonica, an iPhone-affiliated-carrier, is neutral by the iPhone emergence but each of France Telecom and Vodafone, a non iPhone-affiliated-carrier, has statistically negative impact by the event. Deutsch Telecom, another non iPhone-affiliated-carrier, has neutral by the event.

[Figure 2]

5-1-3. Japan

On June 4, 2008, Soft Bank announced their release of 1st iPhone in Japan. Figure 3 shows the event study results by 1st iPhone in Japan. All the Carriers have no statistically significant impact from the event.

[Figure 3]

5-1-4. Summary

In summary, regardless of regional difference, iPhone-affiliated-carriers are statistically neutral by the announcement of iPhone emergence. However, almost of all Non-iPhone-affiliated-Carriers have negative impact by iPhone emergence.

5-2. The Impact on telecommunications carriers measured by the profit change

5-2-1. U.S.A.

Figure 4 shows the five year financial profit change after the iPhone emergence in U.S.A. All the telecommunications carriers increase their profit. Apple's profit has also increased hugely,

[Figure 4]

5-2-2. Europe

Figure 5 shows the five year financial profit change after the iPhone emergence in Europe. The profit of each telecommunications carriers seems stable. More specifically, profits of Vodafone and DT are almost unchanged but Telefonica and France Telecom decrease their profits in Five years.

[Figure 5]

5-2-3. Japan

Figure 6 shows the five year financial profit change after the iPhone emergence in Japan. Soft Bank, the iPhone affiliated Carrier, has increased its profit hugely. However the other two carriers' profits has been almost unchanged.

[Figure 6]

5-2-4. Summary

In summary, telecommunications carriers in U.S.A. and Japan grow their profits or maintain the profits at worst. Telecommunications carriers in Europe reduce their profits or maintain their profits at best.

5-3. The Impact on handset manufacturers measured by the Event Study methodology and profit change

5-3-1. Event study results

Figure 7 shows the event study results by 1st iPhone on handset manufacturers. Apple, an iPhone manufacturer, has statistically positive impact by the first iPhone announcement, whereas almost of all other manufacturers have statistically negative impact by the event.

[Figure 7]

5-3-2. Profit change results

Figure 8 shows the five year financial profit change on handset manufacturers after the 1st iPhone emergence. Apple increased its profit hugely. Samsung and Research in Motion, smartphone centered manufacturers, increased their profits, and other manufactures decreased their profits.

[Figure 8]

5-3-3. Summary

In summary, handset manufacturers are largely separated to two groups by the iPhone emergence. One is Apple, and two is the others. Apple has significantly positive returns by event study and has been growing its profit hugely. Other handset manufactures suffer the huge negative impact by iPhone emergence, although Samsung is pretty successful by profit measure.

6. Discussion

When we go back to our research question, “How does the emergence of iPhone generate the impact on the telecommunications carriers and the handset manufactures in U.S.A, Europe and Japan?”, we can summarize the research results as follows.

Regarding telecommunications carriers, the impact measured by the event study and the financial profits change are different. The event study results imply that the impact of iPhone emergence is neutral to the iPhone-affiliated-carriers. This does not mean that the iPhone has no impact on the iPhone-affiliated-carriers substantially. We may easily figure the positive features and negative features of iPhone’s impact on the iPhone-affiliated-carriers. We think those two features balance out each other. The event study results also imply that the iPhone emergence has negative impact on the non-iPhone-affiliated carriers.

The financial profit results show the very different picture of telecommunications carriers compared to the event study results. Regardless of iPhone affiliation, the telecommunications carriers in U.S.A. and Japan maintain or grow their profits, whereas many telecommunications carriers in Europe reduce their profit after the iPhone emergence in 2007. These results imply that the regional competition environment and policy basis have more influence on the profit of telecommunications carriers than the devices or services strategy developed by telecommunications carriers themselves.

Regarding handset manufactures, both the event study results and the profit change results show that the handset manufactures are largely separated to two groups after iPhone emergence. One is Apple, and two is the others. Apple has significant positive impact by iPhone measured by both event study and profit change. But almost of all other handset manufacturers suffer the huge negative impact by iPhone emergence. Samsung is the only exception that maintains its profit.

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[Appendix] Process of event study method

First, we describe the stock return and market index return as

$$R_{it} = (P_{it} - P_{it-1}) / P_{it-1}$$
$$R_{mt} = (I_t - I_{t-1}) / I_{t-1} ,$$

where P_{it} represents the stock price of the i th firm at time t , R_{it} signifies its rate of return, I_t stands for market index at time t , and R_{mt} denotes its rate of return. Then we use the market model to specify the normal returns of the security i as

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it},$$

where ε_{it} presents the zero mean disturbance term. Based on the estimated parameters α_i and β_i , the abnormal return for the security of firm i in period t is computed as

$$AR_{it} = R_{it} - (\alpha_i + \beta_i R_{mt}).$$

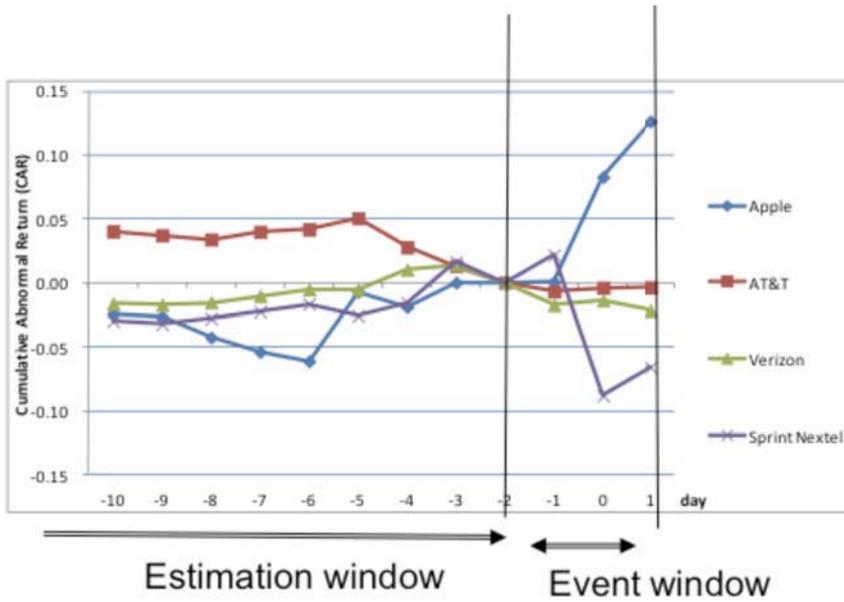
The cumulative abnormal return is calculated as shown below.

$$CAR(t_1, t_2) = \sum AR_{it}$$

Assuming that each event does not affect the mean or variance of returns, we can test whether the average CAR is equivalent to zero using the following t -statistics.

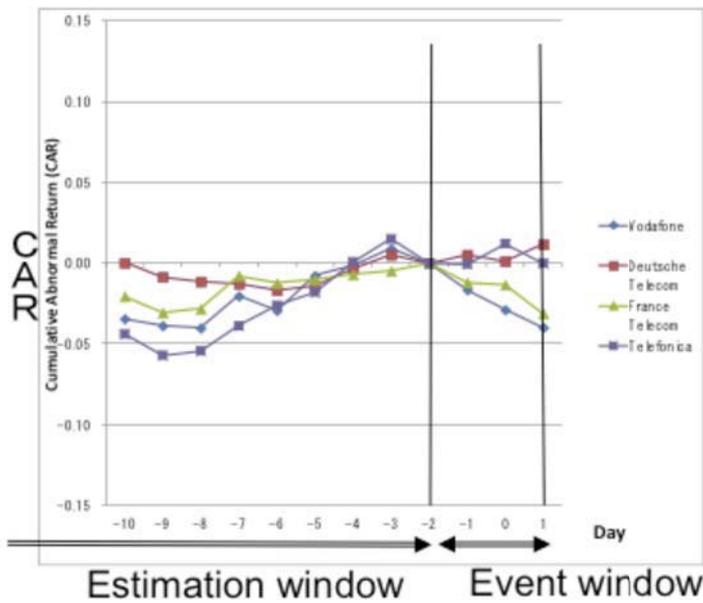
$$t = CAR(t_1, t_2) / \sigma(t_1, t_2) \sim N(0, 1)$$

[Figure1] The event study results on telecommunications carriers by 1st iPhone in U.S.A.



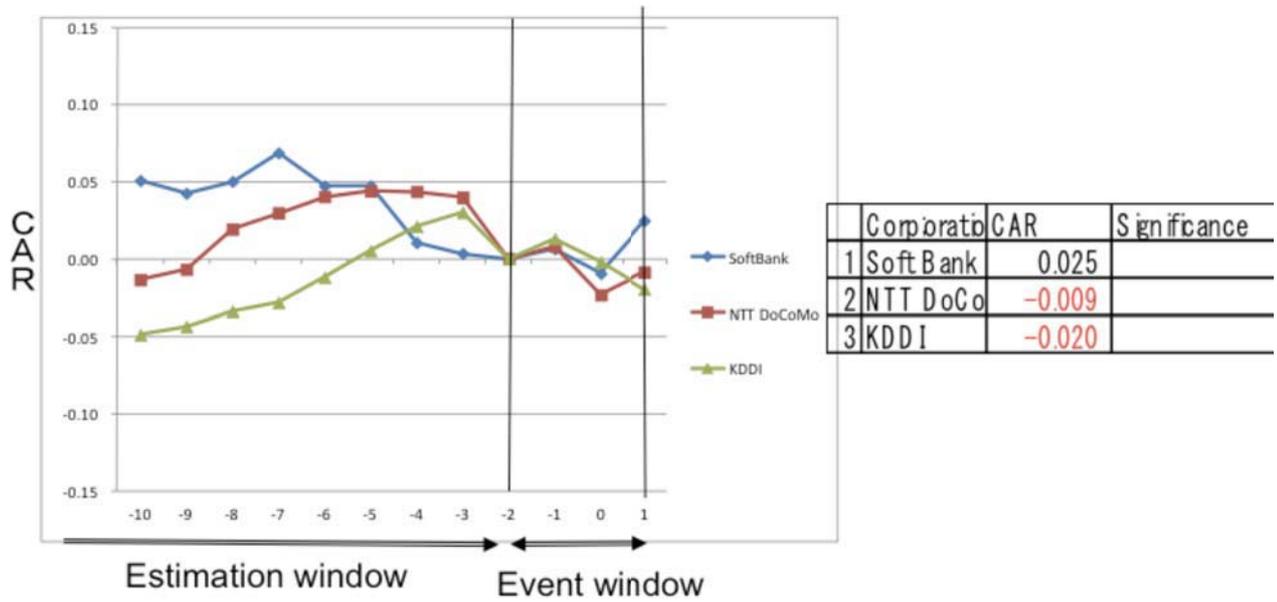
Corporations	CAR	Significance
1 Apple	0.126	***
2 AT&T	-0.004	
3 Verizon	-0.022	**
4 Sprint Nextel	-0.066	***

[Figure2] The event study results on telecommunications carriers by 1st iPhone in Europe

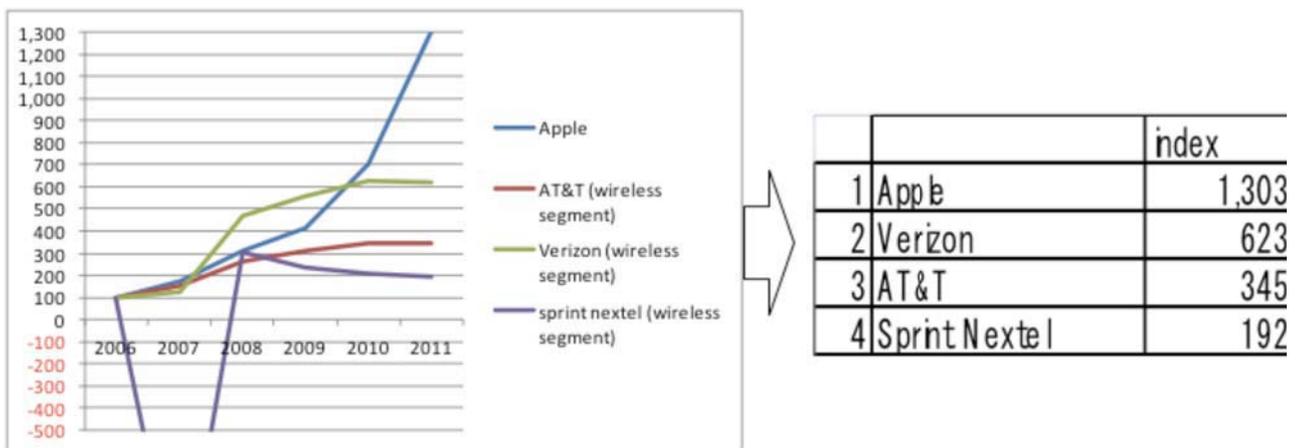


Corporations	CAR	Significance
1 Deutsche Telekom	0.012	
2 Telefonica	-0.000	
3 France Telecom	-0.031	***
4 Vodafone	-0.040	***

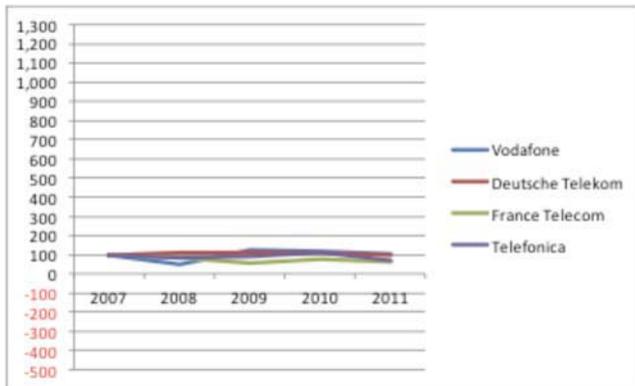
[Figure3] The event study results on telecommunications carriers by 1st iPhone in Japan



[Figure4] Five year financial profit change on telecommunications carriers after the iPhone emergence in U.S.A

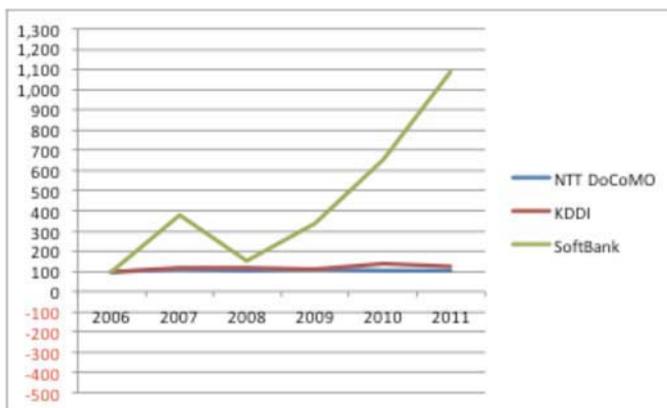


[Figure5] Five year financial profit change on telecommunications carriers after the iPhone emergence in Europe



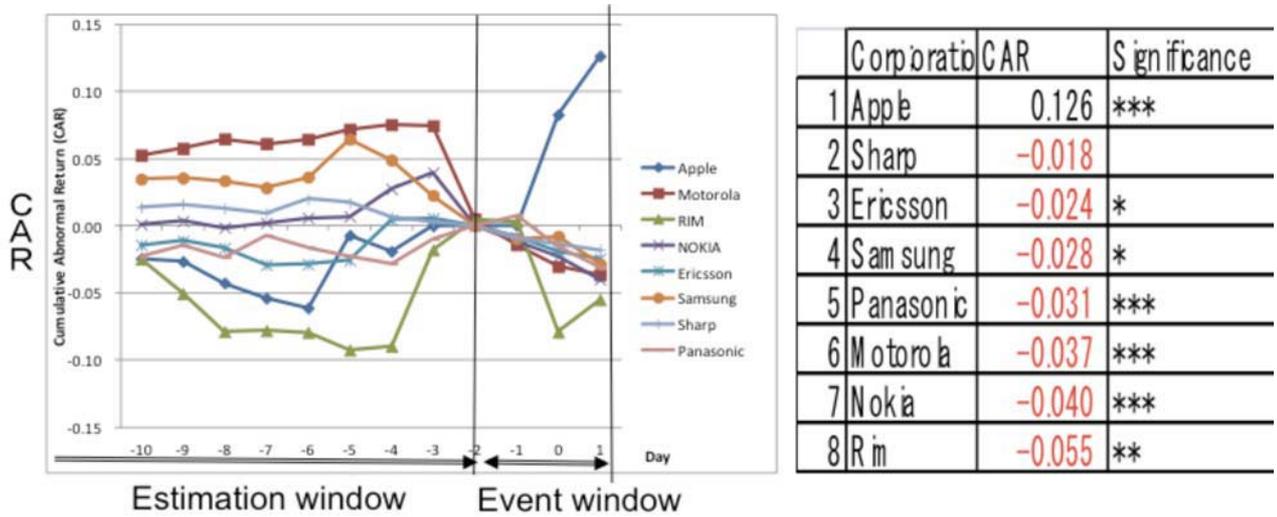
		指数
1	vodafone	104
2	deutsche Telekom	97
3	Telefonica	62
4	FranceTelecom	68

[Figure6] Five year financial profit change on telecommunications carriers after the iPhone emergence in Japan

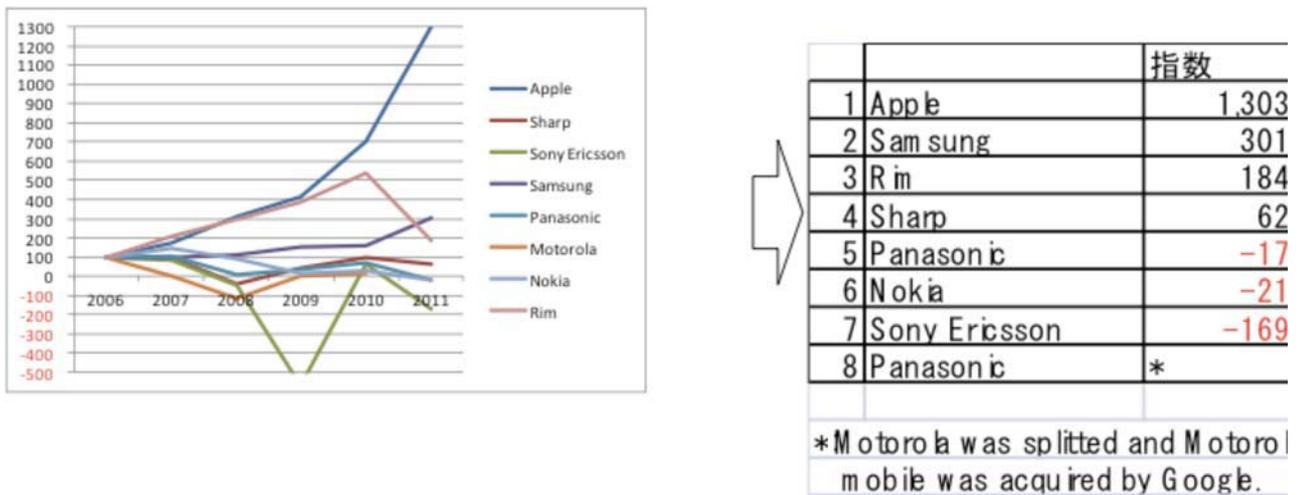


		指数
1	SoftBank	1,088
2	KDDI	128
3	NTT DoCoMo	101

[Figure7] The event study results on handset manufacturers by 1st iPhone



[Figure8] Five year financial profit change on handset manufacturers after the 1st iPhone emergence



By Fax: 28035111 and By Mail

14 December 2012

Mr Y K Ha
Deputy Director-General (Telecommunications)
Office of the Communications Authority
29/F Wu Chung House
213 Queen's Road East
Wanchai, Hong Kong

**Restrictions of Apple's iPhone 5 and new iPad models in respect of
Interworking with LTE Networks in Hong Kong**

Dear Y K

I refer to the presentation made by OFCA entitled "*Restrictions of Certain Mobile Terminals in respect of LTE Networks*" in the recent meeting of Telecommunications Regulatory Affairs Advisory Committee ("TRAAC") held on 12 December 2012 and the respective newspaper articles on the captioned subject matter published today (14 December 2012) on Apple Daily (蘋果日報) and Sharp Daily (爽報).

In view of the detrimental impact on customer choice of Apple's current practice and potentially serious anti-competitive effect on the mobile carrier market in Hong Kong, I have to re-iterate in this letter the views that I made in the TRAAC meeting. By copying this letter to the members of the TRAAC, I, as the representative of the Hong Kong Telecommunications (HKT) Group companies, wish that these matters will be widely discussed and resolved as soon as possible.

- (a) During the liberalization of the local telecommunications markets of Hong Kong (and indeed of most developed economies), the telecom regulator (i.e. the former OFTA) took over from the incumbent operator the power to type approve Customer Premises Equipment ("CPE") that could be purchased and connected to the local telecommunications networks for the provision of public telecom services in Hong Kong. The CPE type approval process is now regulated by OFCA and is primarily based on international standards and as such has facilitated customer choice in CPE (e.g. handsets from various mobile phone vendors). Other pro-consumer and pro-competition provisions such as number portability and the 1997 SIM Lock statement have further ensured that a consumer can switch from one network service provider to another without changing his/her own choice of CPE and mobile phone number.

- (b) Apple's current practice in respect of the interworking of iPhone 5 (and the new iPad models) and specific 4G LTE networks is straightforward. Apple, rather than the consumer, determines via the iPhone 5 SIM locking device which networks the consumer may use and which networks the consumer may not use. Apple, in effect, is imposing its will on the **Type Approval of LTE equipment and networks in Hong Kong, an approach that the regulator expressly rejected in the mid 1990's**. To be clear, under the Apple SIM lock, Apple unilaterally determines which 1800 MHz LTE networks the owner of iPhone 5 may choose to use. As stated above, any unilateral Type Approval of CPE by licensees or other parties has long been prohibited in Hong Kong. Apple's current restrictive practice unilaterally re-instates a de facto Type Approval process. As pointed out by OFCA in the meeting, Apple so far has not disclosed (nor responded to OFCA's request for) its criteria or basis on its selection or defacto "Type Approval" process in relation to allowing any particular LTE network to interwork with its iPhone 5 (despite the fact that all 1800 MHz LTE networks in Hong Kong meet the relevant international technical standards). Such unilateral and non-transparent selection or "Type Approval" process contradicts the pro-competition and pro-customer choice principles that the Hong Kong SAR Government established in the liberalization of the telecommunications markets.

HKT has filed with OFCA various submissions in relation to the captioned matter beginning in September 2012, as soon as Apple's restrictive practice was made known to the market. As reported in the newspaper articles of Apple Daily and Sharp Daily today, it is most worrying that Apple's current restrictive practice is in fact leveraging its market power in the smartphone market such that only the LTE network operators who are willing to commit to the high volume of iPhone 5 sales would be selected or "Type Approved". Such anti-competitive practices would clearly violate Section 7K of the Telecommunications Ordinance and the TA's 1997 SIM Lock Statement. OFCA should immediately take action and issue a direction to require Apple to stop this restrictive practice and thereby protect both consumers and the competitive process.

For completeness, I would reference our complaint dated 28 September 2012 in which we indicated that Apple, a holder of a Radio Dealers (Unrestricted) License, was in clear breach of the TA's 1997 SIM Lock Statements by barring the ability of its iPhone5 to connect to the 4G LTE networks of any 4G network selected by customers. That is, if a mobile operator opts not to agree to Apple's onerous distribution agreement, then Apple will not allow consumers to use that mobile operator's network. Apple therefore limits customer choice and restricts competition, all in direct violation of the 1997 SIM Lock Statement and Section 7K of the Telecommunications Ordinance. Apple's conduct also constitutes an abuse of market power, in breach of Section 7L of the Telecommunications Ordinance.

The 1996 and 1997 SIM Lock Statements make it clear that SIM locking as undertaken by Apple:

- would prevent consumers from easily switching between services in order to obtain better quality or lower prices, or enjoy the services of another network;
- adversely affects both customer choice and competition in the mobile market
- SIM locking breaches the fundamental right of customer choice
- SIM locking is prohibited

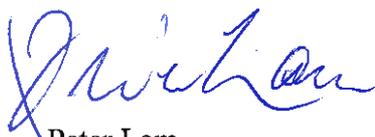
As to Section 7K, it explicitly bars anticompetitive hard bundling. The provision of customer equipment cannot be conditioned upon the person acquiring that equipment (e.g. the iPhone5) also acquiring a specific telecommunications service (i.e. 4G LTE service) from a specific Apple distributor (such as Smart one, CSL or Hutchison). Nor can a licensee with Apple's power in the market use that power to anticompetitively engage in line forcing by threat of locking out the networks of operators who refuse to buy large volumes of Apple's product.

Traditionally, Hong Kong has not allowed one operator/handset vendor to tie popular mobile telecommunication devices such as the phone to one network to compel consumers who want to use the phone to take up a subscription on that network. Instead, customers have been free to purchase phones (and other handsets) separately from the mobile network services. A key reason for this (per the TA Statement referred to above) is that it promotes competition between the mobile operators and allows customers choice both as to handsets and the operator they prefer to contract with, by not artificially increasing barriers to switching.

This matter is clear. Consumer choice has been restricted by Apple's action in Type-approving networks. The competitive process is under attack. An important pro-competitive TA Statement has been clearly breached. The competition provisions of the TO have also been breached. Time is of the essence. OFCA action is required to protect the consumer interest and to minimize the damage being caused not only to operators such as HKT, but to the vibrancy and effectiveness of Hong Kong's telecommunications markets. To fail to do so will undermine the importance and legal force of the Telecommunications Ordinance.

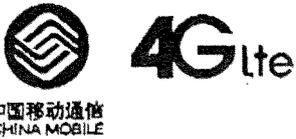
As a final note, I should have also thought it self-evident that it is OFCA's responsibility, not Apple's, to regulate networks and network standards in Hong Kong and OFCA ought not take this usurping of its functions lightly.

Yours sincerely,



Peter Lam
Managing Director
Engineering

cc (by emails) to members of the TRAAC



19th Dec., 2012

Office of the Communications Authority
29/F, Wu Chung House,
213 Queen's Road East,
Wan Chai,
Hong Kong

Attn: Mr. YK Ha
Deputy Director-General

Dear Mr. Ha,

Re: Restrictions of certain mobile terminals in respect of LTE networks

We refer to the subject issue presented by OFCA in the Telecommunications Regulatory Affairs Advisory Committee (TRAAC) meeting on 12th Dec. 2012.

On the issue of iPhone 5 and iPad being restricted to work on certain mobile operators' LTE networks only, we write to express our views as follows:

Our understanding is that by deploying SIM lock, Apple has restricted the owners of the handsets which network they may choose. If that is the case, there may be issues under the OFCA's Statement entitled "Way Forward of "SIM Lock"" ("the Statement").

Specifically, we take note that under paragraph (c) of the Statement, "if "SIM Lock" is solely used for the purpose of tying customers to networks other than for the purposes stated in (a) and (b), it may adversely affect competition in the mobile industry."

The above SIM lock practice will also have implications under s7K of the Telecommunications Ordinance. Under s7K (3)(b), a licensee will be considered as engaging in anti-competitive practices if the licensee "... makes the provision of customer equipment or service conditional upon the person acquiring or not acquiring a specified ... customer equipment or service, either from the licensee or from another person."



4Glte

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51 Kwai Chung Road, Kwai Chung, New Territories, Hong Kong

中国移动香港有限公司
China Mobile Hong Kong Co. Ltd.

In this case, the provision of iPhone 5 (customer equipment) by Apple is conditional upon that customer's acquiring service from a specified network service provider (which has distribution agreement with Apple). Such practices seem to have breached the aforesaid s7K (3)(b). Such anti-competitive effects can potentially have material implications on market monopolization considering that Apple is one of the major leading handset vendors.

Besides, as a top tier global handset manufacturer, the action of publishing operator's name that can support LTE networks may mislead consumers into believing that only those named operators will have better network quality.

We are also concerned that customer's option to choose its preferred telecom service networks has been severely fettered, if not deprived of, under such SIM lock arrangements. It is not fair for customers that have already paid for the device, but have no freedom on operators selection; especially those customers who purchased devices in the open market (i.e. not from operators).

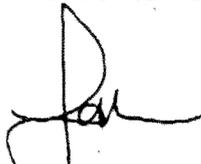
Last, we are concerned that such practice will set a bad precedent for the industry and such adverse impact will further replicate itself if other vendors follow suit and copy this arrangement. This is definitely detrimental to the healthy development of the telecom market as a whole.

We would urge OFCA to look into the above practices as soon as possible and see if there are any breaches of the Ordinance and the Statement.

Yours faithfully,

For and on behalf of

China Mobile Hong Kong Company Limited


w Sean Lee
Director and Chief Executive Officer