

13 June, 2013

Dear Honorable Members of the Legislative Council,

Consultancy Study in relation to the Impact on Service Quality and Customers of Re-Assigning the Spectrum in the 1.9-2.2 GHz Band (“3G Spectrum”).

We write to bring to your attention the enclosed letters dated 31 May and 7 June 2013 which were sent to the Communications Authority (“CA”) and Office of the Communications Authority (“OFCA”) relating to the above subject.

You will recall, at the Panel hearing on 27 March 2013, the Government announced that it would be commissioning a study to look at the impact on consumers and service quality of its proposal to take back part of the 3G Spectrum currently held by the mobile operators (“Study”).

Despite our repeated requests, at present there is no indication whatsoever from the Government of any intention to fully consult the industry and the public on the results of the Study after it is completed. **We are gravely concerned that the Government may simply announce the results of the Study together with its decision on the 3G Spectrum in October 2013 without firstly seeking the views of the industry and the public.**


Moreover, while the Government has now appointed a consultant to carry out the Study, we are deeply concerned, as expressed in our letters, that there are serious defects in the way the Study is being conducted and that the Government has not allowed sufficient time for a proper study to be carried out. These factors will ultimately undermine the usefulness of the Study.

In view of above and the fact that the CA and OFCA have not responded to our letters yet, we would respectfully request the assistance of the Panel to obtain answers from the Government, before the summer recess of the Legislative Council, on the following:

1. Whether the Government will make public the results of the Study as soon as they are available;
2. Whether the Government will conduct a full and proper consultation with the industry and the public on the results of the Study; and
3. Whether the Government will extend the October 2013 deadline to permit a proper Study as well as a proper public consultation on the Study results to be carried out.

Yours sincerely,

Encl. (1) and (2)



Alison Ko
General Counsel
Legal and Regulatory Affairs
CSL Limited



Stuart Chiron
Head of Group Regulatory Affairs
Hong Kong Telecommunications (HKT) Limited

A handwritten signature in black ink, appearing to read 'William Brown', written over a horizontal line.

William Brown
Head of Regulatory Affairs
Hutchison Telephone Company Limited



Elaine Lau
Head Legal Counsel
SmarTone Mobile Communications Limited

By Fax (2507 2219) and By Mail

31 May 2013

Mr Ambrose Ho, SC, JP
Chairman
Communications Authority
20/F Wu Chung House
213 Queen's Road East
Wanchai
Hong Kong

Dear Mr Ho

Arrangements for the 1.9-2.2 GHz Spectrum

As you know, the Secretary for Commerce and Economic Development ("SCED") and the Communications Authority ("CA") are targeting October 2013 to issue the determination of what will happen when the existing 1.9-2.2 GHz spectrum assignments expire in October 2016. Due to recent significant new developments, we believe that this target, which was always ambitious, has now become unrealistic, and is causing the important technical Study which OFCA has recently commissioned to be rushed through with undue haste and without proper consultation. The decision on the future of these spectrum assignments is critically important for Hong Kong consumers, the mobile operators and Hong Kong as a whole. Proper consideration needs to be given to all the implications of each of the three options which have been proposed, with full analysis and due consultations, before the decision is made. We therefore request that the CA exercises its discretion without delay to extend the October 2013 timeline to allow sufficient time to be built into the timeline for the Study to be undertaken thoroughly with input from the operators, including feedback and comment during the Study process, and for a Third Consultation Paper to be brought out once the Study is completed and published, to allow for public comment on this important issue before any determination is made.

At a public hearing held by Legco's Panel on Information Technology and Broadcasting on 27 March 2013, close to the end of the (extended) second consultation period, OFCA announced publicly for the first time that it was in the process of appointing an independent consultant to conduct a study into the adverse impact of OFCA's preferred Option 3 on customer service quality (this was after acknowledging in the Second Consultation Paper issued on 28 December 2012 that customer service quality would deteriorate under its preferred Option 3, that download speeds would decrease by approximately 18%, but that SCED considered this level of degradation to be "acceptable").

The operators each received a letter from OFCA dated 6 May 2013 confirming that the consultant, Network Strategies, had been appointed, and inviting them to individual interviews with the consultant on 14 and 15 May 2013. At those meetings, the signatories of this letter were presented with Network Strategies' timeframe for completion of the Study, a mere eight weeks. Apart from envisaging the furnishing of a large volume of data by each operator by 24 May, (without any non disclosure agreements being in place to protect the confidential nature of the information and data requested), it became apparent that (a) there was no plan to consult the operators on the proposed methodology for conducting the Study, in spite of Hong Kong's

unique telecommunications environment and the operators' experience thereof; (b) the consultant is required to submit to OFCA within six weeks a draft final report, and OFCA reserves the right to circulate that report to others, and to take into account any comments received before finalizing the report in week eight; (c) any input from the licensees will therefore be limited and (d) no re-appraisal of the costs and benefits of the various options taking account of the results of the Study, or public consultation on the Study and such re-appraisal, was envisaged. Clearly this does not constitute proper consultation, and is not conducive to a properly informed assessment.

It seems that these shortcuts are being taken only because of the target to make a decision by October 2013, a target which in turn is being driven by a statement made by the (then) Telecommunications Authority in 2008 stating that at least three years' advance notice would be given to (the incumbent) operators "insofar as it is practicable in the circumstances". It is our contention that the need to conduct a proper technical study into the service degradation issue; to consult on its methodology and findings; to re-appraise the costs and benefits of the three options in the light of the results of the Study; and to consult the public on the Study report and such re-appraisal has made the October 2013 target impracticable for a properly-informed decision to be made. We would therefore urge the CA to exercise its discretion to extend the October 2013 date for issuing the determination, and would suggest that a period of several months would be appropriate. It would be grossly unfair if a notice period that was intended to assist the incumbent 3G network operators ends up harming them, and their customers, through an unnecessarily rushed and procedurally unfair process. Since the notice period is for the benefit of the incumbent 3G network operators, and we are all agreeable to the several months' extension, we trust this request will meet with your approval, especially in view of the obvious public benefits of a proper, thorough appraisal and consultation process. Allowing a full consultation and consideration of the report and comments would certainly be in the public interest. If this adds several months to the current time-line it would on balance be preferable altogether to a rushed or incomplete analysis.

In addition, the method of determining the level of the spectrum utilization fee ("SUF") will be affected by the decision of which option to be adopted by the Government. According to the Plum report¹, the Government's proposed charging of the SUF is grossly excessive: about four times higher than the average of the relevant international benchmarks. Also, the proposed calculation methodology is non-transparent and seriously flawed. It is our contention that the Government should consult the public and the industry on a reasonable level of the SUF.

Finally, we would respectfully request a meeting with the CA so that we can explain further our views, and why we believe an extension period of several months is appropriate.

We look forward to hearing from you.

Yours faithfully

cc: Mr Gregory So, GBS, JP, Secretary for Commerce and Economic Development (fax: 2110 1056)
Hon Charles Mok – Member of the Legislative Council (fax: 3020 9867)

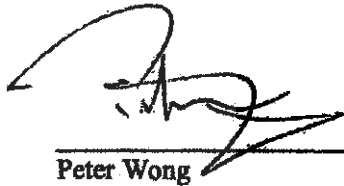
¹ Submission in response to OFCA's second consultation on "Arrangements for the Frequency Spectrum in the 1.9-2.2GHz Band upon Expiry of the Existing Frequency Assignments for 3G Mobile Services"

Phil Mottram

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By Fax 2803 5111 and Post

7 June, 2013

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

Dear Danny,

Consultancy Study in relation to the Impacts on Service Quality and Customers of Adopting a Hybrid between Administratively-Assigned and Market-based Approach in Re-assigning the Spectrum in the 1.9 – 2.2 GHz Band ("Study")

Thank you for arranging the meeting on 4 June 2013 at which your consultant, Network Strategies ("NS"), explained to us the model which they are currently constructing for the purposes of the Study. The discussion was useful in helping us to better understand the workings of the model and the data inputs we need to provide to NS to enable them to generate the required outputs from the model.

It has now become clear, however, that certain major deficiencies concerning the model, which we identified in our letter to you dated 28 May 2013, are still not being addressed. For instance, the costs to mitigate service degradation impacts are being ignored in the model, and there are definitional issues surrounding the data being requested (e.g. hotspots) which, if not clarified, would produce meaningless results. Added to this, during the course of the meeting, we found that certain critical network parameters had not been considered by NS in their model, but which NS admitted would prove useful in improving the accuracy of the results derived from the model. Some examples are given in the Appendix.

In spite of these issues which were identified during the meeting, we were informed by NS that the data requested should be submitted by 6 June 2013 at the latest (i.e. two days after the meeting); otherwise, due to the tight timeframes to which they were working, they would have no choice but to make their own assumptions and use them in place of operator data. Self evidently, this is not acceptable given the importance of the model and the need to make use of actual operator data to produce results which reflect the real situation.

In fact, when specifically questioned as to the sufficiency of the timeframe which has been given to NS to produce their model, NS candidly admitted that the accuracy of the model would be much improved if more time were allowed to develop the model and to solicit the required inputs and comments from the operators. As it stands, however, they are constrained by the timetable set by OFCA so they are only able to produce whatever they can manage within the given timeframe which, as we are fully aware, is driven by the Communications Authority's ("CA's") target to make a decision by October 2013 on the treatment of the 1.9 – 2.2 GHz spectrum expiring in 2016.

Furthermore, as we discovered during the course of the meeting, although the model would examine the impact on service quality of a range of possible scenarios, NS would only be required to put forward to OFCA the three most likely scenarios. However, NS were not able to elucidate what exact criteria they would use to select these three outcomes or confirm whether we would be allowed to input into that selection process. Obviously, the choice of outcomes would have a direct effect on the quantified level of service degradation.

As you can imagine, we were very concerned to hear this. The outputs from the model will be critical to the decision as to how to deal with the spectrum in the 1.9 – 2.2 GHz band. It is therefore crucial that we are allowed to input into each of the decisions made by NS and that sufficient time is provided to construct a full and accurate model with actual operator data that will reflect the actual impact on service quality and the customer experience of implementing Option 3. Without a well-built model that reflects the actual constraints on the networks and service provided by the operators, the Government cannot possibly be in a position to make a reasoned decision based on solid findings.

Accordingly, we would strongly reiterate the request we made to the CA in our letter dated 31 May 2013 (attached) to extend by several months the deadline for making a decision on this matter. This would undoubtedly permit a much more robust model to be constructed to support the Government's future decision-making process and is consistent with the need to ensure that a fair procedure is conducted by the CA in the Consultation given the importance of the decision which is ultimately made to the operators and to the public at large.

Yours sincerely,

cc Mr Gregory So, Secretary for Commerce and Economic Development (Fax: 2110 1056)
Mr Ambrose Ho, Chairman, Communications Authority (Fax: 2507 2219)
Hon Charles Mok, Member of the Legislative Council (Fax: 3020 9867)

Appendix

Examples of the deficiencies of the model proposed by Network Strategies:

- **Download throughput:** The current model only looks at download throughput, which is only one of the parameters to dimension a network. The model needs to consider power, code, uplink noise level, voice and also signaling limitation to properly dimension a network. A typical example is MTR sites – uplink noise rises during peak hours causing very poor user experience that could not be improved by expanding download capacity. Therefore, the current model will significantly underestimate the customer impact.
- **Proxy for customer experience:** Reduction of average download throughput as the only proxy for customer experience is wrong. Instead, the model should look at the number of customers who will experience poor speeds that are insufficient to perform usual tasks such as watching a movie or Youtube in HD, which is what more than 50% of the smartphones are used for in Hong Kong. This needs the definition of a minimum speed standard (different minimum speed requirements for different services), and the percentage of cell sites not meeting this minimum standard or not delivering this minimum throughput to individual customers should be used as a proxy to determine service impact.
- **Scenario analysis:** Network Strategies should show the possible range of outcomes, from status quo to worst case scenario. Network Strategies should then select the scenario with the worst impact to customers as one of the three outcomes to present to OFCA as this was the basis for OFCA's calculated 18% average degradation in data download speed. At a minimum, the scenarios should be agreed with the operators.
- **Hotspots:** Hong Kong is one of the most densely populated and built-up cities in the world. Hot spots are everywhere in the territory. To obtain a meaningful view of the customer impact, it is not sensible to look at averages. Operators use sophisticated simulation tools to estimate customer impact for all cells in the network, using daily and hourly data. Even if operators provide "hotspot" areas, it would be wrong to average over the entire hotspot area as this would largely underestimate the impact. As an example, Causeway Bay can be an area of 3 km² with 100 cells. However, not all 100 cells carry the same traffic - each one is different.
- **Spectrum efficiency gain in 3G:** Network Strategies would greatly underestimate customer impact if they use their theoretical assumption of 3G efficiency gain with the introduction of new technology such as MIMO 4X4. There are no plans for any device to support this technology at present. Device vendors prefer to invest in 4G devices instead of further development on the older 3G technology. Theoretical assumptions of this kind should not be taken lightly when we are talking about real customer impact in a real live network.



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