SmarTone Mobile Communications Limited's Response to OFCA Consultation Paper

"Arrangements for the Frequency Spectrum in the 1.9 – 2.2 GHz Band upon Expiry of the Existing Frequency Assignments for 3G Mobile Services"

1. SmarTone Mobile Communications Limited ("**SmarTone**") is pleased to provide comments on the consultation paper "Arrangements for the Frequency Spectrum in the 1.9 – 2.2 GHz Band upon Expiry of the Existing Frequency Assignments for 3G Mobile Services" ("**Consultation Paper**"), by which the Communications Authority ("**CA**") seeks views and comments on possible options as to how the frequency spectrum in the 1.9 – 2.2 GHz band should be assigned when the existing 3G frequency assignments expire in October 2016.

OVERALL COMMENTS

Arrangements should promote the long-term benefit of the industry and consumers

2. The Hong Kong's mobile market is well recognized as one of the most competitive market in the world. Mobile penetration had crossed 100% as early in 2003. Prices of mobile services are generally low as compared to the cost of living in Hong Kong.

3. Hong Kong has one of lowest population per mobile network operator in the region. Despite the small size of the market, Hong Kong's mobile market now has five mobile network operators. Furthermore, there are eleven mobile virtual network operators ("**MVNO**") as of June 2012. The Hong Kong's mobile sector has undergone several consolidations in the past. In 2004, PCCW has acquired Sunday. In 2005, China Mobile has acquired Peoples Telephone. There was also the merger between two mobile operators, CSL and New World, in 2006. These merger and acquisition ("**M&A**") activities may well reflect that the Hong Kong's mobile market has been over-served.

4. In such a keenly competitive market, it is noted that the majority of industry stakeholders' focus has been on price competition. This is at a significant cost to the industry and consumer since service level and innovation would have been compromised as a result. It is therefore doubtful any further increase in the number of network operator in the market would be in the interests of the industry and consumers.

5. As stated in section 4 of the Communications Authority Ordinance (Cap. 616), one of the factors that the CA must have regard to in performing its function is "*the encouragement of innovation and investment in the communications market*". SmarTone welcomes this guiding principle of the CA and believe this would be an important consideration by the CA regarding such a major policy decision on the licensing arrangement for the 3G frequency.

Right of First Refusal is in public interest

6. Option 1 (i.e., to offer the right of first refusal ("**RFR**") to the incumbent 3G operators) is no doubt in significant public interest. SmarTone appreciates that the Consultation Paper also acknowledges the following key benefits of adopting option 1:
    - Customer service continuity;
    - Certainty and incentive for continued and long-term investment and innovation; and
    - Efficient spectrum utilization through continuous capital investment and more certain spectrum planning.

7. It is worth noting that Australia has recently adopted licence renewal arrangement similar to option 1 based on public interests consideration[1].

8. Similarly, the UK's 3G mobile licences have been transferred to indefinite licences, subject to an annual fee payable to the UK Government. It is noted that one of the purposes of the UK's initiative is to create greater investment certainty for operators[2].

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[1] Radiocommunications (Class of Services) Determination 2012

[2] Wireless Telegraph Act 2006 (Order 2010)

9. Option 1 is a logical choice under a cost and benefit analysis. There are clear benefits of adopting option 1 as above-mentioned. On the other hand, the cost of not adopting option 1 is substantial. Not only that all the aforementioned benefits would be forgone, but the industry and the community as a whole would also have to bear significant costs in case the 3G spectrum is subject to re-auction, as proposed in options 2 and 3.

Importance of Regulatory Certainty

10. Regulatory certainty is crucial to any business. In particular, telecommunications industry requires substantial and continued investment in network infrastructure and service innovation. It is well recognized that any uncertainty over licence renewal would discourage capital investments and hamper longer term investment and innovation.

11. In 2004, the former Telecommunications Authority ("**TA**") had decided to offer RFR to the 2G operators with GSM and PCS frequency bands, based on the following considerations:
    - Efficient use of spectrum by licensees
    - Importance of providing a stable investment environment
    - Continuity of customer service
    - Licensees had been providing satisfactory service with continuous investments and improvements

12. SmarTone agrees that the RFR should not be offered unconditionally to incumbent operators. It should be subject to the same set of criteria as in 2G licence renewal to ensure efficient use of spectrum as well as customer benefits are best served.

13. As licence renewal arrangement is a major policy decision, we believe any decision deviating from the previous practice and principles requires fundamental reasons to justify the decision. Moreover, such decision would send a signal to the market that regulatory certainty is not provided, which would affect the incentive to investment and innovation to a far reaching extent. At the end, the development of the Hong Kong's mobile market would be adversely affected by such decision. The industry as well as consumers in Hong Kong would have to bear the costs.

Market entry is always open

14. To facilitate new player into the market is one of major arguments for not adopting option 1. However, we wish to point out that there are many ways of market entry without re-auction of 3G spectrum.

15. The arrangement of MVNO has ensured that market entry is practical at all times. A number of MVNO arrangements under the existing 3G regime have been established without the need of the former OFTA's intervention.

16. As revealed from past spectrum auction, demand from new entrants (other than the incumbent mobile operators) is not substantial. In the recent auction of the 2.3GHz spectrum, only one new player is interested in participating in the auction and has successfully acquired a block of the spectrum from the bidding.

17. Also, as revealed in the Spectrum Release Plan for 2012 to 2014 published by OFCA, there will be further release of spectrum available for fixed and mobile services in the upcoming 3 years. Interested parties could therefore obtain spectrum from future bidding exercises.

18. Market entry is also possible via M&A activities. As mentioned before, there have been a number of M&A activities in the past, including the acquisition of Peoples Telephone by China Mobile Hong Kong in 2005.

19. Spectrum trading is another way that the Government could explore to further facilitate market entry. Spectrum trading was stated in the Government Spectrum Policy Framework since 2007. It is considered that spectrum trading could promote efficient use of spectrum as well as new player into the market.

20. In view of the above, it is doubtful if re-auction of 3G spectrum is necessary to achieve the outcome of promoting competition (via new player) in the market.

High risk and costs of adopting options 2 & 3

21. Not only that all the benefits of option 1 will be forgone if all or some of the 3G spectrum are subject to re-auction, there will be high risk and high cost which the community as a whole would have to bear.

- Capital investment and technology upgrade by the incumbent 3G operators will immediately held back in view of the uncertainty of re-auction.
- Customer service continuity is at risk
- Operators may not be able to offer long-term contract in view of the uncertainty.
- Costs in spectrum retuning after the re-auction. There will be costs incurred for various network reconfiguration works as well as wastage caused by hardware/software redeployment.

22. All of the above would lead to an unpredictable outcome which would have significantly adverse impact on innovation and service level of the market. When facing the uncertainty, the operators would have no choice but to withhold their investment, such as on their networks and employment, and be more conservative in their customer offers.

23. It is worth noting that Option 3 is an untested arrangement without any international precedent case. Hence there is no reference that the CA nor the industry can rely on.

24. The Consultation Paper mentions that the Netherlands has decided to adopt option 2. However, it is worth noting that the competitive environment of the mobile market in Netherlands is not at the same stage as in Hong Kong. One of the key rationales behind the Netherlands regulator's decision is because of the lack of competition in the Netherlands' mobile market, which is not applicable to Hong Kong.

Setting of SUF

25. The Consultation Paper has proposed 3 methods in setting SUF under option 1, namely the Least Cost Alternative ("**LCA**") method, reference to market benchmark and by open bidding. It is noted that the underlying rationale of these proposed methodologies is to derive an SUF that can reflect the full market value of the spectrum.

26. SmarTone considers that the setting of SUF would have far reaching implications to the industry and the community as a whole. The issue warrants further and detailed assessment. The full market value of the spectrum may be one of the

considerations in setting the SUF, but there are other factors which are equally important.

27. For example, reference to previous licence renewal arrangement is an important consideration in view of the need of regulatory certainty by the industry. In November 2004, the former TA has decided to grant RFR to 2G mobile operators subject to an SUF on par with that of 3G spectrum. It is noted that the principles in assessing SUF models adopted by the former TA at that time were as follows[3]:

- Fair compensation of use of public resources
- Level playing field
- SUF proportional to bandwidth
- Technology neutrality

28. The arrangement for 3G licence renewal could follow the same practice based on the above-stated principles. With refarming of 2G spectrum and deployment of advanced mobile services, such as LTE in the 2G spectrum, the 3G SUF should be set on par with the 2G SUF to maintain a level-playing field in the industry. It is also in line with the technology neutrality principle. What is important after all is that the consistency in the stated telecom policy would increase the regulatory certainty for the industry and thereby provide the incentive for long-term investment and innovation in the sector.

29. The setting of SUF should also be considered in a wider perspective for the promotion of long-term consumer welfare. Operators would have more funding for investment into the network and innovative services if SUF is set at a lower or nominal level. These will increase consumer welfare by various means, such as more advanced network, more innovative services and better customer services. All these will contribute to increased economic and consumer welfare in Hong Kong. This will encourage innovation and investment in the communications market and enhance Hong Kong's position as a communications hub, which are consistent with the guiding principles of the Communications Authority Ordinance (section 4).

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[3] Public Presentation – 2G SUF (November 2004) by Spectrum Strategy Consultants

30. We have strong reservation about the proposed arrangement for the setting of SUF for spectrum subject to RFR (“**Spectrum RFR**”) in option 3 (detailed in paragraphs 55 to 58 of the Consultation Paper). It is proposed that the SUF of the Spectrum RFR would be benchmarked with the SUF subject to re-auctioned (“**Spectrum Re-auctioned**”) as determined by the auction.

31. In such arrangement, the incumbent 3G operators have to exercise the RFR before the auction takes place, without any idea on the eventual amount of SUF payable. This is a very tough decision that most prudent and well-managed organisations would find it difficult to accept.

32. Furthermore, the proposal of benchmarking the SUF of the Spectrum RFR with the SUF of Spectrum Re-auctioned would likely produce a distorted auction result. Under such arrangement, since any increase in the bidding price of the Spectrum Re-auctioned would transfer directly as an increase of the SUF of the Spectrum RFR, the consideration of the incumbent 3G operators would be different from the non-incumbent 3G operators. The incumbent 3G operators’ ability to bid in the auction for the Spectrum Re-auctioned would be limited by the proposed arrangement and therefore in an inferior position as compared to non-incumbent 3G operators. The auction design of the Spectrum Re-auctioned would therefore give an undue advantage to non-incumbent 3G operators and prejudice operators’ ability to compete for the Spectrum Re-auctioned on an equal basis.

COMMENTS ON SPECIFIC QUESTIONS IN THE CONSULTATION PAPER

Questions related to Option 1

Question 1: Given there is clear indication of competing demand for the 3G spectrum, are there good public policy reasons for the TA to adopt Option 1, instead of the market-based approach as stipulated in the Framework, when the current 3G frequency assignments expire in October 2016?

33. Our comments as stated in paragraphs 2 to 20 are relevant to this questions.

34. The Hong Kong mobile market is already very competitive. It is doubtful further introduction of new players into the market could bring in substantial additional benefits to consumers. Also there are many ways of market entry without the need of re-auction of the 3G spectrum. It is unnecessary to make such a high risk and costly decision in order to promote further competition into the market.

35. The Consultation Paper raises the following questions about option 1:
    - whether the existing assignment has already delivered the optimal consumer benefit,
    - whether higher spectral efficiency for the industry could be attained by varying the distribution of spectrum among incumbent operators or by recruiting new players, and
    - whether keener competition could be brought by new players in the market.

36. Given the competitive intensity of the Hong Kong's mobile market, market force has driven the incumbent operators to make best use of their frequency spectrum. There are very incentives for operators to utilize spectrum efficiently in order to stay competitive. It is therefore doubtful whether any substantial and additional benefit could be brought by varying the existing spectrum allocation or recruiting new players.

37. In such a keenly competitive market, the prices for mobile services are low as compared to the cost of living in Hong Kong. It can be said the consumers would be benefited from the low price and affordability of mobile services. However, as

mentioned above, we cast doubt whether the long-term benefit of consumers is best served in such an over-competitive market.

38. In such circumstances, we cast doubt on what would be the additional benefit that could be brought by new players into the market. While the additional benefits are uncertain, the cost of not adopting option 1 is substantial and certain. A cost and benefit analysis should demonstrate that option 1 is the optimal choice among the three options.

Question 2: In offering the right of first refusal to the incumbent 3G operators to acquire the 1.9 – 2.2 GHz spectrum under Option 1, what would be the preferred method for setting the SUF so that it may reflect the full market value of the spectrum?

39. Our comments in paragraphs 25 – 29 above are relevant to this question.

40. The SUF should be set at a level that would promote the long-term benefits of the industry as well as consumers. An SUF that capture all the value of the operators would render no resources available to support sustainable investment in network and service innovation. At the end the customers and the community as a whole would suffer.

Questions related to Option 2

Question 3: How would the prospect to re-auction the entire 120 MHz of spectrum in the 1.9 – 2.2 GHz band impact on the investment plan and network planning of the incumbent 3G operators, and how would that further impact on their mobile network capacity?

Question 4: The number of players in the mobile telecommunications market may or may not remain unchanged after the auction. Would competition in the mobile market be enhanced if the entire 120 MHz of spectrum in the 1.9 – 2.2 GHz band is to be re-auctioned under Option 2?

41. Our comments of paragraphs 21 to 24 above are relevant to these questions.

42. It is envisaged that the investment plan of the incumbent operators will be held

back immediately after the announcement of the decision to re-auction the entire 120MHz of spectrum. The incumbent operators would be faced with a substantial risk that they may not be able to retain the spectrum after 2016. As such, it is likely that most, if not all, investment plans related to the 3G spectrum would be suspended. Such investment plans would cover not only investment into the network infrastructure, but also service development and employment. This would represent a great loss to the Hong Kong economy as a whole because investment incentives would be distorted since the announcement of the re-auction decision, and until such time when the regulatory uncertainties are removed.

43. As mentioned above, Hong Kong's mobile market is already very competitive. It is of great doubt that whether there is still room for any substantial and additional benefits that could be brought by new player to the already very competitive market. Moreover, we have so far not yet seen any assessment of the viability for further network operators in Hong Kong.

44. On the other hand, the existing incumbent operators would have every incentive to keep their existing spectrum holding in order to prevent loss of customer service continuity. In order to keep their existing spectrum, the incumbent operators would bid aggressively for their own spectrum and might even overbid. This has a far-reaching implication to the industry as overbidding means that the incumbent operators would have less resource available for investment after the bidding. Operators may have to cut costs and degrade network quality in order to recover the cost of high bid.

45. In view of the substantial adverse impact of re-auction on existing operators' investment plan and the cost associated with overbidding, the alleged benefits from potential new player must be significant enough to outweigh the potential loss in order to suggest that option 2 is a viable and in the best interest of Hong Kong. This has to be assessed in much further details before any decision is made.

Question 5: What would be the transitional plans for an incumbent 3G operator if under Option 2 (a) it cannot retain any of its original frequency assignment; (b) it can retain only part of its original frequency assignment; and (c) it gets spectrum in a different sub-frequency band?

Question 6: What are the estimated costs and the areas of investment for implementing the transitional plans for tackling the three scenarios mentioned in Question 5?

46. We consider that all of the mentioned scenario would be costly to the industry and the community as a whole. Such costs represent wastage to the industry and the economy as whole if the alleged benefit of re-auction of the 3G spectrum could not outweigh the loss.

Question 7: If an incumbent 3G operator is unable to obtain any of the 3G spectrum or if it manages to obtain less spectrum than what it currently has, to what extent the spectrum that it currently holds in other frequency bands could act as effective substitute for the spectrum foregone?

47. The Consultation Paper mentioned that all the incumbent operators will roll out their 4G LTE networks and therefore a sizeable number of 3G mobile customers will migrate to 4G mobile services.

48. It is worth noting that 3G services have been licenced for more than 10 years, but it is still evidenced that 2G services are still demanded by consumers nowadays. Also, it is envisaged that the 4G LTE network and the existing 3G network would be complementary with each other. The new 4G LTE network would serve to increase the network capacity of the incumbent operators to meet the increasing demand for mobile data services. The 4G LTE network would not be a replacement of the 3G network.

49. Furthermore, as in the case of 2G network, the network operators could not compel customers to migrate to 4G network. Customers have the free choice of services. Also, there would be issue about the compatibility of the customers handsets with the 4G network. The cost of upgrading their existing 3G devices to 4G is a consideration of most existing 3G customers.

Question 8: How effective would be the application of alternative technologies (e.g. Wi-Fi, femtocell, etc.) help economise on the use of radio spectrum through offloading the mobile data traffic?

50. In view of the ever-increasing demand for mobile data services and also the limitations of the alternative technologies, it is unlikely that the alternative technologies would help to offload the mobile data traffic to any significant extent.

Questions related to Option 3

Question 9: Do you have any comment on the preliminary proposal of the TA to offer each of the incumbent 3G operators the right of first refusal to a frequency assignment of 2 x 10 MHz of 3G spectrum post October 2016 under Option 3?

Question 10: Similar to Question 1, given there is clear indication of competing demand for the 3G spectrum, are there good public policy reasons for the TA to offer Spectrum RFR to the incumbent 3G operators, instead of assigning it through the market-based approach as stipulated in the Framework, when the current 3G frequency assignments expire in October 2016?

Question 11: Do you have any comment on the preliminary proposal of the TA under Option 3 to devise an arrangement so that all interested parties will have the opportunity to get hold of at least a contiguous band of 2 x 10 MHz of paired 3G spectrum?

Question 12: Taking into account the merits of having contiguous spectrum of 2 x 10 MHz paired spectrum and the investment in capital equipment that the incumbent operators have already put in the 3G spectrum, should the TA draw up the band plan as described in paragraph 46?

Question 13: What are your views and comments on the proposed arrangement discussed in paragraph 54?

51. Option 3 is similar to Option 2 to the extent that it would create substantial uncertainties to the incumbent 3G operators whether they could retain their original spectrum holding. This would still affect the incumbent operators' investment plan, although it may be to a lesser extent as compared to Option 2. However the alleged benefits of option 2, that is the potential of bringing new player to the market, is questionable in such a highly competitive market as we

mentioned in previous discussions.

52. Also, as we mentioned above, there are other ways to enter into the market without interrupting the existing 3G spectrum holding. These include the arrangement for MVNO, spectrum bands to be available for auction in the Spectrum Release Plan, and the possibility of spectrum trading.

53. The consideration of whether to implement option 3, as in the case of option 2, is still back to a robust cost and benefit analysis of the two options as compared to the status quo. In this regard, SmarTone considers option 1 is the logical choice based on the cost and benefit analysis as abovementioned.

Question 14: What are your views and comments on the proposal to benchmark the SUF of Spectrum RFR with the Spectrum Re-auctioned as proposed in paragraphs 55 – 58 above?

54. Our comments in paragraphs 29 to 31 above are relevant to this question.

55. In short, we have strong reservation about the proposed SUF arrangement as this is not fair to the incumbent operators.

Question to unpaired 3G spectrum

Question 15: What are your views on the proposal to put the unpaired 3G spectrum to reserve?

56. We have no particular view on this question.

SmarTone Mobile Communications Limited
15 July 2012