

**Frequency Swap between  
China Mobile Hong Kong Company Limited and  
SmarTone Mobile Communications Limited  
in the 1800 MHz Band**

**Statement of the Communications Authority**

**6 November 2012**

**INTRODUCTION**

China Mobile Hong Kong Company Limited (“CMHK”) and SmarTone Mobile Communications Limited (“SmarTone”) are currently each assigned with 2 x 13.2 MHz frequency spectrum in the 1800 MHz band. Their assignments are not contiguous as different frequency blocks were assigned to them at different times. In order to convert some of their fragmented frequency blocks to contiguous ones, CMHK and SmarTone submitted a joint request to the Communications Authority (“CA”) asking for its permission to swap 2 x 1.6 MHz frequency blocks of their assigned spectrum in the 1800 MHz band (“Proposed Swap”). The frequency blocks involved (please refer to the Annex) are -

- (a) CMHK: 1716.9 - 1718.5 MHz paired with 1811.9 - 1813.5 MHz (2 x 1.6 MHz); and
- (b) SmarTone: 1781.7 - 1782.5 MHz paired with 1876.7 - 1877.5 MHz (2 x 0.8 MHz) and 1784.1 - 1784.9 MHz paired with 1879.1 - 1879.9 MHz (2 x 0.8 MHz).

2. As this is a swap of an equal amount of spectrum, the Proposed Swap will not result in any change in the total amount of spectrum assigned to the two mobile network operators (“MNO”). According to the two MNOs, the objective of the Proposed Swap is to reduce the interference with other networks and to improve the service quality. This will in turn result in more flexible use of the spectrum, thereby increasing the spectral efficiency and network capacity of both MNOs.

## THE CA's CONSIDERATIONS

### Assessment Criteria

3. Under Section 32G of the Telecommunications Ordinance, the CA has statutory duty to “promote the efficient allocation and use of the radio spectrum as a public resource of Hong Kong”. Moreover, the Radio Spectrum Policy Framework promulgated by the Government in April 2007 stipulates that the spectrum management policy aims to, among other things, (a) facilitate the most economically and socially efficient use of spectrum with a view to attaining maximum benefit for the community, and (b) achieve technically efficient use of spectrum to facilitate the introduction of advanced and innovative communications services in Hong Kong. Under General Condition 2.1 of the Unified Carrier Licence held by the MNOs, it is stated that *“The Licensee may, only with the prior written consent of the Authority, and subject to such reasonable conditions as the Authority thinks fit, transfer the Licence or any permission, right or benefit under the Licence”*.

4. To evaluate the Proposed Swap, the CA has considered the following factors -

- (a) Whether the proposed frequency swap involves any monetary exchange between the parties involved;
- (b) Whether there is any technical benefit as a result of the proposed frequency swap (e.g. reduction of radio interference, improvement in spectral efficiency and introduction of new or innovative services);
- (c) Whether the proposed frequency swap will affect the licence obligations and commitments applicable to the holder of the concerned spectrum, including the expiry date of the frequency assignments, payment of spectrum utilization fee and licence fees, and rollout commitment;

- (d) Whether the proposed frequency swap will result in the transfer of licence obligations and conditions applicable to the involved spectrum between the parties;
- (e) Whether there will be significant impact on customers during the swap (e.g. interruption to services provided by the parties to customers and to services provided by other MNOs to customers); and
- (f) Whether the parties involved have given their consent to the swap.

### **Assessment on the Proposed Swap**

#### *No Monetary Exchange*

5. CMHK and SmarTone confirmed that there was no monetary exchange between the parties. The benefits accrued to both parties are solely increased network capacity and improved service quality due to better spectral efficiency. To put the matter beyond any doubt, a condition specifying that there shall be no monetary exchange between the two parties in effecting the Proposed Swap will be imposed.

#### *Technical Benefits*

6. As far as their existing 1800 MHz band frequency assignments are concerned, CMHK has a total of six frequency channels adjacent to other networks while SmarTone has a total of seven frequency channels adjacent to other networks. After the swap, CMHK will have three frequency channels adjacent to other networks while SmarTone will have six. The CA agrees that the Proposed Swap will reduce the number of channels adjacent to other networks for both CMHK and SmarTone, thereby reducing the adjacent channel interference. The reduction in adjacent channel interference will lead to improvement of network quality. As a result, both spectral efficiency and network capacity can be improved and increased.

#### *Licence Obligations and Commitments*

7. As the same amount of spectrum in the same band is swapped, there is no change to the total assigned frequency spectrum held by any of the MNOs in the market. There should not be any impact on the market situation insofar as the amount of spectrum holding is concerned.

8. CMHK and SmarTone advised that their obligations to pay the outstanding annual spectrum utilization fee (“SUF”) for the concerned frequency blocks currently held by SmarTone will be transferred from SmarTone to CMHK after the swap, and vice versa. The obligation to pay the annual SUF by CMHK and SmarTone of the involved spectrum will continue to apply for the remaining assignment period. The SmarTone frequency blocks involved in the Proposed Swap are also subject to the restriction that they are used for the sole purpose of providing mobile telecommunications services in areas other than the designated area as specified by the former Telecommunications Authority in the gazette notice G.N.2068 of 2009. This restriction specific to the SmarTone frequency blocks will continue to apply to the same frequency blocks used by the new spectrum assignee (i.e. CMHK) after the Proposed Swap is given. The other licence obligations and conditions attached to the use of the involved spectrum will continue to apply to the two MNOs after the Proposed Swap is given. There is no outstanding network rollout commitment on the frequency blocks involved in the Proposed Swap. As the assignment period for all the frequency blocks in the 1800 MHz band will expire at the same time in September 2021, the Proposed Swap will not materially affect the term of the relevant frequency assignment of the two MNOs. The CA is of the view the Proposed Swap will not have any impact on the licence obligations or commitments applicable to the holders of the concerned spectrum.

#### *Impact on Customers*

9. CMHK and SmarTone advised that the spectrum swap can be performed overnight with minimal risk or impact to customers. Although there is a reduction in capacity during the changeover, this will not create any congestion or affect service quality as network traffic is low during slack hours. The capacity will be restored after the

changeover. They would monitor the network traffic and performance statistics so as to timely spot any abnormality and quickly carry out any remedial action that is necessary. There is no need for customers to make any change to their handset or terminal equipment and there will be no impact on the customers of both parties. The changes are transparent to other MNOs and there will be no impact on their customers. The CA is of the view that there should be no service disruption or degradation to the customers during the changeover.

### *Consent of the Parties*

10. This request is jointly submitted by CMHK and SmarTone. The parties involved have given their consent to the swap, subject to the CA's approval.

### **THE CA's DECISION**

11. Based on the above assessment, the CA is of the view that the Proposed Swap will result in more efficient use of spectrum and therefore should be encouraged. Moreover, the consumers will benefit from improved voice quality and network capacity. The CA therefore decides to approve the Proposed Swap, subject to the following conditions -

- (a) There is no monetary exchange between CMHK and SmarTone in effecting the Proposed Swap;
- (b) CMHK and SmarTone shall take all reasonable measures to prevent any harmful interference caused to other MNOs operating in the adjacent frequency blocks; and
- (c) CMHK and SmarTone shall take all reasonable measures to minimize the service impact on their customers during the swap. They shall provide on a date to be specified by the Office of the Communications Authority ("OFCA") a comprehensive migration plan (including contingency measures) to OFCA, prior to the actual swap.

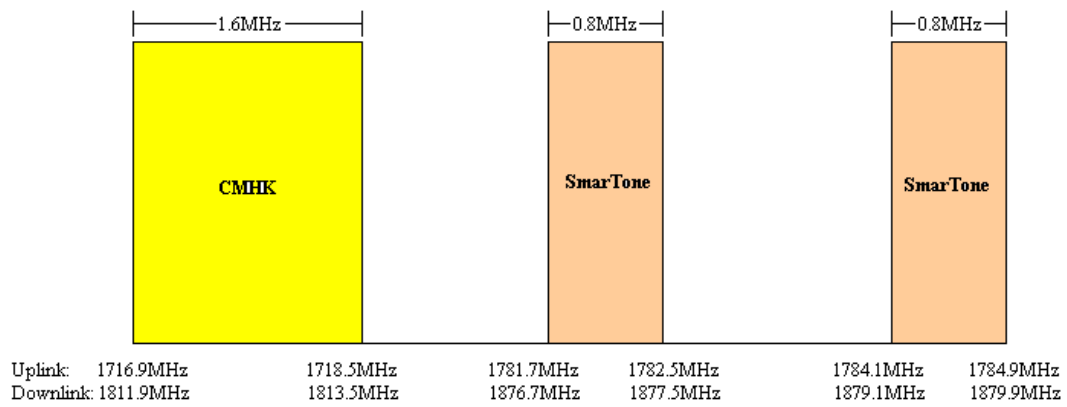
12. The CA will amend the Unified Carrier Licence held by the two MNOs respectively to give effect to the swap of the spectrum assignments under concern.

13. For the avoidance of doubt, nothing in the CA's approval of the Proposed Swap will fetter the Government's discretion in formulating its policy on spectrum trading in future. Nothing in the CA's approval of the Proposed Swap will fetter the CA's discretion in handling similar requests from MNOs for spectrum swap in future. Each future request for spectrum swap from MNOs will be considered by the CA on the merits of each case.

**Communications Authority**  
**6 November 2012**

## Frequency Blocks involved in the Proposed Spectrum Swap

### *Existing Frequency Assignment*



### *Frequency Assignment after the Proposed Swap*

