

## **Statement of the Communications Authority**

### **Frequency Swap and Transfer Among China Mobile Hong Kong Company Limited, Genius Brand Limited, Hong Kong Telecommunications (HKT) Limited and Hutchison Telephone Company Limited in the 2.5/2.6 GHz Band**

**9 November 2023**

#### **INTRODUCTION**

A total of 140 MHz of spectrum in the frequency range of 2500 – 2570 MHz paired with 2620 – 2690 MHz (“2.5/2.6 GHz band”) were assigned to mobile network operators (“MNOs”) in two batches by auction, namely –

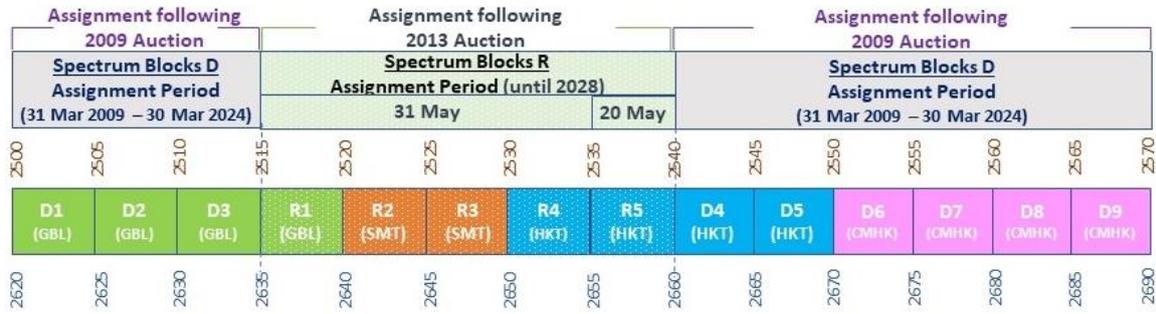
- (a) 2 x 45 MHz of spectrum in the frequency ranges of 2500 – 2515 MHz paired with 2620 – 2635 MHz and 2540 – 2570 MHz paired with 2660 – 2690 MHz (“Blocks D1 – D9”), which was first assigned to China Mobile Hong Kong Company Limited (“CMHK”), Genius Brand Limited (“GBL”) (a joint venture indirectly owned by Hong Kong Telecommunications (HKT) Limited (“HKT”) and Hutchison Telephone Company Limited (“HTCL”) on a 50:50 basis) and HKT on 31 March 2009 for an assignment period of 15 years, and will be re-assigned to CMHK, HKT and HTCL on 31 March 2024 for 15 years upon expiry of the existing assignments pursuant to the results of the auction conducted in October 2021 (the “2021 Auction”); and
- (b) 2 x 25 MHz of spectrum in the frequency range of 2515 – 2540 MHz paired with 2635 – 2660 MHz in between Blocks D1 – D3 and D4 – D9 (“Blocks R1 – R5”), which was assigned to CMHK, GBL, HKT and SmarTone Mobile Communications Limited (“SMT”) on 1 June 2013 for an assignment period of 15 years, following an auction conducted in March 2013 (the “2013 Auction”) with the existing assignments due to expire on 31 May 2028<sup>1</sup>.

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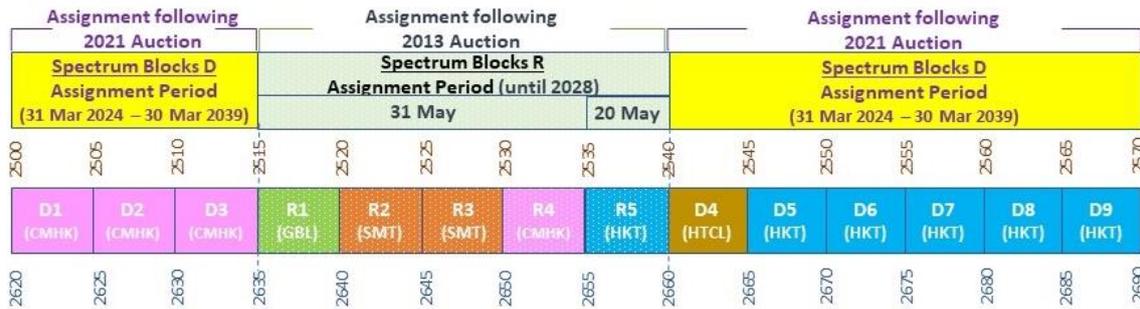
<sup>1</sup> With the exception of Block R5 which was assigned to HKT on 21 May 2013 upon its request, with the existing assignment due to expire on 20 May 2028 (15 years).

2. The spectrum assignments of Blocks D1 – D9 and Blocks R1 – R5 in the 2.5/2.6 GHz band at present and from 31 March 2024 are given in Figure 1 and Figure 2 below respectively.

**Figure 1: Spectrum assignment in the 2.5/2.6 GHz band at present**



**Figure 2: Spectrum assignment in the 2.5/2.6 GHz band from 31 March 2024<sup>2</sup>**



3. CMHK, GBL, HKT and HTCL (collectively referred to as the “Parties”) have submitted a joint application (“Application”) to seek the approval of the Communications Authority (“CA”) for a spectrum swap and a spectrum transfer in the 2.5/2.6 GHz band, namely –

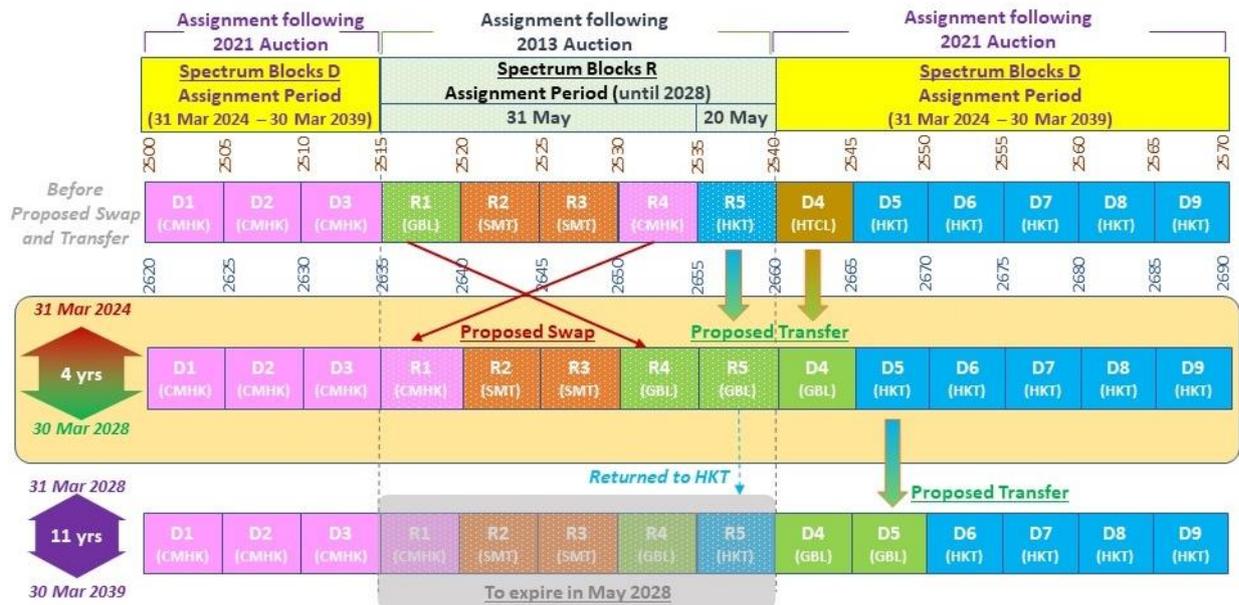
- (a) swap of Blocks R1 and R4 between GBL and CMHK from 31 March 2024 until the expiry of their existing assignments on 31 May 2028 (“Proposed Swap”); and
- (b) transfer of equal amounts of spectrum in the 2.5/2.6 GHz band from each of HTCL and HKT to GBL (“Proposed Transfer”) whereby –

<sup>2</sup> Following the 2021 Auction, Blocks D1 – D9 will be re-assigned on 31 March 2024 upon the expiry of the existing assignments. According to the CA Statement on “Frequency Swap between CMHK and HKT in the 2600 MHz Band” issued on 19 January 2016, Block R4 was assigned to HKT from 19 February 2016 to 30 March 2024 and would then be returned to CMHK on 31 March 2024.

- (i) Block D4 will be transferred from HTCL to GBL for 15 years from 31 March 2024 until the expiry of its assignment on 30 March 2039;
- (ii) Block R5 will be transferred from HKT to GBL for 4 years from 31 March 2024 to 30 March 2028<sup>3</sup>; and
- (iii) Block D5 will be transferred from HKT to GBL for 11 years from 31 March 2028 until the expiry of its assignment on 30 March 2039<sup>4</sup>.

4. The status of spectrum assignment after the Proposed Swap and Proposed Transfer (collectively referred to as “Proposed Swap and Transfer”) is illustrated in Figure 3 below.

**Figure 3: Spectrum assignment in the 2.5/2.6 GHz Band from 31 March 2024 after the Proposed Swap and Transfer**



According to the Parties, the Application, if approved, will remove the fragmentation of the spectrum assignments in the 2.5/2.6 GHz band and as a result, the Parties will derive technical benefits, including increased spectrum efficiency, more flexible use of the spectrum and improved service quality to customers.

<sup>3</sup> Block R5 will then be returned to HKT for about two months from 31 March 2028 until the expiry of the existing assignment on 20 May 2028.

<sup>4</sup> Block D5 will first be assigned to HKT for four years from 31 March 2024 to 30 March 2028 pursuant to the 2021 Auction.

## LEGAL AND REGULATORY FRAMEWORK

5. Under section 32G(1) of the Telecommunications Ordinance (Cap. 106) (“TO”), the CA has the statutory duty to *“promote the efficient allocation and use of the radio spectrum as a public resource of Hong Kong”*. In exercising its statutory power of spectrum management, the CA also gives due regard to the spectrum policy objectives set out in the Radio Spectrum Policy Framework (“Spectrum Policy Framework”) promulgated by the Government in April 2007<sup>5</sup>, which provides that *“Hong Kong’s spectrum policy and management aims to achieve technically efficient use of spectrum to facilitate the introduction of advanced and innovative communications services in Hong Kong”*.

6. Without prejudice to the CA’s statutory power with respect to spectrum management, paragraph B.22.1 of the Information Memorandum for the 2013 Auction<sup>6</sup> stated that, in relation to Blocks R1 – R5 assigned, any request for a subsequent change in spectrum assignment or the swap of spectrum with other licensees would be subject to the approval of the CA (and conditions, if any, the CA imposes), and any spectrum change or swap request would be dealt with by the CA based on the merits of each case and its approval or otherwise would be at the CA’s sole discretion.

7. As regards the 2021 Auction, in paragraph 32 of a statement jointly issued by the CA and the then Secretary for Commerce and Economic Development (“Joint Statement”) on 30 March 2021<sup>7</sup>, the CA stated that it would be prepared to consider application from HKT and HTCL to each transfer an equal amount of spectrum to GBL if each managed to acquire a certain amount of spectrum in Blocks D1 – D9 in the 2021 Auction in order to enable GBL to carry on with its existing scale and mode of operation. The relevant text is extracted below –

*“ ... [the CA] is prepared to consider the joint application of HKT and [HTCL] for transfer of some of [Blocks D1 – D9] they acquired to GBL after the forthcoming auction [concluded in October 2021] if HKT and [HTCL] both participate in the auction and each manages to acquire a certain amount of*

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<sup>5</sup> The Spectrum Policy Framework is available at:  
<https://www.cedb.gov.hk/assets/resources/ccib/policies/spectrum.pdf>.

<sup>6</sup> The Information Memorandum is available at:  
[https://www.ofca.gov.hk/filemanager/ofca/en/content\\_810/20121221\\_IM.pdf](https://www.ofca.gov.hk/filemanager/ofca/en/content_810/20121221_IM.pdf).

<sup>7</sup> The Joint Statement on “Arrangements for the Frequency Spectrum in the 2.5/2.6 GHz Band upon Expiry of the Existing Assignments for the Provision of Public Mobile Services and the Related Spectrum Utilisation Fee” issued on 30 March 2021 is available at:  
[https://www.coms-auth.hk/filemanager/statement/en/upload/556/2\\_5\\_2\\_6\\_ghz\\_statement.pdf](https://www.coms-auth.hk/filemanager/statement/en/upload/556/2_5_2_6_ghz_statement.pdf).

*[Blocks D1 – D9] from the auction (subject to the cap of 50 MHz for each bidder). They may submit a joint application to the CA for its approval for the transfer to GBL of all or part of the re-assigned spectrum acquired by them before the date of re-assignment. Since the sole purpose of the arrangement is to enable GBL to carry on with its existing scale and mode of operation if the concerned parties (namely GBL, HKT and [HTCL]) so wish, the CA will only consider a transfer of up to 40 MHz of the re-assigned [Blocks D1 – D9] that is equally contributed by HKT and [HTCL] (i.e. 20 MHz or two 2 x 5 MHz blocks of [Blocks D1 – D9] by each). Such an arrangement is warranted under the special circumstance as illustrated above and will only be applicable to the re-assignment of the 90 MHz of [Blocks D1 – D9] in the 2.5/2.6 GHz band.”*

8. General Condition 2.1 of the Unified Carrier Licence (“UCL”) held by the MNOs provides that “[t]he licensee may, only with the prior written consent of the [CA], and subject to such reasonable conditions as the [CA] thinks fit, transfer [the] licence or any permission, right or benefit under [the] licence”.

## **THE CA’S CONSIDERATIONS**

### **Assessment Criteria**

9. When evaluating the Application, the CA has considered the following factors –

- (a) whether the Proposed Swap will involve any monetary exchange between the two parties involved, namely CMHK and GBL;
- (b) whether any technical benefit will be generated as a result of the Proposed Swap and Transfer;
- (c) whether the Proposed Swap and Transfer will affect the licence obligations and commitments applicable to the holders of the concerned spectrum, including the expiry dates of the spectrum assignments, payment of spectrum utilization fees (“SUF”) and fulfilment of the network and service rollout obligations;
- (d) whether the Proposed Swap and Transfer will result in the transfer of licence obligations and conditions applicable to the concerned spectrum between the Parties;

- (e) whether there will be significant impact on customers during the Proposed Swap and Transfer (e.g. interruption to services provided by the Parties to customers, or to services provided by other MNOs to their customers);
- (f) whether the Proposed Swap and Transfer will affect effective competition in the market; and
- (g) whether CMHK and GBL have given their consent to the Proposed Swap and whether GBL, HKT and HTCL have given their consent to the Proposed Transfer.

## **Assessment of the Application**

### No Monetary Exchange for the Proposed Swap

10. The CA notes that Blocks R1 and R4 are in the same 2.5/2.6 GHz band and of the same size (2 x 5 MHz). In the Application, CMHK and GBL confirm that there neither has been, nor will there be any monetary exchange between them in effecting the Proposed Swap of Blocks R1 and R4. Each party will bear its own costs incurred in effectuating the Proposed Swap, and any joint costs incurred will be shared equally between the two. On the other hand, the CA also notes that the Proposed Transfer will involve transfer of equal amounts of spectrum (2 x 5 MHz) for equal period of time from each of HKT and HTCL to their 50:50 joint venture, i.e. GBL. The CA takes the view that there is no need to consider whether there will be any issue of monetary exchange among HKT, HTCL and GBL on this occasion, considering the Proposed Transfer will only involve the transfers of spectrum from HKT and HTCL to GBL, which will be used by GBL to service HKT and HTCL anyway.

### Technical Benefits

#### *Gain in Spectrum Efficiency and Throughput*

11. As illustrated in Figure 2 above, without the Proposed Swap and Transfer, the spectrum blocks in the 2.5/2.6 GHz band to be held by the Parties from 31 March 2024 will be rather fragmented, namely –

- (a) CMHK will hold two separate blocks of 2 x 15 MHz (Blocks D1 – D3) and 2 x 5 MHz (Block R4);
- (b) HKT will hold two separate blocks of 2 x 5 MHz (Block R5) and

2 x 25 MHz block (Blocks D5 – D9); and

- (c) GBL and HTCL will each hold a single block of 2 x 5 MHz (Blocks R1 and D4 respectively).

12. If the Proposed Swap and Transfer is approved, all the Parties will be able to hold fully contiguous blocks for four years between 31 March 2024 and 30 March 2028<sup>8</sup>, as illustrated in Figure 3 above, namely –

- (a) CMHK will hold a contiguous block of 2 x 20 MHz (Blocks D1 – D3 and R1);
- (b) GBL will hold a contiguous block of 2 x 15 MHz (Blocks R4 – R5 and D4); and
- (c) HKT will continue to hold a contiguous block of 2 x 25 MHz (Blocks D5 – D9).

13. The Parties suggest that the Proposed Swap and Transfer will create flexibility in the use of the spectrum and improve spectrum efficiency. The CA notes that a contiguous block of spectrum will provide a higher throughput as compared to that of separate blocks, notwithstanding that the aggregate bandwidth will be the same. In the case of GBL, the throughput figures provided by GBL, HKT and HTCL show that a contiguous block of 2 x 15 MHz can deliver a higher throughput as compared to that of three separate blocks of 2 x 5 MHz held by GBL, HKT and HTCL, respectively. In the case of CMHK, it similarly considers that the Proposed Swap, which will result in a single carrier of 20 MHz (Blocks D1 – D3 and R1) will enable it to achieve a higher throughput.

14. In the Application, the Parties make a comparison between the spectrum efficiency that can be achieved by using a 5 MHz, 15 MHz and 20 MHz bandwidth configuration. The CA considers that a more appropriate approach will be to compare the spectrum efficiency of a contiguous 2 x 20 MHz block, against the weighted spectrum efficiency achieved by separate blocks in aggregate (for example, a 2 x 15 MHz block and a 2 x 5 MHz block). The CA considers that the gain in spectrum efficiency from the Proposed Swap and Transfer during the four years between 31 March 2024 and 30 March 2028 should be attributed to the following changes –

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<sup>8</sup> CMHK will hold a contiguous block for about four years and two months from 31 March 2024 to 31 May 2028.

- (a) the two separate blocks of 2 x 5 MHz and 2 x 15 MHz held by CMHK will become a single larger contiguous block of 2 x 20 MHz; and
- (b) the three fragmented blocks of 2 x 5 MHz held by each of GBL, HKT and HTCL, respectively, will become a larger contiguous block of 2 x 15 MHz held by GBL, which will then be used to serve the customers of both HKT and HTCL.

15. The Proposed Transfer of Blocks D4 and D5 from HTCL and HKT respectively to GBL, after the return of Block R5 from GBL to HKT, to form a contiguous block of 2 x 10 MHz for use by GBL in the remaining 11 years between 31 March 2028 and 30 March 2039, as illustrated in Figure 3 above, will enable GBL to maintain to a certain degree its existing scale and mode of operation, though with a smaller contiguous block of spectrum (compared to its holding of a contiguous block of 2 x 15 MHz from 31 March 2024 to 30 March 2028). In this connection, HTCL will benefit from GBL's use of a larger contiguous block of 2 x 10 MHz to provide network services to HTCL and HKT, instead of HTCL's use of Block D4 only, which is a smaller standalone block of 2 x 5 MHz. On the other hand, while the block size of the contiguous spectrum assigned to HKT will be slightly reduced from 2 x 25 MHz to 2 x 20 MHz, HKT will also benefit from GBL's use of the contiguous block of 2 x 10 MHz after the Proposed Transfer. As such, the CA considers that the Proposed Transfer will result in an overall enhancement in spectrum efficiency for HTCL and HKT via GBL between 31 March 2028 and 30 March 2039.

16. Noting that there will be a significant gain in the size of the contiguous blocks to be held by CMHK and GBL by 1.33 times and 3 times respectively between 31 March 2024 and 30 March 2028, as summarised in paragraph 14 above, together with the overall enhancement in spectrum efficiency between HKT, HTCL and GBL between 31 March 2028 and 30 March 2039, as explained in paragraph 15 above, the CA considers that the Proposed Swap and Transfer will improve the spectrum efficiency and hence deliver a higher throughput in the 2.5/2.6 GHz band throughout the relevant period.

#### *Flexibility in the Use of the Assigned Spectrum*

17. The Parties are of the view that, if the Proposed Swap and Transfer are not permitted, CMHK will have to deploy one 2 x 5 MHz carrier (Block R4) and one 2 x 15 MHz carrier (Blocks D1 – D3) between 31 March 2024 and 30

March 2028. For CMHK to balance the traffic loading on these two carriers, it needs to build additional intelligence into its network to enable load-balancing and handover between the two carriers. Similarly, if the Proposed Spectrum Swap and Transfer are not permitted, GBL and HTCL will each only be able to deploy one 2 x 5 MHz carrier (Blocks R1 and D4 respectively) and HKT needs to deploy at least two separate carriers since its Block R5 (2 x 5 MHz) is separated from its Blocks D5 – D9 (2 x 25 MHz) during the same period. If the Proposed Swap and Transfer is approved, each of CMHK, GBL and HKT will form a single contiguous block (Blocks D1 – D3 and R1 for CMHK, Blocks R4, R5 and D4 for GBL and Blocks D5 – D9 for HKT) and hence there will be no need for them to build extra network intelligence for load-balancing or arrange handover between multiple carriers.

18. The CA agrees that each of CMHK, GBL and HKT will be able to form a larger contiguous block of spectrum under the Proposed Swap and Transfer between 31 March 2024 and 30 March 2028, without the need to undertake load-balancing and handover between multiple carriers in the 2.5/2.6 GHz band then. The CA also notes that GBL will be able to form a contiguous block of spectrum under the Proposed Transfer between 31 March 2028 and 30 March 2039. As a result, they will all benefit from having greater flexibility in the use of spectrum.

#### *Improved Service Quality*

19. The Parties express that the technical benefits to be derived from the Proposed Swap and Transfer will enable improved service quality for the customers they serve, including faster maximum download/upload speeds, less congestion and a lower possibility of dropped calls or interrupted sessions as compared with the assignment arrangement without the Proposed Swap and Transfer as shown in Figure 2 above. Moreover, the Parties also consider that the improvement in throughput will support the introduction of new and innovative services for the benefit of mobile users.

20. The CA agrees that the formation of contiguous blocks of 2 x 20 MHz for CMHK and 2 x 15 MHz for GBL under the Proposed Swap and Transfer between 31 March 2024 and 30 March 2028 will enable the Parties to achieve the intended results as explained in paragraph 19 above. In particular, as GBL is providing and will continue to provide wholesale mobile services to HKT and HTCL, despite a slight reduction in the aggregate carrier bandwidth held by HKT itself, the quality of mobile services in the 2.5/2.6 GHz band to be provided by HKT and HTCL to their customers will be significantly improved via the use of the larger contiguous block of 2 x 15 MHz to be held by GBL (Blocks R4 – R5 and D4) as compared with that of three separate small

blocks of 2 x 5 MHz held by each of GBL, HKT and HTCL separately. In the same vein, considering that a contiguous block of 2 x 10 MHz will be formed for GBL to continue serving the customers of both HKT and HTCL in the Proposed Transfer between 31 March 2028 and 30 March 2039, the CA further notes that the resulting improvement in the overall spectrum efficiency, as explained in paragraph 15 above, will also lead to further improvement in the quality of service delivered to their customers, when compared to two separate blocks of 2 x 5 MHz held by each of HKT and HTCL.

21. Regarding the proposed benefit of supporting the introduction of new and innovative services, the CA notes that at present MNOs have primarily deployed their assigned spectrum in the 2.5/2.6 GHz band for 4G services only. The CA considers that a bigger step of improving the support for new and innovative service will come from re-farming the spectrum for the provision of 5G services. Under the technology-neutral approach in spectrum assignment, the MNOs may use the spectrum assigned for providing 4G or higher generation mobile services out of their own commercial considerations.

*No Additional Burden in Upgrading the MTR's Integrated Radio System*

22. The Parties hold the opinion that regardless of the Application, Blocks D1 – D9 in the 2.5/2.6 GHz band will be re-assigned to MNOs on 31 March 2024 following the results of the spectrum auction in October 2021. On this basis, the point of interconnections (“POI”) connected to MTR’s integrated radio system will be upgraded no matter what, with eight frequency blocks in the 2.5/2.6 GHz band changing hands<sup>9</sup>. If the Proposed Swap and Transfer are permitted, while there will be 11 frequency blocks changing hands, and CMHK and GBL need to cater for further updated assignment status for Blocks R1, R4<sup>10</sup> and R5 when upgrading the affected POI, there should be minimal or no additional adverse impact or interruption to the mobile services riding on the 2.5/2.6 GHz band within MTR premises.

23. The CA agrees that with the changing hands of spectrum holdings due to the re-assignment of Blocks D1 – D9 scheduled on 31 March 2024, any further changes due to the Proposed Swap and Transfer can be accommodated as part of the POI upgrade exercises in all MTR’s premises. Based on the above analysis, the CA considers that there should be minimal extra loading to the POI reconfiguration due to the Proposed Swap and Transfer.

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<sup>9</sup> Blocks D1 – D4 and D6 – D9 will change hands on 31 March 2024 following the 2021 Auction.

<sup>10</sup> Regardless of the Proposed Transfer, the POI for Block R4 will be upgraded as Block R4 will be returned to CMHK by HKT on 31 March 2024 pursuant the CA statement as mentioned in footnote 2 above.

## *Summary*

24. The CA accepts that the Proposed Swap and Transfer are likely to provide the Parties with material technical benefits in terms of gain in spectrum efficiency and throughput, flexible use of spectrum and improved service quality to mobile customers. As such, the Proposed Swap and Transfer will contribute generally to more efficient use of the spectrum in the 2.5/2.6 GHz band.

## *Other Considerations*

25. As mentioned in paragraph 7 above, the CA previously elucidated in the Joint Statement in relation to the 2021 Auction that, for the purpose of enabling GBL to carry on with its existing scale and mode of operation, the CA would be prepared to consider a joint application from HKT and HTCL to transfer an equal amount and up to 40 MHz of spectrum under Blocks D1 – D9 to GBL. The CA considers that HKT's current proposal to transfer Block R5, which was assigned to it in the 2013 Auction, to GBL from 31 March 2024 until 30 March 2028, following which it will transfer Block D5 to GBL for use until 30 March 2039, together with HTCL's transfer of an equal amount of spectrum in Block D4 to GBL during the entire period (31 March 2024 until 30 March 2039), will serve the same purpose set out in the Joint Statement, as well as enabling GBL to utilise a contiguous block (Blocks R4, R5 and D4) following the Proposed Swap between GBL and CMHK during 31 March 2024 and 30 March 2028. Approving the Application will therefore be in line with the CA's statutory duty under section 32G(1) of the TO to promote the efficient allocation and use of radio spectrum as a public resource in Hong Kong, and the Spectrum Policy Framework, which requires the CA to give due regard to the spectrum policy objective to achieve technically efficient use of spectrum to facilitate the introduction of advanced and innovative communications services, as elaborated in paragraph 5 above. In particular, having fully considered the merits of the Application, the CA is of the view that by involving Block R5 as well as Blocks D4 and D5 in the Proposed Transfer together with the Proposed Swap, CMHK, GBL and HKT will achieve more efficient use of spectrum by re-arranging standalone blocks of 2 x 5 MHz into contiguous spectrum assignments in the 2.5/2.6 GHz band from 31 March 2024 to 30 March 2028, as illustrated in [Figure 3](#) and explained in paragraph 16 above. Such outcome will not be achievable if the transfer of spectrum is restricted to Blocks D4 – D9 only.

## Licence Obligations and Commitments

26. The licence obligations and commitments of the Parties that will

specifically be affected if the Application is approved include payment of the outstanding amount of SUF, network and service rollout requirements, provision of performance bond and compliance with auction rules.

*Payment of SUF and the related Rolling Performance Bonds*

27. For the Proposed Swap of Blocks R1 and R4 and the Proposed Transfer of Block R5, the relevant SUF have been fully settled by upfront lump sum payments by the original assignees. As such, there will be no outstanding payment of SUF applicable to any subsequent assignees of these three blocks of spectrum.

28. For the Proposed Transfer of Block D4, GBL will be responsible for payment of SUF over the whole 15-year assignment period when the block is transferred from HTCL to GBL from 31 March 2024 to 30 March 2039. If GBL opts for payment of the SUF by annual instalments, it will be responsible for providing a rolling performance bond to guarantee payment of the annual instalments for the ensuing five years. GBL has notified the CA that it will settle the payment of the SUF by annual instalments if the Application is approved.

29. For the Proposed Transfer of Block D5, HKT will be responsible for payment of SUF in the first four years when the block is assigned to HKT from 31 March 2024 to 30 March 2028, while GBL will be responsible for payment of SUF for the remaining 11 years when the block is transferred from HKT to GBL from 31 March 2028 to 30 March 2039. If HKT opts for payment of the SUF by annual instalments, HKT will be responsible for providing a rolling performance bond in each of the first four years of spectrum assignment to guarantee payment of the annual instalments for the ensuing five years, and GBL will be responsible for providing a rolling performance bond in each of the remaining 11 years of spectrum assignment to guarantee payment of the annual instalments for the ensuing five years. HKT and GBL have notified the CA that they will settle the payment of the SUF by annual instalments if the Application is approved.

*Network and Service Rollout Obligations and the related Performance Bonds*

30. For the Proposed Swap of Blocks R1 and R4 and the Proposed Transfer of Block R5, the existing assignees have already fulfilled the respective network and service rollout obligation to at least 50% of the population of Hong Kong within the first five years from the date of spectrum assignment, with all their related performance bonds released. After the changing hands of assignees due to the Proposed Swap and Transfer, the new assignees of these three blocks

of spectrum will continue to be responsible for compliance with the network and service rollout obligation by maintaining coverage to at least 50% of the population of Hong Kong during their assignment terms. CMHK and GBL will be required to comply with the above rollout obligation for Blocks R1 and R4 respectively from 31 March 2024 to 31 May 2028, while GBL and HKT will be required to comply with the above rollout obligation for Block R5 from 31 March 2024 to 30 March 2028 and from 31 March 2028 to 20 May 2028 respectively.

31. After the Proposed Transfer of Block D4 on 31 March 2024, GBL will be required to comply with the network and service rollout obligation<sup>11</sup> by providing on or before 30 March 2029 and thereafter maintaining coverage to at least 90% of the population of Hong Kong.

32. After the date of spectrum assignment of Block D5 on 31 March 2024, HKT will be required to comply with the network and service rollout obligation by providing on or before 30 March 2029 and thereafter maintaining coverage to at least 90% of the population of Hong Kong. Subsequently, after the Proposed Transfer of Block D5 to GBL on 31 March 2028, GBL will be required to comply with the network and service rollout obligation by providing on or before 30 March 2029 and thereafter maintaining coverage to at least 90% of the population of Hong Kong.

33. While each of GBL and HKT is required to lodge a performance bond for guaranteeing its compliance with the network and service rollout obligation for Block D4 or D5 over different assignment periods as mentioned in paragraphs 31 and 32 above, given that GBL and HKT are the incumbent assignees of spectrum in the 2.5/2.6 GHz band, each of them may choose to provide network coverage figures demonstrating that its existing network operating in the 2.5/2.6 GHz band has already fulfilled the 90% minimum population requirement, without the need to provide a performance bond<sup>12</sup>. GBL and HKT have notified the CA that each of them will provide network coverage figures in lieu of a performance bond if the Application is approved.

### *Compliance with Auction Rules*

34. For Blocks R1, R4 and R5, CMHK, GBL and HKT have the

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<sup>11</sup> The network and service rollout requirement for Blocks D1 – D9 in the 2.5/2.6 GHz band is given in paragraph 44 of the Joint Statement which is available at: [https://www.coms-auth.hk/filemanager/statement/en/upload/556/2\\_5\\_2\\_6\\_ghz\\_statement.pdf](https://www.coms-auth.hk/filemanager/statement/en/upload/556/2_5_2_6_ghz_statement.pdf).

<sup>12</sup> The option of submission of network coverage figures in lieu of a performance bond for the incumbent assignees of spectrum in the 2.5/2.6 GHz band is given in paragraph 47 of the Joint Statement which is available at: [https://www.coms-auth.hk/filemanager/statement/en/upload/556/2\\_5\\_2\\_6\\_ghz\\_statement.pdf](https://www.coms-auth.hk/filemanager/statement/en/upload/556/2_5_2_6_ghz_statement.pdf).

licence obligations to comply with the rules promulgated for the 2013 Auction at which the concerned frequency blocks were assigned. For Blocks D4 and D5, GBL, HTCL and HKT will have the licence obligations to comply with the rules promulgated for the 2021 Auction in which they participated and as a result of /or at which the concerned frequency blocks will be assigned on 31 March 2024. Accordingly, the CA may cancel, withdraw or suspend the assignment of the relevant frequency blocks if the licensee is found to have breached the relevant auction rules.

### Impact on Customers

35. The Parties assure the CA that the Proposed Swap and Transfer should not cause any observable disruptions to their existing services as they will take all reasonable and necessary measures to minimise service impact on customers, such as by carrying out the migration during the network maintenance window at midnight when there is low network traffic, so as to minimise any disturbance, and using networks in other frequency bands as fallback alternatives in case of any service disruption. As explained in paragraphs 22 and 23 above, even without the Proposed Swap and Transfer, Blocks D1 – D9 in the 2.5/2.6 GHz band will change hands due to spectrum re-assignment on 31 March 2024. Besides, the impact due to further handover of only two blocks, namely Blocks R5 and D5, on 31 March 2028 should also be minimal. In fact, a technical working group (“TWG”) has been set up among the relevant MNOs and OFCA to ensure the handover of spectrum will be handled in an orderly and seamless manner like similar spectrum re-assignment exercises conducted before. Hence, the TWG can also take into account the further changes due to the Proposed Swap and Transfer.

### Effect on Market Competition

#### *Minimal Effect on the Overall Level of Concentration of Spectrum Holdings*

36. At the outset, the CA notes that the Proposed Swap and Transfer will not result in any material change to the overall level of concentration of spectrum holdings among the incumbent MNOs. In particular, the Proposed Swap will only involve an exchange of the same amount of spectrum holdings between CMHK and GBL, resulting in no change in the overall amount of spectrum holdings vested in either Party.

37. As for the Proposed Transfer, while it will lead to an increase in the spectrum holdings of GBL by 20 MHz (i.e. two 2 x 5 MHz blocks) and the reduction of 10 MHz (2 x 5 MHz) of spectrum holdings vested in each of HKT and HTCL, the CA understands that GBL’s spectrum holdings are and will only

be used to provide wholesale mobile telecommunications service to HKT and HTCL. Therefore, applying the approach the CA adopted in the 2021 Auction in calculating the level of concentration of spectrum holdings in the sub-6 GHz band, GBL's spectrum holdings may be attributed 50:50 to its parents, HKT and HTCL, respectively. From this perspective, the effective spectrum holdings of HKT and HTCL will remain the same and the Proposed Transfer will not result in any material change to the overall level of concentration of spectrum holdings among MNOs in the 2.5/2.6 GHz band.

38. In addition, the fact that each of HKT and HTCL will only be transferring 2 x 5 MHz to GBL (in total 20 MHz, less than the prescribed cap of 40 MHz for any such transfer from HKT and HTCL to GBL) means that the amount to be transferred remains within the limit as set out by the CA in the Joint Statement on the 2021 Auction (as summarised at paragraph 7 above).

#### *Applicability of the Merger Rule*

39. Section 3(1) of Schedule 7 to the Competition Ordinance (Cap. 619) ("CO") provides that an undertaking must not, directly or indirectly, carry out a merger that has, or is likely to have, the effect of substantially lessening competition ("SLC Effect") in Hong Kong (Schedule 7 to the CO is referred to here as the "Merger Rule"). The Merger Rule applies only where there is a "merger", and any party to the "merger" directly (or indirectly via any undertaking it controls) holds a carrier licence (or where the business concerned in the merger is conducted under a carrier licence) (section 4 of the Merger Rule).

40. Pursuant to section 3(2)(c) of the Merger Rule, a "merger" takes place if "*an acquisition by one undertaking (the acquiring undertaking) of the whole or part of the assets (including goodwill) of another undertaking (the acquired undertaking) has the result set out in subsection (3)*". Section 3(3) of the Merger Rule states that "*[t]he result referred to in subsection (2)(c) is that the acquiring undertaking is in a position to replace the acquired undertaking, or to substantially replace the acquired undertaking, in the business or in part of the business concerned (as the case requires) in which the acquired undertaking was engaged immediately before the acquisition*".

#### *Competition Assessment for the Proposed Swap*

41. While the Proposed Swap will involve a transfer of assets (which includes intangible assets, in this case the right to utilise the spectrum concerned under a licence) between CMHK and GBL as two separate undertakings, it will only involve the swap of two blocks of 2 x 5 MHz spectrum in the same 2.5/2.6

GHz band and provides CMHK and GBL with technical benefits as explained in paragraphs 11 to 21 above. Both CMHK and GBL will continue to provide the mobile services in the retail and wholesale markets respectively. Hence, it should not be regarded as a “merger” by nature.

### *Competition Assessment for the Proposed Transfer*

42. For completeness, the CA has considered the potential application of the Merger Rule to the Proposed Transfer on the assumption that, a transfer of assets from HKT or HTCL to GBL be subject to the Merger Rule. However, even on the assumption that the Merger Rule will apply, the Proposed Transfer may not necessarily give rise to a “merger” within the meaning of the Merger Rule, unless the transfer of the right to the spectrum holdings concerned will put GBL (as the “acquiring undertaking”) in the position to “replace” or “substantially replace” the business or part of the business of HKT and HTCL respectively (as the “acquired undertakings”).

43. In this regard, GBL (in the Application jointly submitted with HKT and HTCL) indicates that it only provides wholesale mobile capacity to HKT and HTCL using its assigned spectrum and does not offer any retail mobile service currently, and its plan is to continue to provide wholesale mobile capacity only to HKT and HTCL after the Proposed Swap and Transfer. It does not have any plan to offer wholesale mobile capacity or retail mobile service to any customers other than HKT and HTCL. As such, the spectrum to be transferred to GBL will invariably be used to support HKT’s and HTCL’s mobile services, whose businesses will therefore hardly be “replaced” or “substantially replaced” by GBL. Furthermore, the Proposed Transfer will only involve transferring 2 x 5 MHz of spectrum from each of HKT and HTCL to GBL, in total 20 MHz of spectrum, which in terms of size and bandwidth is insignificant to the total amount of sub-6 GHz spectrum assigned to the transferors (i.e. 3.5% and 4.8% for HKT and HTCL respectively<sup>13</sup>) as at 31 March 2024. Accordingly, it is unlikely that GBL as the transferee will replace HKT or HTCL and the whole arrangement will unlikely constitute a merger.

44. As explained in paragraphs 19 to 21 above, the CA also recognises that the Proposed Swap and Transfer will improve the quality of service offered by CMHK, HKT and HTCL to their customers, which in turn can lead to increased competition and consumer welfare in the telecommunications market. The market structure, number of service providers, competitive constraints and

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<sup>13</sup> Prior to the Proposed Transfer, the total amount of sub-6 GHz spectrum assigned to HKT and HTCL is 289.6 MHz and 209.6 MHz respectively as at 31 March 2024. As such, the 10 MHz of spectrum to be transferred to GBL by each of HKT and HTCL only accounts for 3.5% and 4.8% of the total sub-6 GHz spectrum assigned to HKT and HTCL respectively.

level of competition for mobile telecommunications service in Hong Kong will remain unchanged. Thus, the CA has not found any evidence indicating that the Proposed Swap and Transfer will substantially lessen competition.

### *Summary*

45. Based on the competition assessment in paragraphs 41 to 44 above, the Proposed Swap and Transfer will unlikely raise any competition concern in relation to merger or any competition risks resulting in SLC Effect under the CO.

### Consent of the Parties

46. This Application is jointly submitted by the Parties. The CA notes that CMHK and GBL have provided written consent to the Proposed Swap, and GBL, HKT and HTCL have provided written consent to the Proposed Transfer.

## **THE CA'S DECISION**

47. Based on the above assessment, the CA is of the view that the Proposed Swap and Transfer will result in more efficient use of the radio spectrum. Consumers will also benefit from improved service quality. **The CA therefore decides to approve the Application, subject to the following conditions –**

- (a) CMHK and GBL shall jointly submit to the CA a letter of undertaking and confirmation, in the form specified by the CA, to confirm and undertake that there is not any monetary exchange between them for the Proposed Swap;
- (b) CMHK, GBL, HKT and HTCL shall accept all the proposed consequential amendments to be made to the UCLs (including the relevant special conditions and schedules) held respectively by the four MNOs to give effect to the Proposed Swap and Transfer; and
- (c) GBL shall provide network coverage figures for each of Blocks D4 and D5 while HKT shall provide the same for Block D5 demonstrating that their existing network operating in the 2.5/2.6 GHz band has already fulfilled the 90% minimum population requirement.

48. After notifying the Parties of the CA's conditional approval of the Proposed Swap and Transfer, CMHK and GBL have jointly submitted to the CA a letter of undertaking and confirmation, CMHK, GBL, HKT and HTCL have accepted all the proposed consequential amendments to be made to the UCLs, and GBL and HKT have provided the network coverage figures as specified in paragraph 47 (a) to (c) above.

49. The CA will make all the necessary amendments to the UCLs held by the Parties to effect the Proposed Swap and Transfer.

50. For the avoidance of doubt, nothing in the CA's approval of the Proposed Swap and Transfer will fetter the Government's discretion in formulating its policy on spectrum trading in the future. Nothing in the CA's approval of the Application will fetter the CA's discretion in handling similar requests from MNOs for frequency swap or transfer in the future. Any future request for frequency swap or transfer from MNOs will be considered by the CA based on the merits of each case.

**Communications Authority**  
**9 November 2023**