



China Mobile Hong Kong Company Limited (“CMHK”)

Response to Consultation Paper

of

Arrangements for Assignment of the Spectrum in the

6/7 GHz Band for the Provision of

Public Mobile Services

and the Related Spectrum Utilisation Fee

August 2023

Introduction

1. China Mobile Hong Kong Company Limited (“CMHK”) is pleased to provide its comments to the captioned Consultation Paper jointly issued by the Communications Authority (“CA”) and the Secretary for Commerce and Economic Development (“SCED”) on 18 July 2023.
2. CMHK welcomes the opportunity to comment on the proposed arrangements for assignment of a total of 400 MHz of spectrum in the frequency ranges of 6570 – 6770 MHz and 6925 – 7125 MHz (“6/7 GHz band”), which is expected to be released on 1 January 2025.
3. The 6/7 GHz band holds immense potential for various applications, including wireless broadband services, Internet of Things (IoT) devices, and emerging technologies such as augmented reality and virtual reality. The opportunity to have access to spectrum in the 6/7 GHz band would enable any interested parties to enhance their network capacity, thereby improving their mobile service customers’ experience. However, the lack of a mature ecosystem might presents some challenges when it comes to device availability, interoperability, and standardization.
4. CMHK acknowledges the global allocation and targeting of 5G spectrum, where the 6/7GHz band still remains unlicensed or shared in most countries and districts, including the US, Canada, EU, UK, Australia, Korea, and Japan, etc.¹ It is important to note that this spectrum band is still in its early stages of development. In light of this, CMHK suggests that it would be advantageous to allocate the entire spectrum (6425-7125MHz) in alignment with the “Regulations on the Allocation of Radio Frequency of the People’s Republic of China (MIIT Order No. 62)”², which came into effect on July 1, 2023. This approach requires that the entire spectrum to be cleared without being co-primary with Fixed Satellite Service (FSS) and Fixed Service (FS). Additionally, CMHK respectfully expresses its reservations towards conducting an assignment in the first quarter of 2025, as the ecosystem

¹ Source: GSA Global-5G-Spectrum Update July 2023 – Qualcomm paper.

² 《中华人民共和国无线电频率划分规定》 (available at: https://wap.miit.gov.cn/gyhxxhb/jqsj/cyzcyfqs/bmqz/wxdl/art/2023/art_1e98823e689f42ca9ed14dcb6feec07a.html)

supporting such a process is not yet fully matured. It is worth noting that the PRC serves as a significant driving force in the 5G/6G market, and therefore, it would be prudent for Hong Kong to align its timeline with that of Mainland China. According to the MIIT Order No. 62, the MIIT has only divided the spectrum but has not yet initiated the assignment process. Therefore, it may be more favorable for Hong Kong to delay the assignment of the relevant spectrum until the industrial chain development plan in Mainland China becomes more detailed and concrete.

5. With the above in mind, CMHK would like to provide its views with regard to the questions contained in the Consultation Paper. Unless otherwise stated, the terms and definitions in the Consultation Paper will be adopted herein.

Response to Proposed Assignment Arrangements

Question 1: Do you have any views on the proposed amendments to the HKTFA regarding the allocation of the 6425 - 7075 MHz band for mobile service with FS and FSS (Earth-to-space) on a co-primary basis?

6. CMHK agrees with CA to make a new allocation of the 6425 – 7075 MHz to mobile service in the HKTFA.
7. CMHK has reservations on the proposed co-primary basis for the allocation of the 6/7GHz band. CMHK believes that this approach may introduce uncertain interference to mobile services, which could result in unsatisfactory experiences for CMHK's customers.
8. In order to have a better understanding of the potential interference in this band, CMHK recommends that CA provides MNOs with information regarding the location and station type of existing Fixed Satellite Service (FSS) installations, as well as the future FSS allocation plan. This information would enable MNOs to assess the potential impact on their networks and make informed decisions regarding their operations in the 6/7GHz band.
9. By having access to such information, MNOs would be able to proactively plan and optimize their network deployments, ensuring the provision of high-

quality mobile services to CMHK's customers, and mitigate potential interference issues in the future.

Assignment Approach

Question 2: Do you have any views on assigning spectrum in the 6/7 GHz band by way of auction and allowing all interested parties, subject to minimal qualification requirements and the connected bidders restrictions, to apply for participation in the auction?

10. CMHK has concerns on the proposed deployment of 6/7GHz, as it is likely that expensive Active Antenna Unit (AAU) will be used in deploying 6/7GHz band. This would result in additional rental costs for additional AAUs and increased site implementation costs in upgrading existing outdoor antenna poles, indoor radio infrastructure and electrical power supply facilities. This approach is expected to result in high capital expenditure (capex) and operational expenditure (opex) costs, which could impose a significant financial burden on existing MNOs.
11. In light of these concerns, CMHK recommends adopting an administrative assignment approach instead of an auction assignment approach. By doing so, the burden on MNOs can be reduced, and it will also serve as an encouragement for the mobile industry to deploy innovative mobile services. This alternative approach would facilitate a more efficient and cost-effective deployment of the 6/7GHz spectrum, benefiting both the MNOs and the overall mobile industry. Furthermore, instead of allowing all interested parties with minimal qualifications, the proposed assignment should open to the existing MNOs only.

Band Plan

Question 3: Do you have any views on the proposal that 400 MHz of spectrum in the 6/7 GHz band be divided into twenty frequency blocks, with a bandwidth of 20 MHz each, for assignment?

12. Considering the remaining gap spectrum, i.e. 145MHz (from 6425MHz to 6570MHz) and 155MHz (from 6770MHz to 6925MHz) planned to be



assigned in future, the separate allocation of 400MHz and the remaining gap spectrum will likely result in non-contiguous spectrum blocks in the entire 6425MHz to 7125MHz (700MHz), leading to inefficient use of the spectrum in future. Assigning the entire frequency band from 6425MHz to 7125MHz (700MHz) with a bandwidth of at least 100 MHz each in one go can give the CA time to clear up the 6425-6570MHz and 6770-6925MHz bands and harmonize the spectrum assignment with Mainland China.

Spectrum Cap

Question 4: Do you have any views on the proposed spectrum cap of 140 MHz to be imposed on each bidder in the auction of spectrum in the 6/7 GHz band?

13. In line with CMHK's response to Q2, CMHK favors the adoption of an administrative assignment approach and hence spectrum cap is not applicable.

Auction Format

Question 5: Do you have any views on the proposed format of the auction for the assignment of spectrum in the 6/7 GHz band?

14. In line with CMHK's response to Q2, CMHK favors the adoption of an administrative assignment approach and hence the format of the auction is not applicable.

Licensing Arrangements

Question 6: Do you have any views on the proposed licensing arrangements as specified in paragraphs 26 to 31 above? Among others, do you have any views on the network and service rollout obligations proposed to be imposed on the successful bidders of spectrum in the 6/7 GHz band?

15. CMHK has no adverse comments with licensing and validity period,

restriction on frequency swap and technology neutrality.

16. Having said that, CMHK is of the view that 6/7GHz band is mainly used for capacity enhancement, and it is foreseeable that future 6/7GHz services will be limited to hotspots rather than territory-wide. Also, the equipment and user devices for 6/7GHz service may not be mature in coming years. Therefore, regarding the network and service rollout obligations, CMHK proposes to revise minimum 50% population coverage within 5 years to a minimum 200 Radio Units within 5 years.

Spectrum Utilisation Fee

Question 7: Do you have any views on the proposal in relation to the setting and collection of SUF as specified in paragraphs 32 to 34 above?

17. In line with CMHK's response to Q2, CMHK favors the adoption of an administrative assignment approach and hence SUF is not applicable. This cost-effectiveness can be passed on to customers, resulting in more affordable services.

Submitted by
China Mobile Hong Kong Company Limited

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