



Office of the Communications Authority  
29/F, Wu Chung House  
213 Queen's Road East  
Wan Chai, Hong Kong  
Attention: Head, Regulatory 3

August 18<sup>th</sup>, 2018

**RE: Response from GSA to the “Proposed allocation of the 26 GHz and 28 GHz bands to mobile service and the associated arrangements for spectrum assignment and spectrum utilization fee”**

Dear Sir/Madam:

The GSA would like to thank the Hong Kong Communications Authority (CA) and the Secretary for Commerce and Economic Development (SCED) for the opportunity to comment to the consultation on ***“Proposed allocation of the 26 GHz and 28 GHz bands to mobile service and the associated arrangements for spectrum assignment and spectrum utilization fee”***.

In response to the questions raised in the consultation paper, we would like to provide the following comments, where appropriate, for your kind consideration.

**Question 1: What are your views on the proposed allocation of the 26/28 GHz bands to mobile service and of the sub-band of 24.25-24.45 GHz to fixed service, both on a primary basis? What are your views on the protection of radio stations of co-primary users on a first-come-first-served basis?**

Both 26 GHz and 28 GHz bands are essential and key bands for 5G. Therefore, it is very reasonable to adopt frequency ranges from 24.25 GHz to 28.35 GHz for 5G in Hong Kong with priority. Moreover, we also encourage the CA and the SCED to consider to extend the 28 GHz band up to 29.5 GHz with the same priority taking into account 3GPP standardization status, eco-system readiness and movements from other countries such as USA, Korea and Japan. And the 26 GHz band from 24.25 GHz to 27.5 GHz as one of the candidate bands for WRC-19 would also be important to make total 4.1 GHz spectrum bandwidth for Hong Kong. Now, the 26 GHz band is being studied by ITU-R Task Group 5/1 (TG 5/1) for sharing and compatibility issue between 23.6 GHz and 24 GHz to protect Earth-Exploration Satellite Service (EESS-passive). Therefore, the detailed bandwidth should be considered taking into account these study results and WRC-19 decision, as appropriate.

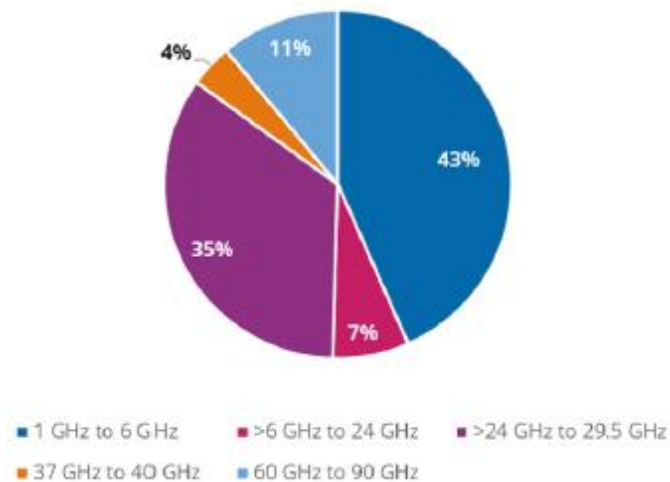
Furthermore, it should be noted that GSA<sup>1</sup> as global suppliers association for mobile communications has published the report<sup>2</sup> in July 2018. From the report, most of 5G trials in the world are being focused on 26/28 GHz band as described in the following figure.

Figure 1. Distribution of number of 5G demonstrations and trials by broad spectrum ranges

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<sup>1</sup> <https://gsacom.com/>

<sup>2</sup> Global progress to 5G-Trials, deployments and launches, July 2018, GSA. Available at <https://gsacom.com/paper/global-progress-to-5g-trials-deployments-and-launches/>



**Question 2: Do you have any views on adopting an administrative assignment approach for the release of spectrum in the 26/28 GHz bands ?**

As mentioned above, both 26 GHz and 28 GHz bands are essential and key bands for 5G. Therefore, an administrative assignment approach would be reasonable to adopt

In general, we support that approach. On the other hand, abundant supply of spectrum for 5G is very significant taking into account Recommendation ITU-R M.2083 defining 5G Vision and Resolution **238 (WRC-15)**. In addition, timing for timely 5G rollout in Hong Kong would also be important. In that regard, we are of the view that the suggested timing in the consultation paper to assign the bands by the end of 2018 and to provide 5G service starting from April 2019 would be the best, by making two bands available for mobile and fixed applications.

**Question 3: Do you have any views on the proposed band plan with frequency slots of 100 MHz each?**

In June 2018, 3GPP has defined the detailed technical specifications for 5G NR supporting these bands. From the technical specifications, 50 MHz, 100 MHz, 200 MHz and 400 MHz have been specified as transmission bandwidth per carrier.

Therefore, we support that 100 MHz for each frequency slot would be appropriate as band plan for 26 GHz and 28 GHz bands.

**Questions 4: Do you have any views on the proposal of assigning (a) 3300 MHz to 3700 MHz of spectrum in the 26/28 GHz bands for the provision of large scale public 5G services; and (b) the remaining 400 MHz to 800 MHz of spectrum in the two frequency bands to other entities for the provision of 5G services in specified locations on a shared basis?**

We support to assign wide bandwidth for 5G. Assignment of 3.3 GHz to 3.7 GHz of spectrum bandwidth for the provision of large scale public 5G service in 26/28 GHz bands would be a good way. And other remaining 400 MHz to 800 MHz of spectrum could be considered for the provision of 5G services in specified locations on a shared basis as suggested in the consultation paper.

**Question 5: Do you have any views on the proposed caps of (a) 800 MHz of spectrum in the 26/28 GHz bands for spectrum designated for the provision of large scale public 5G services; and (b) 400 MHz of the Shared Spectrum designated for the provision of specified location services?**

Taking into account 3GPP status and readiness of RF component technology, the proposed spectrum cap as 800 MHz of spectrum would be a reasonable for the provision of large scale public 5G services.



**Question 6: What are your views on the proposed method of assigning spectrum in the 26/28 GHz band to qualified applications for the provision of large scale public 5G service?**

No specific answer.

**Question 7: Do you have any preference on the assignment of spectrum in either the 26 GHz or 28 GHz band?**

No specific answer.

**Question 8: What are your views in the proposed assignment method for the Shared Spectrum?**

No specific answer.

**Question 9: What are your views on the network and service rollout obligations proposed to be imposed on the use of spectrum assigned for the provision of large scale public 5G services?**

Taking into account radio propagation characteristics, the envisaged network planning and the area of Hong Kong, the proposed network and service rollout obligations as a minimum of 5 000 radio base stations might be reasonable.

**Question 10: What are your views on the proposed performance bond for guaranteeing compliance with the proposed network and service rollout obligations for using spectrum assigned for the provision of large scale public 5G services?**

No specific answer.

**Question 11: Do you have any views on the proposed for SUF as set out in paragraphs 45 to 50 above?**

5G using the 26/28 GHz bands are totally new concept unlike existing 3G and 4G only supporting bands below 6 GHz. In order to facilitate 5G using the 26/28 GHz bands as early as possible, relaxed constraints and flexible requirements would be required.

Once again, the GSA are very pleased to take an opportunity to answer this consultation for Hong Kong 5G. Finally the GSA are keen to continue the close dialogue with the CA and the SCED on the above matters, and looks forward to working closely with the CA and the SCED continuously to enable 5G using 26/28 GHz bands to be deployed in Hong Kong.

Yours sincerely,

HyoungJin CHOI  
Spectrum Group Coordinator  
China, Japan and Korea, GSA  
[hj686.choi@samsung.com](mailto:hj686.choi@samsung.com)

#### **About the GSA**

The GSA (Global mobile Suppliers Association, <https://gsacom.com/>) is an international organization of leading mobile communication suppliers. It develops strategies and plans, and contributes studies and technical analysis to international, regional and individual country policy-makers and regulators to facilitate the timely availability of spectrum for use by mobile network operators.