

**立法會**  
***Legislative Council***

LC Paper No. CB(4)802/16-17  
(These minutes have been seen  
by the Administration)

Ref : CB4/PL/ITB/1

**Panel on Information Technology and Broadcasting**

**Minutes of meeting  
on Monday, 13 March 2017, at 2:30 pm  
in Conference Room 3 of the Legislative Council Complex**

**Members present** : Dr Hon Elizabeth QUAT, JP (Chairman)  
Hon Charles Peter MOK, JP (Deputy Chairman)  
Hon James TO Kun-sun  
Hon Tommy CHEUNG Yu-yan, GBS, JP  
Hon WONG Ting-kwong, SBS, JP  
Dr Hon Priscilla LEUNG Mei-fun, SBS, JP  
Hon Mrs Regina IP LAU Suk-yee, GBS, JP  
Hon Paul TSE Wai-chun, JP  
Hon Claudia MO  
Hon CHAN Chi-chuen  
Hon CHAN Han-pan, JP  
Hon Martin LIAO Cheung-kong, SBS, JP  
Dr Hon CHIANG Lai-wan, JP  
Hon CHUNG Kwok-pan  
Hon CHU Hoi-dick  
Hon CHAN Chun-ying  
Hon HUI Chi-fung

**Members absent** : Hon Jeffrey LAM Kin-fung, GBS, JP  
Hon LEUNG Kwok-hung  
Hon Steven HO Chun-yin, BBS  
Hon MA Fung-kwok, SBS, JP  
Dr Hon Fernando CHEUNG Chiu-hung

Ir Dr Hon LO Wai-kwok, SBS, MH, JP  
Hon Alvin YEUNG  
Hon YUNG Hoi-yan  
Hon Nathan LAW Kwun-chung

**Public officers  
attending**

**: Agenda item IV**

**Commerce and Economic Development Bureau**

Miss Susie HO, JP  
Permanent Secretary for Commerce and Economic  
Development (Communications and Creative  
Industries)

Ms Julina CHAN, JP  
Deputy Secretary for Commerce and Economic  
Development (Communications and Creative  
Industries)

Mr Patrick LEE  
Principal Assistant Secretary for Commerce and  
Economic Development (Communications and  
Creative Industries)B

**Office of the Communications Authority**

Miss Eliza LEE, JP  
Director-General of Communications

Mr Chaucer LEUNG  
Deputy Director-General of Communications  
(Telecommunications)

Mr Sanda CHEUK  
Assistant Director-General (Regulatory)

Ms Linda YU  
Principal Regulatory Affairs Manager (Regulatory)

Communications Authority

Mr Hubert NG  
Member

Dr Anthony William SEETO  
Member

Agenda item V

Innovation and Technology Bureau

Dr David CHUNG, JP  
Under Secretary for Innovation and Technology

Ir Allen YEUNG, JP  
Government Chief Information Officer

Mr Victor LAM, JP  
Deputy Government Chief Information Officer  
(Infrastructure and Operations)

Mr Ricky CHONG  
Principal Assistant Secretary for Innovation and  
Technology

Mr Vinci CHOU Kai-ming  
Acting Chief Systems Manager (Common Services)  
Office of the Government Chief Information Officer

**Clerk in attendance** : Mr Daniel SIN  
Chief Council Secretary (4)3

**Staff in attendance** : Mr Ambrose LEUNG  
Senior Council Secretary (4)3

Miss Mandy LAM  
Legislative Assistant (4)3

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**I. Confirmation of minutes of meetings**

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|------------------------------|----|--|
| (LC Paper No. CB(4)658/16-17 | -- | Minutes of policy briefing held on 7 February 2017 |
| LC Paper No. CB(4)660/16-17  | -- | Minutes of meeting held on 13 February 2017)       |

The minutes of policy briefing held on 7 February 2017 and the minutes of meeting held on 13 February 2017 were confirmed.

**II. Information paper issued since the last meeting**

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|----------------------------------|----|--|
| (LC Paper No. CB(4)605/16-17(01) | -- | Submission from a member of the public received on 21 February 2017 regarding views on policies relating to the development of the communications and broadcasting industries and their implementation (Chinese version only)) |
|----------------------------------|----|--|

2. Members noted that the above paper had been issued for the Panel's information.

**III. Date of next meeting and items for discussion**

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|----------------------------------|----|--|
| (LC Paper No. CB(4)655/16-17(01) | -- | List of outstanding items for discussion |
| LC Paper No. CB(4)655/16-17(02)  | -- | List of follow-up actions)               |

Regular meeting on 10 April 2017

3. Members noted that the next regular Panel meeting would be held on Monday, 10 April 2017 at 2:30 pm to discuss the following items:

- (a) Wi-Fi Connected City Programme; and
- (b) Facilitating cinema development.

**IV. Arrangements for the frequency spectrum in the 900 MHz and 1800 MHz bands upon expiry of the existing frequency assignments**

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|--|----|---|
| (LC Paper No. CB(4)655/16-17(03)   | -- | Administration's paper on arrangements for the frequency spectrum in the 900 MHz and 1800 MHz bands upon expiry of the existing assignments for public mobile telecommunications services and the spectrum utilization Fee  |
| LC Paper No. CB(4)655/16-17(04)  | -- | Paper on arrangements for the frequency spectrum in the 900 MHz and 1800 MHz bands upon expiry of the existing frequency assignments prepared by the Legislative Council Secretariat (Updated background brief)   |
| LC Paper No. CB(4)664/16-17(01)<br>(tabled at the meeting and subsequently issued via e-mail on 13 March 2017) | -- | Paper on arrangements for the frequency spectrum in the 900 MHz and 1800 MHz bands upon expiry of the existing assignments for public mobile telecommunications services provided by the Office of the Communications Authority (power-point presentation materials) (Chinese version only) |

LC Paper No. CB(4)664/16-17(02) (tabled at the meeting and subsequently issued via e-mail on 13 March 2017)	--	Paper on arrangements for the frequency spectrum in the 900 MHz and 1800 MHz bands upon expiry of the existing assignments for public mobile telecommunications services and the spectrum utilization Fee provided by the Commerce and Economic Development Bureau (power-point presentation materials) (Chinese version only))
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Presentation by the Administration

4. At the invitation of the Chairman, Permanent Secretary for Commerce and Economic Development (Communications and Creative Industries) ("PSCCI") briefed members on the arrangements for the frequency spectrum in the 900 MHz and 1800 MHz bands upon expiry of the existing assignments for public mobile telecommunications services and the spectrum utilization fee ("SUF"). Principal Regulatory Affairs Manager (Regulatory) and Principal Assistant Secretary for Commerce and Economic Development (Communications and Creative Industries)B then gave a power-point presentation on the subject. Details of the briefing were set out in the papers provided by Administration (LC Paper Nos. CB(4)655/16-17(03), CB(4)664/16-17(01) and CB(4)664/16-17(02)).

Discussion

*Continuation of second generation public mobile telecommunications services*

5. Mr CHAN Chun-ying noted that the second generation public mobile telecommunications services ("2G services"), which were supported solely by the 900 MHz and 1800 MHz frequency spectrum, would gradually be phased out. He also noted that the Communications Authority ("CA") now proposed in the second consultation to require the spectrum assignees of the 900/1800 MHz spectrum to seek CA's prior approval before phasing out the 2G services instead of requiring them to continue to provide 2G services during a three-year transitional period from the commencement of the new spectrum assignment term in 2020 and 2021 as set out in the first consultation. As that were still

1.65 million 2G service subscribers in Hong Kong and that many of the Mainland visitors coming to Hong Kong were still using 2G services, Mr CHAN asked about the circumstances under which the CA would give approval for spectrum assignees to phase out their 2G services.

6. Deputy Director-General of Communications (Telecommunications) ("DDGC(T)") said that licensees who were assigned the 900/1800 MHz spectrum could apply to CA to terminate their 2G services if the number of 2G service subscribers had decreased to a level rendering it no longer cost-effective to continue with the service, on condition that appropriate plans were in place for the remaining 2G service subscribers to migrate to higher generation services. DDGC(T) supplemented that although many Mainland visitors were still using 2G services, it was expected that the number of these users would fall towards 2020-2021 in line with the global trend to move towards newer technologies.

7. Mr Charles MOK asked if the Administration would be more flexible in considering application from mobile network operators ("MNOs") to phase out 2G services when the client base had dropped to a very low level. Director-General of Communications ("DGC") said that only a relatively small amount of spectrum was needed to deliver 2G services. However, as there was still a sizeable number of people (especially visitors from the Mainland) who were still using 2G services, it was considered necessary to allocate suitable amount of spectrum to maintain the service.

8. DGC supplemented that under a market-driven approach proposed in the second consultation, if, towards 2020-2021, it was demonstrated that the number of 2G service subscribers had dropped to a low level that it was no longer feasible to maintain the services, and if the operators could offer service plans to upgrade 2G service subscribers to new service plans using 3G or above technologies, CA would consider permitting individual MNOs to terminate their 2G service taking into consideration the prevailing market conditions.

*Provision of services in country parks and remote areas*

9. Mr CHAN Chun-ying noted that the Administration proposed to waive SUF for incumbent spectrum assignees for using the re-assigned  $2 \times 4$  MHz of spectrum in the 1800 MHz band to provide mobile coverage in country parks and remote areas for another 15 years upon expiry of the existing assignments until 29 September 2036. He asked how the period of 15 years was determined. DDGC(T) explained that the length of the proposed spectrum assignment period of 15 years was to tally with the validity period of the new carrier licence under which the spectrum would be assigned.

10. The Chairman noted that MNOs operating their networks at the 900/1800 MHz spectrum were required to maintain a minimum of 90% coverage of the population throughout the spectrum assignment term. She asked whether the Administration would ensure that the remaining 10% of the population had access to mobile services. DDGC(T) said that the Administration encouraged MNOs to provide mobile services in remote areas. He explained that  $2 \times 4$  MHz of spectrum in the 1800 MHz band had been assigned to three MNOs for the provision of mobile coverage in the country parks and remote areas and no SUF was payable for such purpose. The Administration had also facilitated MNOs in installing base stations in country parks and remote areas, including allowing their use of government hilltop sites and buildings at nominal rental. Fixed network operators were also encouraged to enhance their Internet services by extending the optical fibre network to remote areas. Recently there were fixed network operators focusing on the provision of fixed broadband services in the rural and remote areas. It was expected that service coverage in the remote areas would gradually improve.

11. The Chairman queried whether such mere encouragement was sufficient for MNOs to provide mobile network services to communities in remote areas. The Chairman commented under the policy of digital inclusion and smart city, the Administration should have a role to ensure that people in remote areas would not be deprived of the access to Internet services. She asked whether MNOs to be assigned frequency spectrum for provision of mobile service should be required to ensure that services would be provided to people living in remote areas.

12. DGC said that there might not be sufficient commercial incentive for operators to provide either fixed or mobile services in remote areas. PSCCI said that it would involve major consideration probably under the digital inclusion and smart city policy initiatives for operators to be required, or funded, to provide network services to remote areas and wider discussion within the community would be necessary.

### *Spectrum Utilization Fee*

13. Mr Charles MOK acknowledged that frequency spectrum was a scarce public resource, and that the Administration should ensure that the level of SUF should reflect its full market value. Mr HUI Chi-fung asked how the Administration could determine the full market value of the spectrum. PSCCI said that SUF for spectrum to be auctioned would be determined through a competitive bidding process to reflect the full market value of the spectrum. This would ensure optimal use of the spectrum by assigning it to the MNOs which valued it the most.



14. Mr Charles MOK expressed concern that if the spectrum was auctioned off at a high price, the increase in SUF would be transferred to mobile service users, resulting in an escalation of mobile service price. The Chairman shared Mr MOK's view. PSCCI said that SUF represented only a small part of MNOs' operating cost. Dr Anthony William SEETO, a member of CA, supplemented that SUF had in the past accounted for a small portion, say in the order of a few percents, of an operator's cost and it was unlikely that an increase in SUF would result in escalation of service charges. DGC supplemented that on average, the share of SUF relating to the 900/1800 MHz spectrum constituted less than 1% of the operating cost of the MNOs.

15. Mr Charles MOK asked, as an alternative to setting SUF to maximizing public revenue, whether the Administration would instead consider imposing conditions to require service operators to improve quality of service, or whether the Administration would require MNO to provide higher rebate for customers to buffer the increase in SUF. PSCCI said that the level of SUF would be set by the market through a competitive bidding process. To determine SUF administratively would not only be a deviation from the longstanding market-based approach adopted by the Administration on spectrum management, it would also be out of line with international practice.

16. Mr HUI Chi-fung asked how the different options for the re-assignment of the 900/1800 MHz spectrum would affect public revenue. He also asked whether the consultancy study on the impact arising from the various spectrum re-assignment options on service quality had looked into the method of setting SUF. PSCCI said that contribution to public revenue was not a factor of consideration in the re-assignment of spectrum. She added that the consultant had not been asked to look into the methods for determining SUF because, as a matter of policy, the level of SUF should be determined by the market.

17. In setting the auction reserve price, PSCCI said that the Administration would make reference to the auction reserve prices in the two most recent auctions in respect of the spectrum in the 2.5/2.6 GHz and 1.9 – 2.2 GHz bands conducted in 2013 and 2014 respectively. As regards the spectrum which would be offered via the right of first refusal ("RFR Spectrum"), the Administration would set a minimum price which represented the estimated market value of the spectrum by making reference to the value of spectrum in frequency bands with similar propagation characteristics as determined in the two abovementioned assignments. The final value of SUF would be determined by auction.

*Quality and continuity of mobile network services in MTR stations*

18. Mr CHAN Chi-chuen expressed concern about the impact of the re-assignment of the 900/1800 MHz spectrum on the continuity of 4G services in MTR. In particular, Mr CHAN commented that online service was slow in many areas along MTR lines. He asked what measures the Administration would put in place to improve the situation. DGC said that 4G services had to be delivered using equipment operating in the 1800 MHz band. However, the delivery of mobile service in 43 of the MTR stations relied on legacy systems which could not flexibly accommodate changes in spectrum assignments to MNOs. To address the service continuity issue, the CA would offer more RFR spectrum in the 1800 MHz band to the incumbent spectrum assignees. DGC assured members that based on the experience in the last re-assignment exercise for spectrum in the 1.9 – 2.2 GHz band, when the handover of spectrum to different spectrum assignees had proceeded smoothly without any service interruption, she was confident that the handover of the 900/1800 MHz spectrum would proceed equally seamlessly.

*Utilization of spectrum*

19. Mr Charles MOK also observed that in the last auction of spectrum for 4G services, some MNOs had allowed the spectrum to lay idle until towards the end of the period for network and service rollout when it was used to provide other kinds of mobile data service. Mr MOK asked what the Administration would implement to prevent idling of spectrum.

20. DDGC(T) responded that the operator, in fact, used the spectrum for provision of wireless fixed network service in accordance with its plan in bidding for the spectrum. CA would consider whether similar terms should be offered to successful bidders of 900/1800 MHz spectrum to afford them the same flexibility over the choice of using the spectrum for wireless fixed services, mobile services, or a combination of both. Mr Charles MOK further asked whether it was an efficient use of spectrum when an operator only used it to provide wireless fixed services in a small area. DGC said that the operator was still providing services to users having regard to market situation and the issue should not be viewed in a narrow perspective as the Chairman had, on the other hand, asked earlier that operators should be required to provide services to people living in remote areas.

## **V. Implementation of Centrally Managed Messaging Platform**

(LC Paper No. CB(4)655/16-17(05) -- Administration's paper on implementation of Centrally Managed Messaging Platform)

### Presentation by the Administration

21. At the invitation of the Chairman, Under Secretary for Innovation and Technology briefed members on the implementation of Centrally Managed Messaging Platform ("CMMP") in the Government. Details of the briefing were set out in the paper provided by Administration (LC Paper No. CB(4)655/16-17(05) ).

### Discussion

22. Mr CHAN Chun-ying supported the proposal. He asked how many civil servants would benefit from the proposed implementation of CMMP and when it would be extended to all departments. Mr CHAN also asked the level of savings in terms of energy consumption and economy of scale that could be achieved through installing the CMMP.

23. Government Chief Information Officer ("GCIO") explained that the first phase of the CMMP implementation would cover all policy bureaux and the Department of Justice, involving around 15 000 government employees. The first phase was expected to take three years to complete. The second phase, which would cover the rest of the government departments, would include about 200 000 staff. Deputy Government Chief Information Officer ("DGCIO") supplemented that, with the implementation of CMMP, the number of servers would be reduced from 320 to 77 and the electricity cost could be reduced by two-thirds (i.e. \$880,000 per annum); the required floor space could also be reduced by about two-thirds, and the reclaimed space could be reallocated for other uses such as work stations for staff.

24. Mr Charles MOK welcomed the Administration's proposal. He suggested that the Administration should extend the new system to other government departments at the earliest opportunity. Mr MOK asked if the Administration had evaluated the return on investment for the CMMP. GCIO said that the proposed CMMP would achieve better system utilization by adopting cloud technology and enhancement to system security. DGCIO supplemented that the current cost estimate for implementing CMMP was about \$250 million. If the existing system was to be upgraded with additional security enhancements, the

cost, including subsequent system upgrades, would be around \$200 million over a period of five to seven years. DGCIO added that an upgrade of the existing system would not be as good as the proposed CMMP in terms of system performance and security.

25. Mrs Regina IP supported the proposal. She asked how the community would benefit from the proposed implementation of CMMP, and, in particular, how CMMP would help enhance communication between the community and the Administration. GCIO said that the proposed CMMP include new features to handle confidential e-mails by adopting standards which were compatible with popular systems being used in the industry. The new features would make it more convenient to share data using e-mail between the Government and the public.

26. The Chairman asked what improvement measures would be introduced to enhance system security in CMMP. GCIO said that as the proposed CMMP would centralize the administration of email systems of different bureaux and departments, any system maintenance and system enhancements could be implemented centrally and in a timely and integrated manner. He added that a central support team would be available round the clock to provide assistance and technical support.

27. As no members had expressed any contrary views to the implementation of CMMP, the Chairman concluded that the Panel had no objection to the Administration seeking funding approval for the proposed project.

## **VI. Any other business**

28. There being no other business, the meeting ended at 3:57 pm.