

**立法會**  
**Legislative Council**

LC Paper No. CB(4)1607 /17-18  
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by the Administration)

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**Panel on Information Technology and Broadcasting**

**Minutes of meeting**  
**on Monday, 11 June 2018, at 2:30 pm**  
**in Conference Room 3 of the Legislative Council Complex**

- Members present** : Hon Charles Peter MOK, JP (Chairman)  
Dr Hon Elizabeth QUAT, BBS, JP (Deputy Chairman)  
Hon James TO Kun-sun  
Hon CHAN Kin-por, GBS, JP  
Hon Mrs Regina IP LAU Suk-ye, GBS, JP  
Hon Paul TSE Wai-chun, JP  
Hon Claudia MO  
Hon YIU Si-wing, BBS  
Hon MA Fung-kwok, SBS, JP  
Hon CHAN Chi-chuen  
Hon CHAN Han-pan, JP  
Hon Christopher CHEUNG Wah-fung, SBS, JP  
Hon Martin LIAO Cheung-kong, SBS, JP  
Ir Dr Hon LO Wai-kwok, SBS, MH, JP  
Hon Alvin YEUNG  
Hon YUNG Hoi-yan  
Hon CHAN Chun-ying  
Hon HUI Chi-fung
- Members absent** : Hon WONG Ting-kwong, GBS, JP  
Hon Starry LEE Wai-king, SBS, JP  
Hon Michael TIEN Puk-sun, BBS, JP  
Hon CHUNG Kwok-pan  
Hon CHU Hoi-dick  
Dr Hon Junius HO Kwan-yiu, JP

**Public officers  
attending**

: Agenda item IV

Innovation and Technology Bureau

Mrs Millie NG KIANG Mei-nei, JP  
Deputy Secretary for Innovation and Technology (1)

Mr Ricky CHONG Kwok-man  
Principal Assistant Secretary for Innovation and  
Technology (1)

Office of the Government Chief Information Officer

Ir Allen YEUNG, JP  
Government Chief Information Officer

Mr Tony WONG Chi-kwong  
Assistant Government Chief Information Officer  
(Industry Development)

Agenda item V

Commerce and Economic Development Bureau

Miss Eliza LEE, 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 Danny LAU  
Advisor (Telecommunications)

Mr Keith GIANG  
Principal Assistant Secretary for Commerce and  
Economic Development  
(Communications and Creative Industries)A

Office of the Communications Authority

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

Analysys Mason Limited

Mr David ABECASSIS

**Clerk in attendance** : Mr Ambrose LEUNG  
Acting Chief Council Secretary (4)3

**Staff in attendance** : Ms Peggy CHUNG  
Council Secretary (4)3

Ms Cynthia TAM  
Legislative Assistant (4)3

Action

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**I. Confirmation of minutes of meeting**

(LC Paper No. CB(4)1197/17-18 -- Minutes of meeting held on  
12 March 2018)

The minutes of the meeting held on 12 March 2018 were confirmed.

**II. Information paper(s) issued since the last meeting**

2. Members noted that no paper had been issued since the last meeting held on 14 May 2018.

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

(LC Paper No. CB(4)1200/17-18(01) -- List of outstanding items  
for discussion

LC Paper No. CB(4)1200/17-18(02) -- List of follow-up actions)

Regular meeting on 9 July 2018

3. Members noted that the next regular Panel meeting would be held on Monday, 9 July 2018 at 2:30 pm to discuss the following items:

- (a) Report on the work of Create Hong Kong and Hong Kong Design Centre; and
- (b) E-Government Services.

**IV. Progress report on Innovation and Technology Fund for Better Living and Digital Inclusion**

(LC Paper No. CB(4)1200/17-18(03) -- Administration's paper on progress report on Innovation and Technology Fund for Better Living and Digital Inclusion

LC Paper No. CB(4)1200/17-18(04) -- Paper on Innovation and Technology Fund for Better Living and Digital Inclusion prepared by the Legislative Council Secretariat (updated background brief))

Presentation by the Administration

4. At the invitation of the Chairman, Deputy Secretary for Innovation and Technology (1) ("DS(1)") briefed members on the progress of the Innovation and Technology Fund for Better Living ("FBL") and Digital Inclusion. Details of the briefing were set out in the paper provided by the Administration (LC Paper No. CB(4)1200/17-18(03)).

Discussion

*Accessibility of Government websites and mobile applications*

5. The Deputy Chairman enquired about the number of Government websites in operation and the number of which had conformed to the relevant accessibility standards. She also enquired about the Administration's target in

enhancing the accessibility of Government's mobile applications ("apps").

6. Government Chief Information Officer ("GCIO") responded that the Government had currently set up 555 websites in total, and they all met the Level AA standards of the Web Content Accessibility Guidelines Version 2.0 promulgated by the World Wide Web Consortium. GCIO supplemented that while there was no common standards for mobile app on web accessibility, the Office of the Government Chief Information Officer had introduced the "Baseline Accessibility Criteria for Government Mobile App" and issued an internal circular to government bureaux and departments in April 2018 asking all Government mobile apps to conform to the relevant accessibility criteria by July 2019. GCIO said that by that time, all Government mobile apps should be accessible by the concerned user groups.

7. Assistant Government Chief Information Officer (Industry Development) ("AGCIO") supplemented that there were currently 106 Government mobile apps, of which 60 had met the baseline accessibility criteria. By July 2019, the remaining apps would either have to be upgraded to conform to the required criteria, or be removed if they were under-utilized.

8. The Deputy Chairman said that, as a target, the Administration should ensure that all Government services were accessible through mobile apps that met accessibility standards.

*Implementation of the Innovation and Technology Fund for Better Living*

9. Mr CHAN Chun-ying supported the implementation of FBL. He noted that only 13 out of 48 applications had been approved so far. He queried whether the low success rate reflected the lack of publicity and whether the Administration would step up promotion and publicity.

10. DS(1) said that FBL was introduced in end-May 2017 and the FBL Assessment Panel had already approved 13 eligible applications involving a total grant of about \$38 million. Many of the applicants were social service organizations which needed time to study the application requirements and to identify partners in preparing application documents, and hence the Administration did not expect to receive many applications during the initial launch of the Fund. The Administration considered that the response so far met the Administration's expectation.

11. Mr CHAN Chi-chuen noted that eligible applicants for FBL must be subvented non-governmental organizations ("NGOs"), public bodies, professional bodies or trade associations. In fact, some FBL applications had

been returned to the applicants because they were private enterprises. He queried whether the Administration had explained the eligibility criteria clearly to the community and whether a private enterprise would be able to apply for FBL funding if it set up or partnered with an NGO.

12. DS(1) responded that the Administration had launched promotion programmes on FBL which included briefing sessions for interested organizations. The Administration had explained the application criteria clearly that applications from private companies would not be accepted, although private enterprises could partner with an NGO or other non-profit-making organizations and submit a joint application.

13. Mr YIU Si-wing said that if an organization had a project idea that could help achieve the objective of FBL in encouraging the use of innovation and technology to address the needs of specific community groups, the Administration should encourage their contribution regardless of whether it was a private or non-profit-making organization. DS(1) said that if a private organization was able to come up with a project that was able to address the needs of specific community groups, it would be advisable for the company to seek partnership or collaboration with an NGO which was providing direct services to those community groups. She added that there were different funding schemes under the Innovation and Technology Fund targeted for private enterprises.

14. Mr CHAN Chi-chuen asked if a project funded under FBL would be required to achieve certain downloads or usage rate, or if the service funded under FBL was required to sustain a minimum amount of time. Mr CHAN also asked if the applicant needed to return part of the grant to FBL if the project failed to satisfy the conditions.

15. DS(1) said that the FBL Assessment Panel would examine the nature and the expected number of people who might benefit from a project under application and the anticipated number of downloads that might be achieved. In case of mobile app projects, successful applicants were required to offer the product free for download during the funded period, which covered a development period of 12 months and a running period of another 24 months. They were also required to sign an agreement with the Innovation and Technology Bureau which specified the schedule of deliverables of the projects. The Chairman asked the Administration to provide a schedule of deliverables for each of the approved projects funded under FBL. DS(1) said that the Administration had to observe the terms and conditions in the funding agreement signed with the organization in the release of information.

16. On Mrs Regina IP's enquiry about the evaluation of the performance of FBL, DS(1) said that the key performance indicators included the benefits the FBL-funded projects brought to the public or specific community groups, the number of beneficiaries, the innovation and technology contents of the projects and the number of applications approved. DS(1) added that it was estimated some 300 000 people could be benefited from the 13 projects that had been approved.

17. Mrs Regina IP enquired if a successful applicant under FBL could apply again for funding on another project. DS(1) responded that it was possible for an organization which had been granted funding under FBL for a project to apply again and the Assessment Panel would examine each new application based on its own merits. However, to avoid one organization receiving funding for too many projects, preference might be given to other eligible applicants who had not received any funding from FBL before.

18. Mr CHAN Chi-chuen asked whether the Administration would disseminate information about the projects that had been approved under FBL so that interested organizations might draw reference from these projects in preparing their applications. The Chairman said that the Administration might consider setting out basic information on each of the successful applications using a standard template even before the final products were launched. DS(1) undertook to consider members' suggestions.

19. Mr CHAN Chun-ying referred to a grant of \$4.52 million to an application ("Baduanjin Health Programme Game") which had been criticized for being too costly. He asked why the FBL Assessment Panel supported such a large amount of funding on just one mobile app. DS(1) said that the app would adopt advanced artificial intelligence technology and machine learning features which enabled users to receive feedback from the app. DS(1) added that the Assessment Panel had thorough deliberation on the project based on the prescribed assessment criteria and agreed that the project should be supported.

20. The Chairman said that, from his discussion with the app's developer, he understood that the bulk of the FBL grant was spent on software development. The app included an advanced feature which allowed users' motions to be captured and analyzed, and would give advice to users based on their motions. The Chairman said that the app did not only benefit just the elderly members of the applicant, i.e. North Point Kai-fong Welfare Advancement Association, but it would also serve a wider community in Hong Kong. The Chairman further commented that the new technology developed could be applied into other areas. DS(1) supplemented that FBL also aimed at promoting local innovation and nurturing an I&T culture.

21. On Mr YIU Si-wing's enquiry about the ownership of the intellectual property associated with the project funded by FBL, DS(1) clarified that the intellectual properties associated with the projects funded under FBL belonged to the project proponents. Mr YIU said that as the project was supported by public fund, the relevant product or service should be available to the public at no cost.

*Use of information and communications technology by elderly people*

22. Mr YIU Si-wing enquired about the Administration's plan to increase the Internet adoption rate of the elderly community in 2017 to the anticipated rate of 70%. GCIO explained that the Administration would regularize the 12-month Information and Communications Technology ("ICT") Outreach Programme for the Elderly as an on-going programme. The Administration would also offer advanced training to active elders with basic ICT knowledge through the district networks of Elderly Academies to enhance their capability in adopting digital technology in their daily living. Upon completion of training, those more agile elders could serve as trainers to help other elders acquire further technology knowledge. The Administration also planned to launch a web-based learning platform for sharing learning resources.

*Digital inclusion*

23. In response to the Deputy Chairman's query, GCIO said that support under the subsidy for Internet Access Charges was disbursed on a family basis, irrespective of the number of students in a household. The Deputy Chairman commented that the bandwidth that could be bought with the current rate of subsidy might not be sufficient for larger households. She asked if the Administration would negotiate with the relevant service providers to offer more favourable plans to those families. GCIO undertook to follow up.

24. Mr CHAN Chun-ying asked whether the Administration had invited private sponsorship in implementing the various digital inclusion initiatives. AGCIO said that the Administration welcomed and encouraged those organizations which had helped to implement digital inclusion measures to seek sponsorship from other private companies. In fact, the two implementers of the Internet Learning Support Programme ("ILSP") would continue to seek private sponsorship to provide assistance to needy families after completion of ILSP.

25. The Chairman noted that connection speed of the Internet services subscribed under ILSP was often too slow. The Chairman said that the low connection speed might depend on many factors: the computer systems might be



obsolete, the respective households did not have access to broadband Internet service, or the service providers only offered plans with a small bandwidth. He said that the Administration should look into the problem.

26. The Chairman noted that funding support was available under the Community Care Fund ("CCF") for needy students to purchase mobile computer devices to facilitate e-learning. However, the subsidy was only applicable to students in schools which had adopted the "Bring Your Own Device" ("BYOD") policy. If those schools, for certain management or others reasons, decided not to adopt BYOD policy, the students would not be able to benefit from the CCF Assistance Programme. He asked the Administration to look into the issue.

## **V. Spectrum trading**

(LC Paper No. CB(4)1200/17-18(05) -- Administration's paper on spectrum trading)

### Presentation by the Administration

27. At the invitation of the Chairman, Permanent Secretary for Commerce and Economic Development (Communications and Creative Industries) ("PS(CCI)") briefed members on the policy's views on spectrum trading. Details of the briefing were set out in the paper provided by the Administration (LC Paper No. CB(4)1200/17-18(05)) The representative of Analysys Mason Limited ("Consultant") and Principal Assistant Secretary for Commerce and Economic Development (Communications and Creative Industries) A gave Power-point presentations on the spectrum trading.

*(Post-meeting note: The power-point presentation materials provided by the Administration was issued to members vide LC Paper Nos. CB(4)1201/17-18(01) and CB(4)1201/17-18(02) (Chinese version only) on 11 June 2018.)*

### Discussion

28. Mr MA Fung-kwok noted that in 2007, the Administration had considered the case for introducing spectrum trading, but decided that there was no need to do so in the short to medium term. Mr MA queried about the Administration's timeframe and what the Administration's position was on the introduction of spectrum trading in the long term. The Chairman made a similar query. PS(CCI) explained that in 2007, the Administration had consulted the telecommunications sector on issues related to spectrum management and

spectrum assignment arrangements. While it was considered at that time that spectrum trading might be an option for the long term, certain technical implementation issues would have to be resolved. The Administration had held the view that while it was demonstrated, through another study in 2009, that it was feasible to implement spectrum trading, such an arrangement should not be pursued in deference to the implementational issues yet to be resolved. In 2016, after having implemented the various measures set out in the Radio Spectrum Policy Framework ("Framework") published in 2007, the Administration considered it opportune to revisit the subject of spectrum trading and, in the light of the outcome of the latest consultancy study, the Administration concluded that there was no justifiable case for introducing spectrum trading in the next five to 10 years. PS(CCI) added that the long term need for spectrum trading would depend on the demand and supply of spectrum following the emergence of the fifth generation ("5G") services.

29. In response to a follow-up enquiry from Mr MA Fung-kok, PS(CCI) supplemented that during the consultation conducted under the latest consultancy study, the Administration noted that the mobile communications sector was not keen on the introduction of spectrum trading arrangement.

30. Mr MA Fung-kok was concerned about the Administration's evaluation on the implications of 5G services to the mobile market. In response, PS(CCI) expected that a large amount of 5G spectrum would be available for assignment. On the other hand, the demand for 5G spectrum was likely to be large, as 5G technology had wide applications not only in mobile telecommunications but also in Internet of Things ("IoT") and smart city development. The implications of 5G services on the mobile market were rather uncertain at this stage. PS(CCI) advised that the Administration would monitor the market development, supply of the spectrum, as well as the overseas experience and would revisit the matter of spectrum trading if circumstances so warranted.

31. Mrs Regina IP noted that 5G technology would be an enabler in several areas including financial technology, IoT, smart city and virtual banking. It was likely that the future demand for 5G spectrum would be substantial. She asked if the 5G spectrum would be assigned administratively, by way of auction or through other arrangements similar to those practised in other jurisdictions. Mr MA Fung-kok raised a similar query and asked how the Administration would determine whether the spectrum would be assigned administratively or by auction. Where the spectrum was to be assigned by auction, Mrs Regina IP asked if the price of spectrum would be pushed up and the cost of 5G services would be passed on to consumers.

32. PS(CCI) shared Mrs Reginia IP's view that the future demand for 5G spectrum might be high. She explained that the International Telecommunication Union had identified 11 candidate frequency bands (within 24.25 GHz to 86 GHz) for 5G services. As a result, about 33 GHz of spectrum would be available following the spectrum harmonization at the World Radiocommunications Conference to be held in 2019. The Administration had invited interested parties to express interest in using the first batch of 5G spectrum in the higher frequency bands and the feedback indicated that the demand could be fully accommodated by the available spectrum. If there was no competitive demand for the 5G spectrum, they would be assigned administratively according to the principle laid down in the Framework. Otherwise, the spectrum could be assigned through auctions and would then be subject to spectrum utilization fee ("SUF").

33. As regards the assignment of spectrum, PS(CCI) said that the main guiding principle under the Framework was that a market-based approach should be adopted if the Communications Authority considered that there were likely to be competing demands from providers of non-Government services, unless there were overriding public policy reasons to do otherwise. PS(CCI) supplemented that, as evident in previous spectrum auctions, significant increase in the fees of communications services was not observed. PS(CCI) said that in fact the total SUF per year of all spectrum assigned for second generation ("2G"), third generation ("3G") and fourth generation ("4G") services constituted only 3% to 4% of the operating costs of the service providers, and any increase in spectrum price due to the competitive process in auction should not significantly affect their operation. PS(CCI) also said that based on the previous seven auction exercises, the Administration had not observed that there were service providers who had managed to monopolize the spectrum.

34. The Chairman commented that the recommendations of the two consultancy studies conducted in 2009 and 2017 as regards the introduction of spectrum trading in Hong Kong were inconsistent. He asked whether there were any major changes from 2009 to 2017 that led to different conclusions. The Chairman further said that although the latest consultancy pointed out that only one operator was keen on the introduction of spectrum trading, it did not imply that the other three operators objected to having such a regime. He added that spectrum trading might also bring competition to the market as new entrants could obtain the spectrum through trading instead of having to bid for them at an auction.

35. PS(CCI) said that when the first consultancy study was conducted in 2009, the Framework had only been in operation for a short period and the mechanism of spectrum management had not been fully developed. PS(CCI)

supplemented that the current supply and demand of spectrum in Hong Kong and the existing spectrum management regime were totally different from those in 2009. The profit generated from spectrum trading would only benefit the operators, whereas the income from spectrum assignment through auction or payment of SUF would go to the General Revenue. As the existing spectrum management mechanism was considered effective, and that the 5G spectrum in the higher frequency bands was expected to be in large supply and could likely be assigned administratively, PS(CCI) commented that there was no justifiable grounds for introducing spectrum trading in the short and medium term.

36. Mr MA Fung-kwok was concerned about the handling of the 5G spectrum assignment. For example, whether current assignees of 2G to 4G spectrum would be given priority and whether these assignees could swap their spectrum for 5G spectrum. Mr MA further asked what charges would be collected in relation to the assignment of the spectrum, whether the charges would be set at a level to recover the cost of the administration of the spectrum or whether the assignment would be conducted by phases.

37. PS(CCI) said that a public consultation exercise would be conducted in July 2018, and, in the light of the views received, the Communications Authority would determine the assignment arrangements for the first batch of 5G spectrum in the higher frequency bands in accordance with the Framework. Deputy Director-General of Communications (Telecommunications) supplemented that while SUF might or might not be payable for administratively assigned spectrum, a spectrum management fee would be charged, as part of the licence fee payable to the Office of the Communications Authority ("OFCA"), for recovery of OFCA's administrative costs in managing the spectrum.

38. The Chairman noted that the Administration considered spectrum trading arrangement unnecessary for the lower frequency bands (i.e. frequency spectrum for 2G to 4G services) because the demand was high. However, he also noted that for higher frequency bands (such as those required for 5G services) the Administration ruled out the need for any spectrum trading arrangement because the expected demand was small compared with the amount of spectrum available. However, for spectrum below the 3.5GHz frequency bands which could be used for provision of 3G/4G as well as 5G services, the Chairman asked if the Administration would consider whether some sort of trading mechanism should be provided for those spectrum.

39. PS(CCI) explained that spectrum of low frequency bands (such as those in frequency bands of 3 to 3.5GHz or below) had shorter wavelengths and could be transmitted over a longer distance. Services using these frequency bands could achieve a wider coverage without many base stations. The demand for

spectrum in these frequency bands was high. However, existing operators (except one) using spectrum in these bands were not keen to have a spectrum trading regime. Without supply of spectrum in the second hand market, PS(CCI) said that there seemed no justifiable reason to set up a spectrum trading regime.

40. PS(CCI) said that on the other hand, spectrum in the high frequency bands (such as those in the frequency bands of 26GHz or above) could carry a large volume of information although the signals could only transmit over a relatively short distance. Such spectrum was suitable for 5G services and the supply of spectrum in these frequency bands was large vis-à-vis the demand. There was no need for a second-hand trading platform because operators could apply to OFCA for assignment of these high frequency spectrum. PS(CCI) said that in both cases there were no justifications for a spectrum trading regime.

41. The Chairman commented that a spectrum trading regime could attract new companies to acquire spectrum to provide 5G services in Hong Kong without having to go through tendering. He said that the downside with the use of the high frequency spectrum for 5G, despite its high capacity, was that it could only cover a relatively short distance and many base stations would need to be installed, requiring the availability of many physical locations to accommodate the base stations.

42. The Chairman said that when 2G to 4G services were eventually phased out, the demand for low frequency spectrum would decrease. The Administration should consider how these resources should be used and allocated.

43. PS(CCI) said that despite the launch of 5G services, 2G to 4G services would not immediately become obsolete. She anticipated that these services and technologies would co-exist for some time. The Administration would, however, keep in view developments to adjust the spectrum assignment arrangements to meet the changing needs of the market.

## **VI. Any other business**

44. The Chairman said that Miss Eliza LEE attended the ITB Panel meeting for the last time as PS(CCI). He thanked Miss LEE for her support and past contribution to the work of the Panel

45. There being no other business, the meeting ended at 4:31 pm.

Council Business Division 4  
Legislative Council Secretariat  
8 October 2018