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Panel on Information Technology and Broadcasting

Meeting on 11 December 2017

**Updated background brief on the progress of the implementation of
digital terrestrial television broadcasting in Hong Kong**

Purpose

This paper sets out the background of the implementation of digital terrestrial television ("DTT") broadcasting in Hong Kong, and summarizes the views and concerns previously expressed by Members.

Background

Implementation framework for DTT broadcasting

2. The Administration announced the implementation framework of DTT broadcasting in 2004. The implementation of DTT helps fulfil the policy to enhance and promote Hong Kong's information infrastructure and services to build Hong Kong into a leading digital city in the globally connected world of the 21st century. The Administration's priority is to ensure a smooth analogue-to-digital migration of existing terrestrial television ("TV") services by broadcasters building and testing the digital broadcasting network and launching new TV or multimedia services to drive consumer take-up of DTT.

Digital terrestrial television services by free TV licensees

3. On 22 February 2016, the Television Broadcasts Limited ("TVB") ceased the simulcast arrangement on its Jade and HD Jade channels, where the same TV programme content was simultaneously broadcast on the two TVB channels. The HK Television Entertainment Company Limited ("HKTVE") launched its new integrated Chinese channel, ViuTV, via fixed network since

31 March 2016 and has started to transmit its DTT service from 2 April 2016; the integrated English channel was launched on 31 March 2017.

4. The transmission network of HKTVE and TVB cover at least 99% of the Hong Kong population¹. Another free TV licensee, Fantastic Television Limited ("Fantastic TV"), was granted a free TV licence on 31 May 2016, and its service was launched on 14 May 2017.

Radio Television Hong Kong

5. The Administration announced in 2009 that Radio Television Hong Kong ("RTHK") would serve as the public service broadcaster for Hong Kong, and RTHK would develop an all-round broadcasting service to the community. In 2010, RTHK took forward DTT broadcasting as part of its expanded scope of services set out in the RTHK Charter signed between the Administration and RTHK in August 2010. Since then, RTHK has been establishing the necessary DTT transmission network, including renting suitable hilltop transmission sites, purchasing transmitters and equipment, and conducting technical trials.

6. RTHK commenced broadcast of its DTT channels in January 2014. The Administration informed the Panel on Information Technology and Broadcasting ("the Panel") in November 2016 that RTHK's DTT signals were being broadcast from a total of 13 transmitting stations², covering about 85% of the Hong Kong population. RTHK plans to establish more transmitting stations for its DTT service in a progressive manner in the coming years.

7. With the endorsement of the Panel on 10 March 2014, the Administration sought the Finance Committee's approval for funding of \$64.2 million to install 22 fill-in stations by phases by RTHK from April 2015 to the first quarter of 2019. With the completion of these fill-in stations in 2019, DTT target coverage of 99% of the Hong Kong population would be achieved and such coverage will be on a par with the current DTT coverage of TVB and HKTVE.

8. At the Panel held on 11 January 2016, members supported the Administration's funding proposal of \$15.53 million for procurement of additional production equipment and system for further developing the existing DTT service of RTHK.

¹ HKTVE also provides its licensed free TV service via a fixed network.

² The 13 transmitting stations that RTHK is currently broadcasting its DTT signals are located at Temple Hill, Kowloon Peak, Castle Peak, Golden Hill, Cloudy Hill, Lamma Island, Mount Nicholson, Beacon Hill, Brick Hill, Sai Wan Shan, Hill 374 Yuen Long, Pottinger Peak and Stanley Hill

Analogue switch-off

9. In promulgating the implementation framework for DTT broadcasting in July 2004, the Administration also indicated its plan to switch-off analogue TV service (or, in short, analogue switch-off ("ASO")) at end 2012, i.e. five years after the commencement of simulcast of DTT and analogue TV services. The Administration took the view that ASO could vacate spectrum to relieve the ever increasing demand for high value-added mobile telecommunications services, such as mobile broadband services.

10. However, the Administration explained that, for the freed-up spectrum after ASO to be usable for mobile telecommunications services in Hong Kong, it must be free from radio interference in the same frequency range, including that of any signals transmitted from neighbouring areas in the same frequency range. This requires coordination and harmonization of the use of the respective spectrum band with Hong Kong's neighbouring Mainland areas. The Administration informed the Panel that, according to the Mainland authorities, the earliest ASO timeframe for the Guangdong Province would be the end of 2020.

11. In the light of the above considerations, the Administration, in 2014, revised the working target ASO date from 2015 to the end of 2020, with a review of the target date to be conducted in 2017-2018. The revised target date will allow more time for the remaining analogue television viewers to switch to DTT service. It also allows the Administration to optimize the utilization of the vacated spectrum after ASO to yield the maximum economic benefits for Hong Kong through the coordination of frequency use with the Mainland authorities.

Previous discussion

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12. At the meeting held on 14 November 2016, the Administration briefed the Panel on the latest progress of the implementation of the DTT service.

Sports, arts and cultural programmes

13. Members expressed concern on whether the Administration would encourage DTT service providers to offer more sports, arts and cultural programmes to meet public expectations. The Administration and the Communications Authority ("CA") indicated that they would give due regard to public views in considering the appropriate conditions to be imposed in the domestic free TV programme service licences. However, the choice of TV

programmes to be delivered was a commercial decision for licensees taking into account market conditions; quite a high proportion of programmes broadcast by RTHK were already arts and cultural programmes.

Progress in handling application for domestic free television programme service licences

14. Some members enquired about the progress of the Administration's processing of applications for domestic free TV programme service licences. The Administration advised that there were three applications under processing. The Chief Executive in Council ("CE in Council") had accepted CA's recommendations to allow more time for one of the applicants (i.e. Fantastic TV) to submit the required information to CA to facilitate consideration of the licence application.

Analogue switch-off

15. Members enquired about the reasons for viewers not to switch to DTT service and whether they would be ready to switch to DTT service by 2020 when analogue TV broadcasting service was to be switched-off. The Administration responded that some consumers had not yet switched to DTT service probably because they had bought analogue TV sets recently and they were still functional. Viewers in tenement buildings who could not receive DTT signals would also not be able to switch to DTT service. The Administration would review the situation in 2017-2018. Analogue TV sets were expected to be phased out gradually in the coming few years and more viewers would then switch to DTT service. This would also affect the pace at which people switched to DTT service.

16. Some other members commented that the Administration might have underestimated the operating cycle of analogue TV sets so that many would still be function by ASO date. They enquired whether the Administration would assist disadvantaged groups to switch from using analogue TV to DTT sets. The Administration replied that viewers could install TV set-top boxes, the price of which had become more affordable, to receive DTT programmes.

17. Members expressed concern that any delay in ASO would affect availability of spectrum for high demand mobile telecommunication applications and Hong Kong might miss the opportunity for leading the development of the fifth generation of telecommunications technology. The Administration responded that the current target ASO date in 2020 still stood, and the Administration would coordinate with the Mainland authorities on ASO arrangements.

Coverage of Digital Terrestrial Television service

18. Members asked whether the Administration would work with the DTT service providers to improve transmission facilities for enhancing signal reception quality and extending DTT coverage. The Administration replied that Hong Kong had achieved a DTT coverage of 99% of the population and it was very difficult technically and extremely costly for a broadcasting network to achieve a 100% coverage. The Administration informed the Panel that it would continue to explore with TV service providers whether alternative technically feasible and cost-effective measures were available to further improve DTT coverage. The Office of the Communication Authority would deploy technical staff to investigate the situation and tender technical advice to complainants regarding DTT reception.

19. In response to members' enquiry on the measures to be taken to further extend DTT, the Administration stated that it was inevitable that some areas might not be covered by DTT service. Local TV stations might be reluctant to invest for the benefit of a small group of viewers. There were cases whereby local residents had installed reception facilities with their own resources.

20. Upon members' request, the Administration provided supplementary information about the locations with poor DTT reception and technical means to improve the reception via LC Paper No. CB(4)297/16-17(01).

Special Finance Committee

21. At the special meeting of the Finance Committee ("FC") held on 6 April 2017, Members raised enquiries about the development plan, viewership and numbers of sports, arts and culture TV programmes of RTHK's DTT. They also asked the schedule, resources and manpower involved in ASO. The required information was provided by the Administration to members at the special FC meeting on 6 April 2017.

Latest position

22. The Administration will brief the Panel on 11 December 2017 on the latest progress of implementation of DTT broadcasting services.

Relevant papers

23. A list of the relevant papers is set out in the **Appendix**.

Council Business Division 4
Legislative Council Secretariat
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List of relevant papers

Issued by	Meeting date/ Issue date	Paper
Commerce, Industry and Technology Bureau	9 July 2004	The Statement of the Secretary for Commerce, Industry and Technology on The Implementation Framework for Digital Terrestrial Television Broadcasting
Panel on Information Technology and Broadcasting	14 November 2016	<p>Administration's paper on an update on the implementation of digital terrestrial television broadcasting LC Paper No. CB(4)58/16-17(05)</p> <p>Updated background brief on the progress of the implementation of digital terrestrial television broadcasting in Hong Kong LC Paper No. CB(4)58/16-17(06)</p> <p>Minutes of meeting LC Paper No. CB(4)251/16-17</p>
Commerce and Economic Development Bureau	7 December 2016	<p>Administration's response on information requested by the Panel relating to the locations with poor digital terrestrial television reception and technical means to improve reception LC Paper No. CB(4)297/16-17(01)</p>
Special Finance Committee	6 April 2017	<p>Administration's replies to Members initial written questions (Reply Serial Nos. CEDB(CCI)005, CEDB(CCI)029 and CEDB(CCI)069)</p>