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**Panel on Information Technology and Broadcasting**

**Meeting on 18 February 2019**

**Background brief on switching off analogue television service  
following the implementation of  
digital terrestrial television broadcasting in Hong Kong**

**Purpose**

This paper sets out the background of the Administration's plan to switch off analogue television ("TV") service following the implementation of digital terrestrial television ("DTT") broadcasting in Hong Kong, and summarizes the views and concerns previously expressed by members.

**Background**

2. In 2004, the Administration announced the implementation framework of DTT broadcasting which would help fulfil the Administration's 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 21<sup>st</sup> 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.

3. The Administration has suggested that when most TV households had switched to DTT service, analogue TV service could be switched off. The Administration took the view that the analogue switch-off ("ASO") could vacate spectrum to relieve the ever increasing demand for high value-added mobile telecommunications services, such as mobile broadband services. The Administration has indicated that DTT coverage and penetration of digital TV as reflected by DTT take-up rate as well as the coordination with the Mainland on the use of spectrum for communications services after ASO are relevant factors for determining when ASO could be effected.

### Digital terrestrial television coverage

4. By December 2017, the DTT coverage of the three domestic free TV programme service licensees in Hong Kong, namely Fantastic Television Limited, the HK Television Entertainment Company Limited and the Television Broadcasts Limited, were about 93%, 99% and 99% of the Hong Kong population respectively<sup>1</sup>. In addition, Radio Television Hong Kong ("RTHK")'s DTT coverage reached about 90% of the Hong Kong population in December 2017. With the establishment of more transmitting stations in recent years, RTHK targeted to achieve an overall coverage of 99% of the Hong Kong population in 2019.

### Penetration of digital television

5. According to the surveys conducted by consultants commissioned by the government, the DTT take-up rate increased from 80% as reported in December 2014 to 88% in December 2017, where more than 2.2 million of the households in Hong Kong were receiving digital TV services. Of the remaining 12% of the households not receiving digital TV services in 2017, about 7% still relied on analogue TV services and about 5% did not install TV sets at home.

### **Analogue switch-off**

6. The Administration originally planned to switch off analogue TV service at end 2012, i.e. five years after the commencement of simulcast of DTT and analogue TV services. In 2011 and 2014, the target date of ASO was deferred twice due mainly to insufficient coverage and penetration. The Administration's latest target date of ASO is end-2020 subject to the outcome of a review conducted in 2017-2018.

7. The Administration has 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 bands with Hong Kong's neighbouring Mainland areas. The Administration has informed the Panel that, according to the Mainland authorities, the earliest ASO timeframe for the Guangdong Province would be the end of 2020.

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<sup>1</sup> Fantastic Television Limited provides its licensed domestic free TV programme service via a fixed network.

8. In the light of the above development, the Administration, in 2014, revised the working target date of ASO from 2015 to the end of 2020, with a review of the target date scheduled to be conducted in 2017-2018. The revised target date would allow more time for the remaining analogue television viewers to switch to DTT service. It would also allow 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**

### Panel on Information Technology and Broadcasting

9. At the meetings held on 14 November 2016 and 11 December 2017, the Administration discussed with the Panel the latest progress of the implementation of the DTT service and ASO.

#### *Whether local viewers would be ready for analogue switch-off by 2020*

10. Members queried whether local viewers would be ready to switch to DTT service by 2020 when analogue TV broadcasting service was to be switched off. The Administration explained that some viewers had not yet switched to DTT service probably because their analogue TV sets which were bought recently were still functional. For some other viewers living in tenement buildings which could not receive DTT signals, switching to DTT service was not even an option. The Administration expected that analogue TV sets would gradually phase out towards the target date of ASO and more viewers would then switch to DTT service.

11. Some other members enquired whether the Administration would assist disadvantaged groups to switch from using analogue TV to DTT sets. The Administration replied that viewers could install less costly TV set-top boxes to receive DTT service using their analogue TV sets.

#### *Implications of delay in analogue switch-off*

12. Members expressed concerns that any delay in ASO would affect the 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 ("5G"). The Administration advised that it still planned to effect ASO in 2020, and would coordinate with the Mainland authorities on implementation details.

13. The Administration added that the progress of ASO would not affect Hong Kong's preparation for the commercial launch of 5G services, because the International Telecommunication Union had identified new candidate bands for 5G services for international harmonization. The spectrum in different frequency bands between 24.25 GHz and 86 GHz could potentially be used for 5G services.

*Possibility of advancing the target date of analogue switch-off*

14. At the Panel meeting held on 11 December 2017, members enquired whether the Administration had discussed with the Mainland authorities on the possibility of advancing the target date of ASO, so that the spectrum currently used for analogue TV services could be freed up for other applications before the end of 2020. The Administration responded that they had maintained coordination with the Mainland authorities regarding the target date of ASO and the post-ASO spectrum assignment arrangements. The working target date of ASO was also being reviewed taking into consideration factors such as DTT take-up rate and the progress of the discussion with the Mainland authorities. The Administration would report the outcome to the Panel after conducting its review in 2017-2018.

*Use of spectrum after analogue switch-off*

15. Members enquired about the usage of the 700 MHz band to be released upon ASO. The Administration explained that subject to coordination with the Mainland authorities on the avoidance of interference in the spectrum to be vacated after ASO, the 700 MHz band might be considered for mobile telecommunications services.

**Latest position**

16. The Administration will brief the Panel on 18 February 2019 on the outcome of the review on the working target date of ASO and the way forward.

**Relevant papers**

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

## List of relevant papers

Issued by	Meeting date/ Issue date	Paper
Commerce, Industry and Technology Bureau	9 July 2004	<a href="#">The Statement of the Secretary for Commerce, Industry and Technology on The Implementation Framework for Digital Terrestrial Television Broadcasting</a>
Panel on Information Technology and Broadcasting	11 July 2011	Administration's paper on digital terrestrial television - analogue switch-off (Legislative Council Brief) <a href="#">File Ref: CTB(CR)9/1/9(11)</a>
	12 January 2015	Legislative Council Brief issued by the Commerce and Economic Development Bureau in December 2014 <a href="#">File Ref: CTB(CR)9/1/9</a>
	11 December 2017	Administration's paper on an update on the implementation of digital terrestrial television broadcasting <a href="#">LC Paper No. CB(4)330/17-18(04)</a>  Updated background brief on the progress of the implementation of digital terrestrial television broadcasting in Hong Kong <a href="#">LC Paper No. CB(4)330/17-18(05)</a>  Minutes of meeting <a href="#">LC Paper No. CB(4)582/17-18</a>