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Panel on Information Technology and Broadcasting

Meeting on 13 January 2020

**Background brief on
Hong Kong's external telecommunications connectivity**

Purpose

This paper provides background information on Hong Kong's external telecommunications connectivity, and a brief account of the concerns expressed by Members on the subject.

Background

2. Hong Kong is a leading digital economy consistently achieving top rankings in digital readiness and Internet access capabilities. All sectors of Hong Kong's telecommunications market have been liberalized with no foreign ownership restrictions. Its telecommunications infrastructure is currently one of the most sophisticated and advanced in the world, providing a wide range of services connecting the city locally and more importantly, to the rest of the world.

3. By utilizing the external networks operated by licensees, external telecommunications services ("ETS") are provided in the market to facilitate (a) communications between one or more points in Hong Kong and one or more points outside Hong Kong; and (b) communications between two or more points outside Hong Kong but routed in transit via Hong Kong.¹ The Communications Authority ("CA") which was established under the Communications Authority Ordinance (Cap. 616) regulates the provision of

¹ Section 4.2 of the [Guidelines for Application for Unified Carrier Licence \(Issue 12\)](#)

both the facilities (such as cables and satellites) and the services (such as International Direct Dialing ("IDD") services) of Hong Kong's ETS in accordance with the Telecommunications Ordinance (Cap. 106) as well as the relevant regulations and policies.

Facility-based external telecommunications services

4. Hong Kong is a major telecommunications and Internet hub in the region. As at March 2019, there are eight cable landing stations in Hong Kong connecting the city to 11 regional and transcontinental submarine cable systems and 20 overland cables connected to four telecommunications operators in the Mainland of China. The total equipped external capacity exceeded 81 421 Gbps. Landing of five additional submarine cable systems is in the pipeline and they are expected to be ready for service between 2019 and 2021.

5. Hong Kong adopts an open sky policy in regulating the provision of satellite services. Satellite-based telecommunications and television broadcasting services are provided via a multitude of satellites in the region with more than 200 transmitting/receiving satellite antennae in earth stations operated by a number of licensed fixed carriers and broadcasters. As at March 2019, two Hong Kong companies are licensed to operate and provide satellite communications services, namely Asia Satellite Telecommunications Company Limited and APT Satellite Company Limited, operating a total of 12 in-orbit satellites.

6. The provision of external facilities as well as external services operated over external facilities is regulated by a Unified Carrier Licence ("UCL(External)"). As at November 2019, there are 42 UCL(External) licensees providing satellite-based or cable-based fixed external telecommunications service in Hong Kong.

Service-based external telecommunications services

7. An operator who intends to provide external service without establishment, operation and maintenance of external transmission facility does not need a UCL. The operator may consider applying for a Services-Based Operator ("SBO") Licence for Class 3 services (ETS) by which he/she may provide ETS by leasing external transmission facility from other UCL holders. As at November 2019, there are 183 licensed services-based ETS providers in Hong Kong, providing services such as IDD service and international call forwarding service. In the financial year ended on 31 March 2019, the total external telephone traffic from Hong Kong exceeded 3 billion minutes.

Previous discussion

8. The impending introduction of the fifth generation ("5G") mobile services in Hong Kong may affect the operation of ETS. During the briefing by the Administration to the Panel on Information Technology and Broadcasting ("the Panel") on 10 May 2019 on the assignment of spectrum for the 5G mobile services, Panel members noted that the satellite earth stations in Tai Po and Stanley were using the 3.5 GHz band radio spectrum for the telemetry, tracking and control of satellites in orbit. To ensure that satellite services operated by these satellite earth stations could coexist with future 5G services, CA, based on technical considerations, had set up restriction zones in Tai Po and Stanley to constrain the deployment of mobile base stations operating in the 3.5 GHz band in the area. Members were concerned whether the Administration would consider relocating the telemetry, tracking and control stations away from Tai Po and Stanley. They also queried how the 5G mobile services would be affected in the restriction zones.

9. The Administration informed Panel members that a working group had been formed to explore feasible technical arrangements for utilizing the 3.5 GHz band within the restriction zones. Mobile services could be provided in the area using other frequency bands. As regards the suggestion to relocate the earth stations, the Administration explained that it would keep the option under review but the interest of the licensees of the earth stations would have to be considered.

Council question

10. At the Council meeting of 10 January 2018, Mr CHAN Chi-chuen raised a written question in relation to complaints on billing disputes in relation to ETS as well as other telecommunications services. In particular, Mr CHAN expressed concerns over complaints against telecommunications service operators overcharging service fees and enquired whether the Administration would adopt new regulatory measures to enhance protection of consumers' rights and interests. The Administration explained that, with a view to enhancing the transparency of pricing in respect of chargeable items in the provision of telecommunications services, CA had issued the Code of Practice in Relation to Billing Information and Payment Collection for Telecommunications Services, which provides guidelines on the information to be included in bills and on the arrangements for payment collection. Furthermore, the Office of the Communications Authority had also encouraged the industry to improve and implement the Industry Code of Practice for Telecommunications Service

Contracts, run the Customer Complaint Settlement Scheme and implement the "mobile bill shock" preventive measures, so as to protect the rights and interests of consumers.

11. Details of the question and the Administration's reply are given in the hyperlink in the **Appendix**.

Latest position

12. The Administration will brief the Panel on 13 January 2020 on the overview and updates relating to Hong Kong's external telecommunications connectivity.

Relevant papers

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

Council Business Division 1
Legislative Council Secretariat
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List of relevant papers

Issued by	Meeting date	Paper
Panel on Information Technology and Broadcasting	10 May 2019	Administration's paper on assignment of spectrum for fifth generation mobile services (LC Paper No. CB(1)1020/18-19(05)) Updated background brief (LC Paper No. CB(1)1020/18-19(06)) Minutes of meeting (LC Paper No. CB(1)1290/18-19)
Council	10 January 2018	Question No. 18 raise by Hon CHAN Chi-chuen Billing of telecommunications services