

**For Discussion on
10 April 2017**

**Legislative Council Panel
on Information Technology and Broadcasting**

**Progress Update on the Implementation of the
Wi-Fi Connected City Programme**

Purpose

This paper briefs Members on the latest progress of the implementation of the “Wi-Fi Connected City” programme.

Background

2. The Government has all along endeavoured to promote information and communications infrastructure development, and has launched the Government Wi-Fi (“GovWiFi”) service as early as in 2008 to provide free Wi-Fi service to the public at designated government venues. “GovWiFi” sets a good example for the industry and gradually many public and private organisations have been providing free Wi-Fi service at their venues. To facilitate members of the public and visitors to access the free Wi-Fi service provided by various public and private organisations, the Government launched the common “Wi-Fi.HK” brand in August 2014 for participating public and private organisations to provide free Wi-Fi service to users for at least 30 minutes a day. As at the first quarter of 2016, the number of “Wi-Fi.HK” hotspots has increased significantly to over 17 000 from some 5 000 since its service launch.

3. In May 2016, the Finance Committee of the Legislative Council approved a funding commitment of \$500 million for implementing the “Wi-Fi Connected City” programme to progressively expand the coverage of “Wi-Fi.HK” to more government and other venues to provide free Wi-Fi service to the public. Our target is to double the number of hotspots to 34 000 within three years so as to build Hong Kong as a Wi-Fi connected city.

Progress of the “Wi-Fi Connected City” Programme

4. Apart from continuing to provide Wi-Fi service at some government venues, we are implementing the “Wi-Fi Connected City” programme through a multi-pronged approach. Details are as follows:

Proactively encouraging public and private organisations to join “Wi-Fi.HK” brand

5. Since its launch, the “Wi-Fi.HK” brand has received support from public and private organisations. Apart from government departments, at present, 34 private organisations and government related organisations, including Wi-Fi service providers, industrial and commercial organisations, tourism related organisations, universities and tertiary institutions, a number of public organisations, etc. have joined the brand (a list of the private organisations and other public organisations participating in the “Wi-Fi.HK” programme is at **Annex 1**). “Wi-Fi.HK” hotspots cover different types of venues, including: universities and tertiary institutions, cultural and sports venues, entertainment and leisure venues, government offices, stores/shopping centres, telephone booths, restaurants, etc. As at end-February 2017, the number of hotspots has increased to over 19 000 (the distribution of all “Wi-Fi.HK” hotspots by venue types is at **Annex 2**).

6. We are also proactively inviting other government related organisations to join the “Wi-Fi.HK” brand to provide free Wi-Fi service to the public at their venues. In 2015, we facilitated the Hospital Authority (“HA”) in collaborating with service providers to provide one-hour free Wi-Fi service at the public areas of six public hospitals (such as the waiting halls of the Accident and Emergency Departments and the Specialist Out-patient Clinics). In 2016, we further collaborated with HA and secured the support of Wi-Fi service providers to select another seven public hospitals to provide one-hour free Wi-Fi service. We anticipate that the service will be launched progressively starting from the second half of 2017. We will continue to assist HA in extending the free Wi-Fi service to other public hospitals to benefit more people.

Providing Wi-Fi service at government venues through public-private collaboration model

7. Through a public-private collaboration model, we will open up suitable government venues as far as possible for the private service providers to install equipment and provide Wi-Fi service with free usage time at their own cost. We are implementing a pilot project permitting private service providers to provide valued-added services¹ to users at these venues as an incentive for them to continue to provide free Wi-Fi service for the public. In the long run, this collaboration model will not only provide an effective way in bringing in best commercial practices with the participation of private service providers, but will also enable the Government to provide sustainable Wi-Fi service to the public without the need to finance its operation.

8. Currently, there are four service providers participating in the pilot project to provide Wi-Fi service with free usage time at about 180 government venues, including sitting-out areas, markets, public transport interchanges, promenades, museums and land boundary control points. This figure exceeds the original estimate of 100 pilot venues. The venues under the pilot project will provide at least one-hour free Wi-Fi service while some venues such as libraries, museums, parks, sports and performance venues will have no usage time limit. The average speed for Internet access of each mobile device is about 4 Mbps. The speed of the Wi-Fi service in some venues like libraries and museums will be raised to 8 Mbps.

9. The Wi-Fi service under the pilot project will be launched progressively starting from the second quarter of 2017. We anticipate that about 1 000 hotspots will be provided within 2017.

¹ The valued-added services permitted under the pilot project include: (a) Wi-Fi on-line advertisement: such as displaying advertisements on users' mobile devices when they connect to the Wi-Fi service; (b) commercial Wi-Fi service: such as providing users with premium Wi-Fi service with higher speed and no usage limit; (c) mobile telecommunications services: to allow the installation of small cell mobile radio base stations at government venues to provide mobile telecommunications service; and (d) big data analytics: to collect data, in a manner that complies with the laws in Hong Kong, for study and analysis purposes during the provision of Wi-Fi service, thereby creating business opportunities.

Subsidising youth service centres and study rooms operated by non-profit-making organisations to provide Wi-Fi service

10. Provision of free Wi-Fi service in youth service centres and study rooms operated by non-profit-making organisations can facilitate the public, in particular students, to use Internet resources to continue study after school. Since the commercial returns in providing service at these venues are relatively low, it is not suitable to implement the service by using a public-private collaboration model. Therefore, the Government will subsidise these non-profit-making organisations to provide free Wi-Fi service in youth service centres and study rooms.

11. We have invited eligible non-profit-making organisations to apply for the subsidy in end-March this year. We expect that the subsidised non-profit-making organisations will progressively set up 500 to 800 hotspots in their youth service centres and study rooms from mid-2017 to provide free Wi-Fi service.

Providing Wi-Fi Service in some Government venues

12. Currently, since some government venues providing “GovWiFi” service are of lower commercial value, free Wi-Fi service cannot be provided through a public-private collaboration model. However, recognising that there is still keen demand from the public for free Wi-Fi service at these venues, we have decided to continue to provide free Wi-Fi service at these venues upon expiry of the current “GovWiFi” contract in January 2018. We are in the midst of the procurement process and expect to award contracts in the fourth quarter of 2017. We estimate that about 2 700 existing “GovWiFi” hotspots will continue their service to the public through this means.

Security of “Wi-Fi.HK”

13. To ensure the security of free Wi-Fi service, the Government has taken the lead in adopting digital server certificates for all “GovWiFi” service to facilitate Wi-Fi service users to verify the identity of the service provider, thereby minimising the chance of accessing fake “Wi-Fi.HK” service. We also proactively encourage other “Wi-Fi.HK” participating organisations to use digital server certificates in their “Wi-Fi.HK” service. Currently,

25 “Wi-Fi.HK” participating organisations are using digital server certificates, covering more than 10 000 hotspots. We will continue to follow up with the remaining participating organisations on their progress in using digital server certificate, and will request new organisations joining the “Wi-Fi.HK” brand to adopt digital server certificates.

Service quality

14. To monitor the quality of Wi-Fi service under the “Wi-Fi Connected City” programme, we have established a steering committee and working groups with members from the bureaux and departments, service providers and major non-government organisations participating in the programme to define the service scope and detailed requirement, oversee the implementation progress, and monitor the daily service. We have also engaged third party organisations to monitor, through means such as periodic sample checks, the Wi-Fi service provided by the service providers under various arrangements to ensure that the quality of “Wi-Fi.HK” service meets the requirements and public expectations.

Way Forward

Promoting the “Wi-Fi.HK” brand

15. We plan to promote the “Wi-Fi.HK” brand through various means, including organising large-scale events, making use of social media and producing announcements in the public interest. We will also work with the Hong Kong Tourism Board to promote the “Wi-Fi.HK” brand to visitors. We are aware that more and more private organisations are offering free Wi-Fi service adopting different business models, for instance, there are private organisations and associations coordinating different types of traders to form a sizeable network to provide the public with free Wi-Fi hotspots. We will consider more effective ways to allow these Wi-Fi services to join the “Wi-Fi.HK” brand. We will continue to explore with the industry further room for development, including introducing other value-added services. We hope that through such promotion activities, more private organisations will be encouraged to participate in the “Wi-Fi.HK” brand.

16. We are now revamping the “Wi-Fi.HK” website and mobile application to provide more “Wi-Fi.HK” information to the public and

visitors and assist them in more easily locating free Wi-Fi hotspots under the “Wi-Fi.HK” brand. Participating organisations of the brand will be provided with more promotion opportunities, which in turn will attract more private organisations to join the “Wi-Fi.HK” brand. We anticipate that the revamped website and mobile application will be launched in mid-2017.

Reviewing the pilot project

17. We will review the effectiveness of the pilot project that provides Wi-Fi service at government venues through a public-private collaboration model as outlined in paragraphs 7 and 8 above, and evaluate the attractiveness of the various value-added services to the service providers, as well as the feasibility of introducing more value-added services such that service providers can provide and expand sustainable free Wi-Fi service. After taking stock of our experiences, we will implement the programme in full scale and provide Wi-Fi service at more suitable government venues through a public-private collaboration model.

Smart City

18. We are conducting a consultancy study for formulating a smart city development blueprint for Hong Kong, covering information and communications infrastructure and connectivity demands for smart city development. The consultancy study will assess the various measures under the existing “Wi-Fi Connected City” programme and propose long-term recommendations.

Advice Sought

19. Members are invited to note the contents of this paper and provide views on the development of the “Wi-Fi Connected City” programme.

**Innovation and Technology Bureau
Office of the Government Chief Information Officer
April 2017**

**Private Organisations and Other Public Organisations
Participating in the “Wi-Fi.HK” Programme
(As at end-February 2017)**

	<i>Wi-Fi Services Providers</i>
1.	Hong Kong Telecommunications (HKT) Limited
2.	Hong Kong Broadband Network Limited
3.	Wharf T&T Limited
4.	Hutchison Global Communications Limited
5.	Y5ZONE Limited
	<i>Industrial/Commercial Organisations</i>
6.	Hang Lung Properties
7.	Hopewell Holdings Limited
8.	The Bank of East Asia, Limited
	<i>Tourism Related Organisations</i>
9.	Ocean Park Corporation
10.	The Airport Authority Hong Kong
11.	Ngong Ping 360 Limited
12.	West Kowloon Cultural District Authority
	<i>Universities & Tertiary Institutes</i>
13.	The University of Hong Kong
14.	The Chinese University of Hong Kong
15.	The Hong Kong Polytechnic University
16.	City University of Hong Kong
17.	Hong Kong Baptist University
18.	The Hong Kong University of Science and Technology
19.	Lingnan University
20.	The Education University of Hong Kong
21.	The Open University of Hong Kong
22.	Vocational Training Council
23.	Tung Wah College
24.	The Hong Kong Academy for Performing Arts
25.	Hang Seng Management College
26.	The HKU School of Professional and Continuing Education (HKUSPACE)

	<i>Other Public Organisations *</i>
27.	Hong Kong Science and Technology Parks Corporation
28.	Hong Kong Cyberport Management Company Limited
29.	Hong Kong Productivity Council
30.	Hong Kong Housing Authority
31.	Hong Kong Exchanges and Clearing Limited
32.	Hong Kong Export Credit Insurance Corporation
33.	Construction Industry Council
34.	Hong Kong Trade Development Council

*The Hospital Authority provides venues in their public hospitals for Wi-Fi service providers to provide Wi-Fi service.

Distribution of “Wi-Fi.HK” Hotspots by Venue Type
(As at end-February 2017)

Venue Type	Number of Hotspots
Universities & Tertiary Institutes	10 773 (57%)
Sports, Cultural & Recreational Venues	1 613 (8%)
Entertainment & Leisure	1 147 (6%)
Government Offices	982 (5%)
Stores/Shopping Centres	977 (5%)
Telephone Booths	934 (5%)
Restaurants	851 (4%)
Hospitals & Clinics	580 (3%)
Public Transportation	385 (2%)
Convenience Stores	363 (2%)
Industrial/Commercial Buildings	316 (2%)
Offices of Other Public Organisations	63 (<0.4%)
Accommodations	63 (<0.4%)
Banks	4 (<0.1%)
Total:	19 051