

## **ITEM FOR FINANCE COMMITTEE**

### **CAPITAL WORKS RESERVE FUND**

#### **HEAD 710 – COMPUTERISATION**

**Office of the Government Chief Information Officer**

**Subhead A068XV Provision of WiFi wireless Internet facilities at  
Government premises**

Members are invited to approve an increase in the commitment of Subhead A068XV for Provision of WiFi wireless Internet facilities at Government premises from \$217,600,000 by \$68,000,000 to \$285,600,000 for the implementation of a next generation Government Wi-Fi programme.

### **PROBLEM**

We need to implement a next generation Government Wi-Fi (*GovWiFi*) programme to meet the continuous public demand for free Wi-Fi service at government premises.

### **PROPOSAL**

2. The Government Chief Information Officer, with the support of the Secretary for Commerce and Economic Development, proposes to increase the commitment of Subhead A068XV “Provision of WiFi wireless Internet facilities at Government premises” from \$217,600,000 by \$68,000,000 to \$285,600,000 to implement a next generation *GovWiFi* programme with enhanced services upon expiry of the current contract in December 2012.

**/JUSTIFICATION .....**

## JUSTIFICATION

### Continuing the GovWiFi service

3. The GovWiFi service is well received by the public. Since the full roll-out of the service in June 2009, the number of Internet connections through the service has increased by almost three times. An average monthly growth rate of 7% is noted. The latest average number of users and Internet connections per day are around 14 000 and 26 000 respectively. Usage information of service is provided at Encl. 1 Enclosure 1 for reference.

4. According to surveys conducted by the Census and Statistics Department (C&SD), the percentage of members of the public having devices with Wi-Fi capabilities is on the rise<sup>1</sup>. Feedback from the relevant government departments also confirms a strong public demand for free Wi-Fi service at government premises. To address the continued need for the GovWiFi service, we see the need to implement a next generation GovWiFi programme with enhanced services upon expiry of the current service contract in December 2012. The proposed next generation GovWiFi will last for five years from December 2012 to December 2017.

5. To address concerns expressed by some Members on potential competition with the private sector in the provision of Wi-Fi facilities, we will continue with the prevailing programme objective of providing the GovWiFi service only at selected government premises with high public demand and premises that will help facilitate the delivery of e-government services and promote Hong Kong's image. We accordingly plan to extend the service to about 40 new premises. To ensure value for money, we will also review the usage at existing premises and adjust the service scope in particular for locations which recorded a low usage<sup>2</sup>.

**/Enhancing .....**

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<sup>1</sup> The percentage of persons aged 10 and over who had mobile web devices with Wi-Fi function increased from around 18% in 2008 to around 28% in 2009 according to the Thematic Household Surveys on Information Technology Usage and Penetration conducted by the C&SD.

<sup>2</sup> We will further consult the government departments responsible for these premises to assess the impact and other alternatives available to the public (e.g. whether there is any other available Wi-Fi service nearby) before we decide whether to reduce service scope or curtail the service.

### Enhancing the GovWiFi service

6. We also see the need to introduce technological enhancements to improve the GovWiFi service. We propose to adopt a newer version of Wi-Fi technology standard<sup>3</sup> for providing better signal coverage, enabling faster data transfer and reducing signal interference. With this, we expect faster and better quality service without any significant difference in cost.

7. We are aware that Internet Protocol (IP) addresses based on version 4 of the communication standard (Internet Protocol version 4<sup>4</sup>) are running out, and that future Internet services will gradually be using the new communication standard Internet Protocol version 6<sup>5</sup>. There will be growing public demand for accessing future Internet services using the new standard. We therefore propose to enhance the GovWiFi service to support both standards to cater for the foreseeable public demand under the new programme in order to maximise its utility.

8. Apart from offering free Wi-Fi access to the public, GovWiFi also provides additional channels for delivering e-government services. Through the GovWiFi web portal and the use of location based technology, the public can access specific e-government services pertaining to the premises they are situated in. For example, citizens can enjoy book renewal services at public libraries, sports facilities booking services at sports centres, interactive employment services at job centres; and access weather information local to the district of the GovWiFi premises. In the new programme, we propose to further enhance our GovWiFi web portal to facilitate the provision of more tailored and a greater number of e-government services and contents to the public.

### Potential benefits

9. Implementation of the new programme will enable the public to continue enjoying GovWiFi service. It has the following benefits –

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<sup>3</sup> The new version of technology standard to be adopted is Wi-Fi standard IEEE 802.11n. The new version is backward compatible with the versions adopted in the current programme, namely IEEE 802.11b and 802.11g.

<sup>4</sup> The prevailing Internet communication standard is Internet Protocol version 4 (IPv4). On 3 February 2011, the Internet Assigned Numbers Authority allocated the last batch of IPv4 address blocks to the regional Internet registries, implying the exhaustion of the global free pool of available IPv4 addresses.

<sup>5</sup> Internet Protocol version 6 (IPv6) is a new standard to succeed IPv4. IPv6 offers much greater number of addresses (in the order of  $3.4 \times 10^{38}$ ) than IPv4 (in the order of  $4.3 \times 10^9$ ). IPv6 is not compatible with IPv4, and enhancing GovWiFi service to support IPv6 is necessary for enabling citizens to access future Internet services using IPv6.

- (a) *Stimulate development of public Wi-Fi services* - With Government taking the lead in providing public Wi-Fi service in some 400 locations, GovWiFi stimulated development of other Wi-Fi initiatives by the private sector. The overall number of public Wi-Fi locations in Hong Kong has grown from around 4 200 to over 5 000 since the launch of GovWiFi in March 2008 and is among the highest in the region.
- (b) *Promote the image of Hong Kong* - The provision of commercial Wi-Fi services in Hong Kong has extended from fixed locations to mobile transportation media such as buses, ferries and trains where passengers can enjoy on-board Internet access services. In conjunction with the provision of free GovWiFi service at business districts and tourist spots such as the Statue Square and the Tsim Sha Tsui Promenade, a wide ubiquitous Wi-Fi network is gradually building up in Hong Kong. Apart from benefiting the local public, business travellers and tourists who visit Hong Kong can also enjoy the convenience brought about by GovWiFi. All these contribute to the positive image of Hong Kong as a wireless and ubiquitous city.
- (c) *Bridge the digital divide* - By offering free Internet access at government premises like public libraries and community centres, GovWiFi complements other digital inclusion measures in facilitating under-privileged groups to gain access to the Internet. As more and more contents and services are accessible through the free GovWiFi service, we anticipate more social groups, including the elderly and persons with disability, will find the service useful.

10. With enhancements to be introduced under the new programme, we also anticipate the additional benefits as mentioned in paragraphs 6 to 8 above.

## **FINANCIAL IMPLICATIONS**

### **Non-recurrent expenditure**

11. We estimate that the implementation of the new programme will require a total non-recurrent expenditure of \$152,000,000 from 2011-12 to 2017-18. Having regard to the unspent balance of the existing commitment at some \$84,000,000 under Subhead A068XV, we seek an additional allocation of \$68,000,000 to top up the existing commitment of \$217,600,000.

12. The indicative cost breakdown and cash flow requirements by financial years are as follows –

	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Total
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
(a) Provision of GovWiFi service	-	63,300	10,000	10,000	10,000	10,000	6,700	110,000
(b) Programme coordination, management and support	3,600	7,100	3,700	3,700	3,700	3,700	3,000	28,500
Sub-total	3,600	70,400	13,700	13,700	13,700	13,700	9,700	138,500
(c) Contingency	-	7,000	1,400	1,400	1,400	1,400	900	13,500
<b>Total</b>	<b>3,600</b>	<b>77,400</b>	<b>15,100</b>	<b>15,100</b>	<b>15,100</b>	<b>15,100</b>	<b>10,600</b>	<b>152,000</b>

13. On paragraph 12(a) above, the estimate of \$110,000,000 is for acquisition of external services for the provision of hardware, software, site preparation, installation, on-going operation and maintenance, Internet connection and helpdesk service. The hardware includes access points, wireless local area network switches and controllers, and network infrastructure. The software includes packages to drive and support hardware, network management and content filtering.

14. On paragraph 12(b) above, the estimate of \$28,500,000 is for coordination, management and support work for the new programme. It includes the professional services for monitoring site work, verification of Wi-Fi coverage, inspection of Wi-Fi signal as well as the services of contract information technology (IT) staff for programme coordination and management.

15. On paragraph 12(c) above, the estimate of \$13,500,000 represents an approximately 10% contingency on the cost items set out in paragraphs 12(a) and (b) above.

16. The Wi-Fi facilities at the selected government premises will continue to provide public with free connections to the Internet. The proposal will have no impact on fees and charges for services.

### **Other non-recurrent expenditure**

17. The implementation of the new programme will entail an additional non-recurrent staff cost of \$3,720,000. The cost represents a total of 45 man-months of IT staff effort for performing tendering and contract management work. The Office of the Government Chief Information Officer (OGCIO) will absorb the non-recurrent staff cost with existing resources.

### **Recurrent expenditure**

18. The new programme will be carried out through the award of bundled service contracts which cover the provision of equipment, implementation and operation support services within a single package for a time-limited period of five years starting from December 2012.

19. OGCIO will deploy from within the existing resources a total of 18 man-months of IT staff effort to provide on-going programme coordination, management and contract administration for the new programme, entailing a recurrent staff cost of \$1,121,000 per annum starting from 2013-14.

### **IMPLEMENTATION PLAN**

20. To ensure the provision of highly integrated Wi-Fi services, we will continue to adopt a total outsourcing approach. Specifically, we will procure a service from the market covering the provision of hardware, software, site preparation, installation, on-going operation and maintenance, Internet connection and helpdesk service.

21. To facilitate more effective service delivery and management, we will group premises by type and departments in the new procurement arrangement. We will categorise premises into 3 groups: (a) indoor premises managed by the Leisure and Cultural Services Department; (b) indoor premises managed by other departments; and (c) outdoor premises and premises in remote areas.

22. The proposed implementation plan is as follows –

<b>Activity</b>	<b>Target Completion Date</b>
(a) Procurement of services for implementation and operation of <i>GovWiFi</i>	February 2012
(b) Implementation at existing premises and ready for service rollout	December 2012
(c) Implementation at new premises and ready for service rollout	November 2013

23. We will seek to expedite the implementation where possible with a view to rolling out the *GovWiFi* service at new premises progressively from early 2013.

## **PUBLIC CONSULTATION**

24. We invited Wi-Fi and mobile service providers to provide their input via a request for information exercise in January 2011. The respondents are supportive of the new programme, and they offered positive comments and valuable suggestions on the programme.

25. We consulted the Legislative Council Panel on Information Technology and Broadcasting on the proposal on 11 April 2011. Members are supportive of the proposal and raised no objection to submitting it to the Finance Committee (FC) for funding approval.

## **BACKGROUND**

26. In May 2007, the FC approved funding of \$217,600,000 for implementing a *GovWiFi* programme. The programme provides free Wi-Fi Internet access service to the public at designated government premises.

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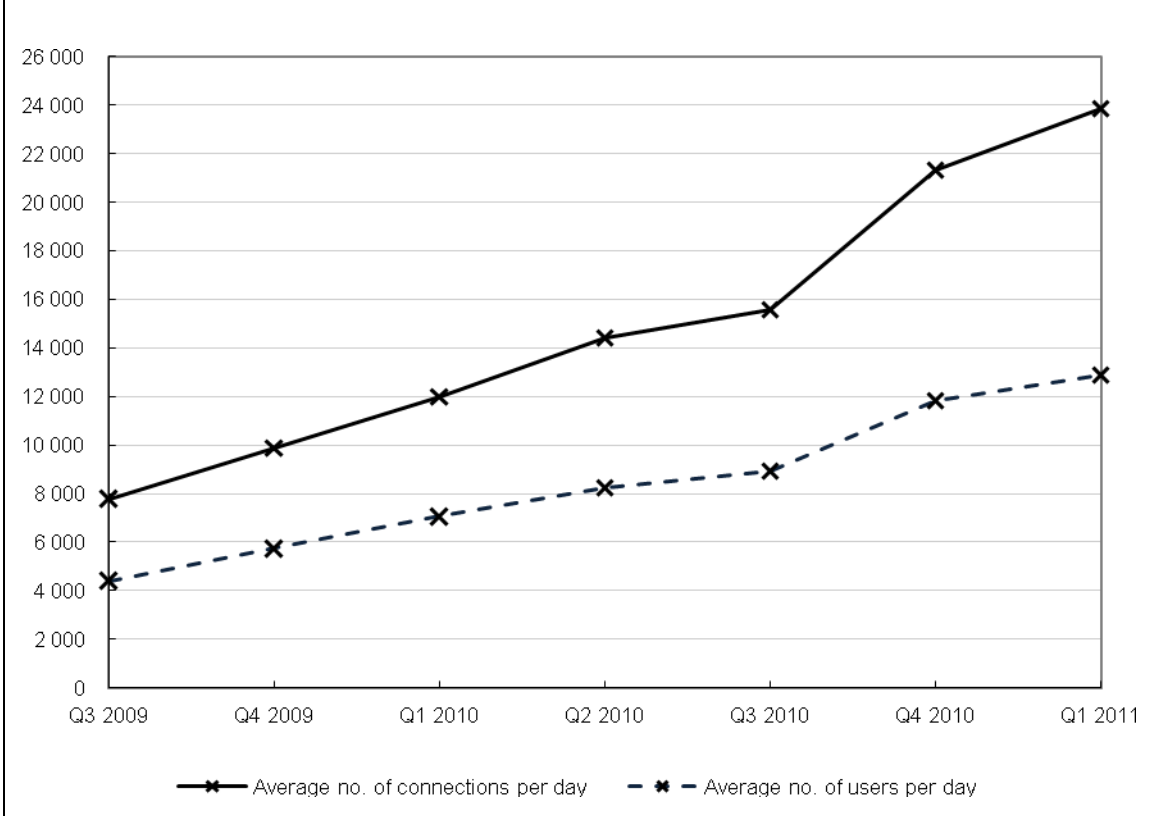
Under the programme, we arranged a five-year contract for the supply, implementation, support and maintenance of the necessary network equipment and associated services. The contract commenced in December 2007 and will expire in December 2012. Currently, GovWiFi is available at 392 government premises, with over 2 000 hotspots installed. A list of the distribution of these premises by type is provided at Enclosure 2.

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Office of the Government Chief Information Officer  
June 2011



**Usage Information of the GovWiFi Service  
(Average Daily Usage by Quarter)**



Remark – The above diagram reported the trend on average daily usage of GovWiFi by quarter. As of March 2011, the average number of users and Internet connections per day are around 14 000 and 26 000 respectively.

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**Distribution of GovWiFi Premises by Type  
(as of May 2011)**

<b>Premises Type</b>	<b>No. of Premises</b>
All Public Libraries	66
All Public Enquiry Service Centres	20
All Job Centres	12
<i>Selective based on demand of respective premises:</i>	
Sports Centres, Sports Grounds and Stadiums	93
Government Buildings and Offices	56
Community Halls and Centres/Complexes	45
Cooked Food Markets/Centres	37
Parks, Gardens and Visitor Centres	37
Cultural and Recreational Centres	15
Holiday Camps	4
Piazza/Beach/Promenades	4
Ferry Terminals	3
<b>Total</b>	<b>392</b>

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