

COMMUNITY MAP ON INTERNET

Paul NG Kwok-wai
Senior Land Surveyor, Lands Department
The Government of The Hong Kong Special Administrative Region

1. Introduction

The Survey and Mapping Office (SMO) of the Lands Department is the central authority for land surveys and all types of mapping in Hong Kong. Among other things, SMO surveys and produces maps at various scales. Basic mapping in Hong Kong is carried out at 1:1000 scale and there are over 3,000 map sheets covering the whole territory of Hong Kong. SMO has completed the conversion of the whole set of the 1:1000 scale paper maps to digital form in 1996.

The digital map has a seamless map base. The map features are represented by unique codes and attributes in the map database; they are topologically related and organized into sets of layers for easy retrieval and analysis of data, e.g. buildings, roads, contour lines. The geographic information and spatial data of a particular area can be searched by means of a number of identifiers such as the address, building name, street intersection and geographic coordinates. The digital maps are extensively used in government departments, utility companies, engineering consultants, property developers and education institutes.

It is the SMO's objective to promote and widen applications of the digital maps and to use them to serve the community. In 1998 SMO decided to adopt the partnership with private sector approach to implement the project of "Community Map on Internet" (in Chinese it was named "衣食住行網上圖"), which is to use the government's bilingual map as a platform for delivery of city life information to the community on the Internet.

2. Partnership Model

With this approach, the government provides the digital map data and other public services information to the business partners (BPs). The BPs provide hardware, software and human resources to develop the value-added map information and to disseminate such via Internet. The added on information includes commercial information of dining, shopping, entertainment, property sites, transportation, etc. They also market, sell and deliver the services to the end users while the SMO monitors the standard of services. They are permitted to display advertisement banners and include the location indicator of the advertisers like hotels, supermarkets, and banks on the web to generate revenue. An advantage of this approach is government only makes minimal interference, and it is guaranteed to have a share on the revenue generated from the services. Another advantage is the BPs will be more flexible and quicker in adopting new technology to improve on the services. At the same time, the government can make use of the business and marketing experiences of the BPs to exploit diversified services and respond quickly to market needs.

3. The Tender

To stimulate competition and to enable better market penetration, the government would select two BPs to enter into a 3-year contract in the tendering exercise. The contract is non-exclusive and renewable for another 3 years subject to the agreement from both parties. Under the contract, SMO supplies digital map of scales of 1:1000 and 1:10,000 together with the associated textual database and other government services information to the BPs. In return, the BPs pay an agreed percentage of the revenue generated from the business. In addition, the BPs put aside 5% of the revenue to an improvement fund for improving the system and updating maps.

The public tender was let out in October 1998. The tender selection criteria were based on the tenderers' expertise in geographic information system and Internet technology, and their commitment and capability in marketing and sale of the service. After the tender evaluation, the government awarded the contracts to two companies in April 1999 to implement the project.

4. Services Provided on the Web Sites

Each of the two BPs developed a web site, they are namely the "Centamap" at www.centamap.com and "YPMMap" at www.ypmap.com. The launching of these two web sites on 19th Nov 1999 signifies that we moved to the new era of Internet mapping.

The successful web sites are those which are interesting and informative. They are updated to keep them fresh, alive and therefore attractive for people to visit. In this respect, it is very encouraging to see that a lot of government offices are willing to provide their information to us for dissemination in this project. The two BPs have different emphasis in the market. They add other functions and information on commercial services and products to the map guide service to make the web sites more useful and fun to use.

The maps provided in the web sites covers the whole territory of Hong Kong. The system provides a bilingual map guide service with the usual map browsing, zooming and panning functions for the public to search the locations of places of interest through navigation of the digital maps. Places of interest can also be searched by inputting the street name, building name, or address. Members of public are able to search and view location maps with information on public facilities such as police station, fire station, hospitals, clinics, schools, post offices, libraries, leisure facilities, swimming pools, employment service centres and etc. The census statistical data of any selected area are available at the click of a mouse. During the contract period, BPs have endeavoured to continuously update and enrich the information contents disseminated through the web sites, such as property sites, shops, restaurants, hotels, entertainment, scenic spots, green mini-bus routing information and etc.

5. Benefits to the Public

The two web sites have been operated for two years. It is evident that they are well

received by the community and attained the goal of promoting the government digital maps to the general public. The round-the-clock services are convenient, fast, easy to use and free of charge. Based on the pageview statistics of the web sites, there are more than 65,000 map pages generated and served to the Internet users every day. The high hit rates of the two web sites are attractive to the companies to advertise their products and services there. There are also favourable feedbacks from many visitors to these two web sites.

This is the first time that government digital maps are open to public access in such a convenient manner. The comments and suggestions from the public and the information-provider departments spur us on to improve the accuracy and updateness of the digital map data.

The implementation of the Internet mapping project also prompted the business sector aware of the potential of digital maps for diversified applications. In early 2001, SMO launched the Internet Map Permitttee (IMP) service scheme to meet the increasing demand from the private sector for using government's digital map as a platform to promote its products and services on Internet. With this new service scheme, many private firms could incorporate SMO's digital maps in their web sites for different commercial applications. SMO has been making discussions with many more companies which have expressed interests in obtaining the Internet maps to find out which digital mapping product would meet their specific needs.

6. Extension of the Project

The 3-year contract is due for expiry in April 2002. SMO has been negotiating with the BPs and consulting the concerned bureau and departments on the details for extension of the project. With the experience gained in the Community Map on Internet capability of Internet to provide better services to the general public.

***** End *****