Scenario

With the growth of technology, it becomes more and more convenient to obtain information. However, it is difficult to collect specific information according to users’ needs in a quick way. Taipei City, the biggest city in Taiwan, is a blend of the traditional culture and modern technologies. As the population increases, traffic demands have become one of the public’s main concerns. Taipei City Government provides many kinds of traffic information, such as MRT services, parking lots, etc. But different kinds of information belong to different units so that it’s inconvenient for the public to obtain information in a new and fast way.

Taipei City ATIS Web is an integration platform providing real-time traffic information based on WebGIS technology. It displays various kinds of real-time traffic information, such as Taipei City real-time bus, road events, CMS, real-time images of parking lots, etc. and related map manipulation functions. Users can easily gain the information through the browser without installing any plug-in programs. In addition, it also supports to assist users in querying some traffic information, such as bus routes, train schedule of Taiwan Railway and so on.

Results

Taipei City ATIS Web is an integration platform providing real-time traffic information based on WebGIS technology. It displays various kinds of real-time traffic information given by different governmental units can be queried via the internet browsers; therefore, users can check the traffic status or plan their routes according to the current traffic situation.

1. Web Server: The sever uses SuperWebGIS 2.1 as the user interface platform. It displays various kinds of real-time traffic information, such as Taipei City real-time bus, road events, CMS, real-time images of parking lots, etc. and related map manipulation functions. Users can easily gain the information through the browser without installing any plug-in programs. In addition, it also supports to assist users in querying some traffic information, such as bus routes, train schedule of Taiwan Railway and so on.

2. Database Server: The main function of this server is to put received traffic information into fixed fields and stores relevant static information. However, geographic data and other related lower map are stored in the web server because the system efficiency can be improved without the transmission via the Internet.

3. Real-time information receiving Server: Its main job is to connect all the traffic information databases in other governmental units. To ensure the reliability and stability of the data, this server will also keep on tracking the receiving status of upstream information through the internet. Meanwhile, this server will also be the streaming Server to reduce the load of the web sever.

Software Used

- SuperGIS Desktop 2.2
- SuperWebGIS 2.1
- Taiwan Railway Schedule
- SuperGIS Server 1.2
- NTU GIS Development toolkit

Results Software Used

The back-end management system covers two parts to maintain Taipei City ATIS Web; the front-end includes Map Manipulation, Static-Information Query, and Dynamic-Information Query.

1. Map Manipulation: Taipei City ATIS Web, electronic map and satellite images as the base map, provides some GIS tools, such as zoom to full-extent, zoom in/out, Pan, etc. for users to navigate the map.

2. Static-Information Query: Taipei City ATIS Web provides the static information, including landmarks, Taipei Railway Timetable, Taiwan High Speed Rail Timetable, and National Highway Bus Timetable. Through this function, the public can easily query the public transportation schedule you need at this integration platform.

3. Dynamic-Information Query: In this part, users can query many types of real-time dynamic information online, such as dynamic bus information, real-time images, parking lots info, road events, CMS, national highway travel time, real speed, road construction, weather info, etc. In addition, users who would like to rent bikes can obtain the basic information of each public bicycle rental station, like the station name, address, parking lots number, etc. in advance.

The back-end management system covers two parts to maintain Taipei City ATIS Web.
Solutions

This project applies 3 servers, including web server, database server and real-time information receiving server, to form the structure of the WebGIS.

1. Web Server: This server uses SuperWebGIS 2.1 as the user interface platform. It displays various kinds of real-time traffic information, such as Taipei City real-time bus, road events, CMS, real-time images of parking lots, etc., and related manipulation functions. Users can easily gain the information through the browser without installing any plug-in programs. In addition, it also supports to assist users in querying some traffic information, such as bus routes, train schedule of Taipei Railway etc.

2. Database Server: The main function of this server is to put received traffic information into fixed fields and stores relevant static information. However, geographic data and other related traffic data are stored in the web server because the system efficiency can be improved without the transmission via the internet.

3. Real-time information receiving Server: Its main job is to connect all the traffic information databases in other government units. To solve this problem, Taipei City Department of Transportation planned to integrate different traffic information resources on one platform based on WebGIS technology to provide all of traffic information for the public.

Results

Taipei City ATIS Web is an integration platform providing real-time traffic information based on GIS technology. It allows traffic information given by different governmental units can be queried via the internet browsers; therefore, users can check the traffic status or plan their routes according to the current traffic situation.

Taipei City ATIS Web applies GIS technology to integrate various types of real-time dynamic and static traffic information in one platform. Hence, the public can spend less time searching information and obtain more appropriate information in a new and fast way.

You can get the basic information of each public bicycle rental station. The traffic information websites in Taiwan mostly belong to Traffic Control Center and lack of a platform to integrate the information providing by these websites. Now, Taipei City ATIS Web applies GIS technology to integrate various types of real-time dynamic and static traffic information in one platform. Hence, the public can spend less time searching information and obtain more appropriate information in a new and fast way.

Results Software Used

- SuperGIS Desktop 2.2
- SuperWebGIS 2.1
- SuperGIS ODBC 2.1
- SuperGIS Toolbar 1.2