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Taipei City Advanced Traveler Inf ormation System Web

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 using. 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.

Solutions

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

1. Web Sever: The sever uses SuperWebGIS 2.1 as the user interface platform. It diplays 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 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 base maps are stored in the web sever 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 stability and mobility of the data, this server will also keep on tracking the receiving status of upstream information and report about exception events. Meanwhile, this server will also be the streaming Sever to reduce the load of the web sever.

Taipei City Advanced Traveler Information System Web, an integration platform, facilitates the public to easily obtaion appropriate traffic information.

Solutions

- This project applies 3 servers, including web sever, database server, real-time information receiving server, to form the basic system structure.

- Use SuperWebGIS 2.1 as the user interface platform.

Results

Taipei City ATIS Web is an integration platform providing real-time traffic information based on WebGIS technology. All kinds of 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.

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, road 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, park lots number, etc. in advance.

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

1. Automatic Report Mechanism: Taipei City ATIS Web uses the gateway to obtain real-time traffic information from upstream information providers. In the meanwhile, the gateway also can set on different time to operate the instruction to improve the flexibilities of this mechanism.

2. Single Notification Management: Besides Automatic Report Mechanism, Single Notification Management can assist professional staff in contacting and solving urgent problems of the system. Even on holidays, when the urgent problems or errors happen, administrators also can check the error status and solve the problems quickly through this management system.

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.
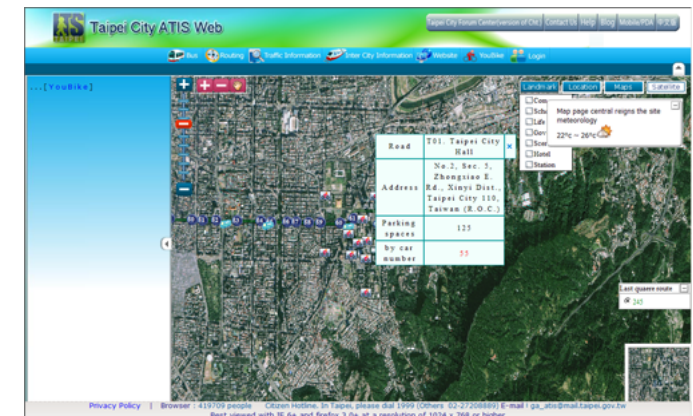
You can get the basic information of each public bicycle rental station.

Results

- Taipei City ATIS Web is an integration platform providing real-time traffic information based on WebGIS technology.

- Taipei City ATIS Web applies GIS technology to integrate various types of real-time dynamic and static traffic information in one platform, spending less time searching information and obtaing more appropriate information in a new and fast way

Software Used

SuperWebGIS 2.1

SuperGIS Desktop 2.2

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