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Taichung Dynamic Bus Information and Transit System

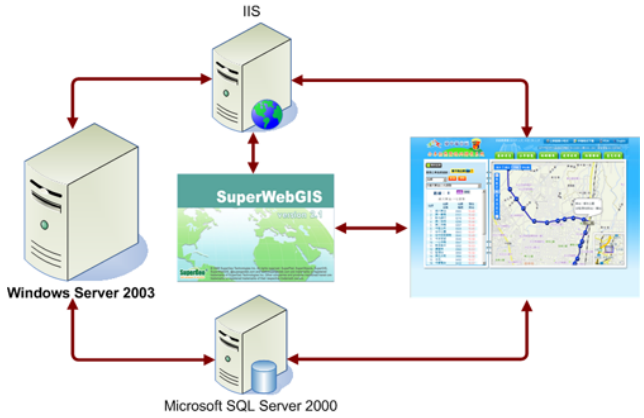
Scenario

Taichung area enjoys the pleasant climate and constant sunshine all the year round. Located in the middle of Taiwan, it is also the economic center for the areas of the south of Miao-li and the north of Yun-lin with a population of six millions. Located in the key position, Taichung area has the very busy traffic network communicating the south and the north of Taiwan.

In recent years, the domestic travelers have learned to appreciate the taste and joys of the individualized tour. More and more people are starting to plan a satisfying tour according to their own needs and purposes. However, first-time visitors usually spend a great amount of time arranging the public transportation to travel between the scenic spots. In order to make Taichung area a even better tourism environment and have the convenient public transportation which enable the public to travel Taichung area in an easy way, Department of Transportation of Taichung City Government planned to create a system for the public to query bus transfer and plan a tour with the real-time dynamic bus information and transfer information. Through the system, the public can query estimated arrival time of the bus when waiting for the bus and get to know how to transfer to destination, eventually achieves the goals of bringing convenience for people and saving time.

Solutions

Taichung Dynamic Bus Information & Transit System is a query system using Web-GIS as the foundational architecture. Integrated the convenience of map manipulation of Geographic Information System (GIS) and the “Smart Multi-Transfer Query Engine” in the system, the public can easily find out and obtain the needed information for their tour arrangements. Taichung Dynamic Bus Information & Transit System adopts SuperWebGIS as the map server platform, which helps the related unit to publish the route data, scenic spot data and the electronic map of Taichung area stored in the geodatabase (Microsoft SQL Server 2000) over the internet. The client end users could query the bus information of Taichung area and plan the tour route with the web browsers (Microsoft Internet Explorer 6.0 and higher) without the need of installing any plug-ins.



Solutions

- Utilize SuperWebGIS software as the map server to build up a WebGIS to delivery bus and tourism information service for the public through the Internet.

Results

Taichung Dynamic Bus Information & Transit System is a Web-GIS integrating real-time bus information and tourism information. In terms of functions, Taichung Dynamic Bus Information & Transit System can be divided into two major functions: Dynamic Bus Information Query and the Transfer Planning.

1. Dynamic Bus Information Query: Through the query interface, users can select an urban bus route by clicking the dropdown menu to query. After that, the complete bus route and the bus stops will be displayed on the map as well as the current bus position. Moreover, users can click the bus stop to check the estimated arrival time of the bus at the bus stop. On the left side of the window, the estimated times of arrival at each stop are listed. The query result of each bus line is set “Go” direction by default, and users can click “Back” to switch the direction and query. The bus stops and routes for “Go” and “Back” direction are presented respectively in blue and red color for distinguishing.
2. Transfer Planning：The function combines all the information about public transportation and scenic spots in Taichung area, which can be referred by tourists when arranging the tour route. There are four query types: Planning By Keyword, Planning By Scenic Spot, Planning By District and Planning By Clicking On The Map.

   Planning By Keyword: The query type allows people to easily search by typing the keyword. After the related name is searched, users can click the query result on the map and set it as the start, end or middle point of the route, which makes the route planning easier.

   Planning By Scenic Spot: The information of scenic spots, delicious snakes, accommodation and transportation are collected in the system. Users can check the class of landmarks to show and the distribution of the selected class of landmarks will show on the map automatically. In this way, users can not only understand the location of each landmark but also catch the information of nearby historical sites or delicious snakes simply through switching the class of landmarks, which strengthens the purpose of in-depth tour. When users click the landmark on the map, the detail information for the landmark will show up automatically, including description text and photograph. Users can decide whether to put the scenic spot into the travel schedule through the buttons on the window to set as start, end or middle point.

   Planning By District: Users can find the descriptions and photographs of the scenic spots in a certain area by selecting the district. Also, users can directly decide whether to add the scenic spots into their itinerary.

   Planning By Clicking On The Map：Besides, the three planning types mentioned above can be used to set up the start and end point of the tour route, users can also set up the start and end point for the route by right-clicking mouse on the electronic map.

By selecting the district, users can not only find descriptions and photographs of the scenic spots in a certain area but also directly decide whether to add the scenic spots into the itinerary.

Results

- Taichung Dynamic Bus Information & Transit System is an integrated platform providing real-time bus information and tourism information based on WebGIS technology.
- With the establishment of Taichung Dynamic Bus Information & Transit System, users and tourists are able to query bus routes and plan the best travel routes in a convenient way.

Software Used

SuperWebGIS

Windows Server 2003

Microsoft Server SQL 2000

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