With the economic growth and technological advancement, to build transport network infrastructure is an important issue and development goal in developing countries. In Taiwan, to facilitate citizens to gain complete and accurate traffic information in real time, the government actively planned, developed and constructed the Intelligent Transportation System (ITS). However, the city/county governments and related transportation units respectively provide traffic information of different levels, such as traffic information of national freeway, province road, and city/county roads. The general public has to obtain the required traffic information from different traffic websites. To facilitate the general public to collect the needed information, Institute of Transportation, MOTC planned to integrate different traffic information resources on one platform based on WebGIS technology to provide all of traffic information for the public.

National Traffic Information System is an integrated platform providing real-time traffic information based on WebGIS technology. All kinds of traffic information given by different city/county governments and related transportation 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 functions of the system are divided into three parts: Road Information, Route Guidance and Alternative Routes.

1. Road Information: In this part, many kinds of commonly-used traffic information of national freeway and city/county roads are provided. By querying, users can obtain real-time dynamic traffic information online, such as road speed, CCTV, CMS (Changeable Message Signs), weather information, etc., and various kinds of road events, like traffic block, construction, signal breaks, disasters, accident and so on. In addition, the system displays the queried results on the map to facilitate users to clearly understand the geographic location of traffic information.

2. Route Guidance: The function can assist users in planning an appropriate road. Users are allowed to assign the start point and end point by clicking the map or querying. They also can require the system to avoid national freeway or event point. The system would display the appropriate route on the map and the details.

3. Alternative Routes: Although the government built 5 national freeways, the heavy traffic jam still happens on holidays. Therefore, the government built 6 alternative routes to relieve the huge number of vehicles. The function shows descriptions and locations of these alternative routes to facilitate the public to avoid a traffic jam.

National Traffic Information System provides many kinds of commonly-used traffic information for querying.

Transportation system and technology have developed rapidly nowadays in the modern society. The public wants to obtain required traffic information instantly to plan their routes. As to the government, therefore, how to quickly provide real-time traffic information for the public has become a big issue. National Traffic Information System applies GIS technology to effectively integrate various types of real-time dynamic and static traffic information in one platform. The public can spend less time searching information and obtain more appropriate information in a new and fast way.

Road Information:

- Speed information
- CCTV information
- CMS information
- Weather information
- Road events
- Traffic block
- Construction
- Signal breaks
- Disasters
- Accidents

Route Guidance:

- Querying start point and end point
- Avoid national freeway
- Avoid event point

Alternative Routes:

- Descriptions
- Locations

Software Used

- SuperWebGIS 2
- PostgreSQL
- Windows SQL Server 2000

Solutions

National Traffic Information System, the WebGIS-based system, integrates many kinds of real-time traffic information of each city/county and national freeway, such as speed information, CMS information, CCTV information, road events, etc. It can assist the public in clearly querying and understanding real-time traffic situation of where they will go.

National Traffic Information Center System adopts Microsoft SQL Server 2000 and PostgreSQL as the database platforms for saving the various kinds of traffic data from numerous related units. In terms of the map server, National Traffic Information Center System uses SuperWebGIS 2 as the map server to publish maps and services and provide various GIS manipulations. Therefore, users can use a browser to view and query traffic information easily.

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National Traffic Information Center System adopts Microsoft SQL Server 2000 and PostgreSQL as the database platforms for storing the various kinds of traffic data from numerous related units. In terms of the map server, National Traffic Information Center System uses SuperWebGIS 2 as the map server to publish maps and services and provide various GIS manipulations. Therefore, users can use a browser to view and query traffic information easily.

Software Used

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