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The Extension and Maintenance of Taipei City ATIS Website

Scenario

Taipei City ATIS Website is the website developed by TMS Technologies commissioned by Taipei City Department of Transportation. Taipei City ATIS Website offers numerous types of real-time traffic information, including real-time road information, bus dynamic information system, real-time available parking lot information, etc. The App, Easy Travel in Taipei, developed this year supports iOS, Android, and windows mobile platforms. Users who have the mobile devices can query the real-time traffic information in Taipei city anytime. The main features of Easy Travel in Taipei include:

- E-bus Information
- Real-time Traffic Information (including CCTV, CMS, road speed, and road event, etc.)
- Real-time Available Parking Lot Information
- YouBike Rental Station Information
- Inter City traffic Information (including TRA, HSR, Aircraft, Bus, etc.)
- Mass Transit Travel Plan
- The Blue Highway Information
- Bike Lanes Information

Challenges

Taipei City ATIS Website has been a popular traffic information website for years. In order to enable citizens to query the real-time information with their smart phones, the App, Easy Travel in Taipei was developed this year.

However, since the versions of iOS, Android and windows mobile keep updating and the resolutions of mobile phones differs from brands, Easy Travel in Taipei has been continuously updated to fit multiple users' need and different hardware requirements.

Goals

Easy Travel in Taipei provides the public with real-time traffic information, promote public transportation, avoid traffic jam in advance, and shorten the transit time.

Solutions

Traffic Information Collection and Integration
The system adopts SuperWebGIS as the core of the GIS platform; the spatial map server built with SuperWebGIS integrates spatial data from various departments to provide the public with real-time traffic information.

Publishing Traffic Information
The published information include: E-bus Information, Real-time Traffic Information (including CCTV, CMS, road speed, and road event), Real-time Available Parking Lot Information, YouBike Rental Station Information, Intercity Information (including railway, Aircraft, Bus, etc.), Mass Transit Travel Plan, the Blue Highway Information, and Bike Lanes Information.

Platform Planning
Platform planning is divided into the display platform on front-end and the data management system on back-end. The front-end system adopts iOS, Android and windows mobile platforms to provide traffic information for querying; the back-end system collects and integrates the real-time traffic information as the Web Services for front-end system to apply.

Goals

- With the application of iOS, Android and window mobile, Easy Travel in Taipei provides the public with real-time traffic information, promote public transportation, avoid traffic jam in advance, and shorten the transit time.
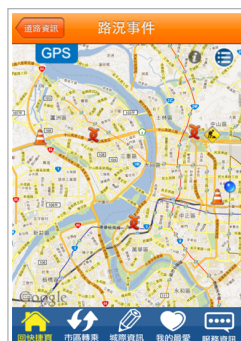
Results

System Interface
- **Back-end Interface:** The system collects and publishes the traffic information as Web Services for smart phones to integrate data.

- **Front-end Interface:** Besides getting the real-time traffic information on mobile phones through the application, the system also provides web page for the public to query online.

- **Homepage:** On mobile phones, users can rapidly query the carrier information through clicking the buttons on Homepage.

- **Road Capacity and CCTV:** The interface displays the road capacity in red, yellow, and green. Clicking CCTV or CMS icons can get the real-time image and related description.

- **Parking Information:** Users can query the nearby parking lot location and the available parking space.

- **Route Guide:** Route plan guildes users to the destination.

- **Road Event:** With the spatial query interface, users can query the locations where car accident, traffic jam occur as well as the construction sites.

Information of parking lost   *Road events*

- **E-bus Information:** The dynamic interface displays the bus information, such as bus location, estimated arriving time, and bus number, etc.

- **Transfer Query:** Query the transfer information by mass transit system by inputting the departure and destination points.

- **YouBike Rental Station Information:** Taipe City Government provides bicycle rental service for the public. Through the interface users can query the available parking spaces and bicycles to rent.

- **Intercity travel Information:** This application provides the timetables of railway, high speed rail, airport, and bus station.

- **My Favorite:** The estimated arriving time, available parking space, and road capacity, etc can be added into My Favorite for later use.

e-bus information   *YouBike Rental Station Information*   *Intercity travel Information*

System Benefit
Easy Travel in Taipei has become the most popular application for citizens to download to query the public transportation and traffic information since it was officially released. Therefore, the related spatial data and traffic information can not only be displayed on the website but also be published as web services for users to query with smart phones.

Results

- The system successfully integrates all spatial data in Taipei city with e-map to provide users with real-time traffic information.

Software Used

- MS SQL Server 2005
- Microsoft Windows Server 2008
- SuperWebGIS 3.0
- iOS 5
- Android 3
- windows mobile 6

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