

Historical Material Geographic Information System

Scenario

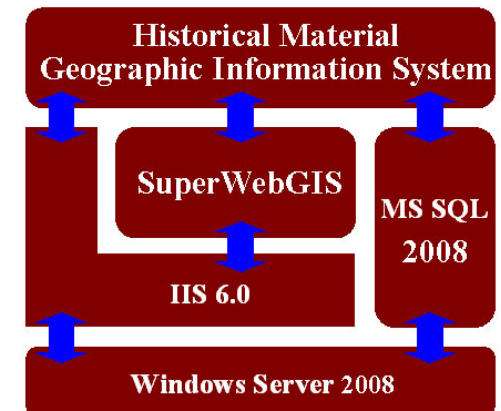
Academia Historica is the highest authority of history in Taiwan and also the most essential organization collecting, organizing, storing, editing, and studying the modern history of Republic of China (ROC). The museum collects a great number of the historical materials related to the modern history of ROC, and the materials can be used as the important references for modern history researchers in studying history, culture and academic education to outline the frame of the history more clearly. In addition to the abundant historical materials, Academia Historica also planned to apply modern technologies to build up a WebGIS system which can publish the historical materials stored in the museum to the Internet. Then, users would be able to utilize the browsers to query the historical materials on the Internet in an interactive way. Furthermore, the website system also opens a new avenue for the public to access the modern history of ROC.



Solutions

Historical Material Geographic Information System is a history material query system based on WebGIS technologies and cooperating with geodatabases which stores the abundant historical materials of the museum.

As to software, Historical Material GIS is operated in Microsoft Server 2008. The system utilizes Microsoft SQL Server 2008 as the historical and spatial database storing the history data and geographic data. Also, the system adopts SuperWebGIS as the map server platform of the system to assist Academia Historica in publishing historical and geographic data as the map services on the Internet. Users, therefore, can use the browsers, such as Internet Explorer, Firefox, Chrome, Opera, and Safari to access the data stored in Academia Historica without installing any other plug-ins.



Solutions

- SuperWebGIS is applied to build up a historical material query system based on WebGIS technologies.

Results

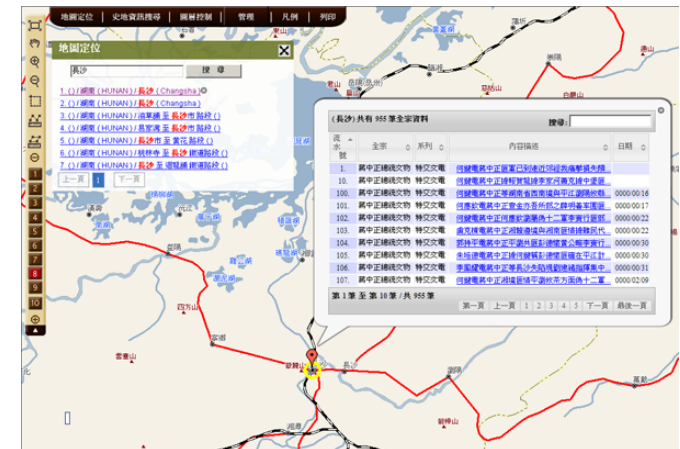
Historical Material GIS is the WebGIS constructed with SuperWebGIS and composed of the modern history of Republic of China (ROC). In the system, the map is displayed in the full window of the browser so that users can focus on the map easily. Additionally, all of the functions and tools of the system are on the top and left part of the map to prevent users from being interrupted when reading the map.

The functions of Historical Material GIS include 5 extensions, such as map manipulation, map position, historical data query, layer control, print.

- 1. Layer Manipulation:** The extension includes the functions, like zoom map, full-extent, line measurement, area measurement, select by rectangle. Thus, users can apply the tools to view and measure the map.
- 2. Map Position:** The purpose of the extension is to enable users to zoom the map to the specified location with the map position function. During the process of positioning, users only need to input the keyword, and the system will search the keyword from the city name, province name, mountain name, lake name, etc in the database. Then, the search results will be listed for users to query. Users can find and select the location they need from the list, and the selected location will be panned to the map center.
- 3. Historical Data Query:** The extension provides 3 types of data, historical data, data of ROC, historical maps, for users to query. The 3 types of data allow users to query by setting the keyword and conditions. When the query is finished, the system will list the results. Then, users can select the data they need from the list and access the contents of the data. Furthermore, besides displaying the list, the system also can calculate the query results of each province and display the results with different colors to present the spatial distribution.

- 4. Layer Control:** The extension enables users to manage and control the layers in an easy way. Using the extension, users can add the layer to the map by ticking. When the layer is added to the map, users can also adjust the order of the layers and the transparency of each layer. As a result, the layers of the same extents can be overlaid together to present the differences in each era.
- 5. Print:** The function assists users in saving the maps and outputting the map as the format you need. Users can click the print button, and a new window of the current map will pop up. Then, users can choose to save or print the map.

With the establishment of Historical Material GIS, hundreds of historical materials of Academia Historica can be published to the Internet as the map services through the WebGIS technologies. Users can use the browsers to clearly know the modern history events of Republic of China and recognize the geographic differences between ancient and modern time. Meanwhile, the system can be seen as another academic way for domestic and international researchers to study the history.



Map Position extension enables users to use keywords to zoom the map to the specified location with the map position function.

Results

- The WebGIS system allows users to display and query the modern history of ROC and the maps of ancient and modern times.
- The system effectively integrates the GIS system and the map data of ; not only the data can be provided more conveniently but also the availability of the data can be improved.

Software Used

- SuperWebGIS
- Windows Server 2008
- Microsoft Server SQL 2008