Web Based GIS for Safranbolu Historical City

- Deniz ARCA
- Mehmet ALKAN
- Çağlar BAYIK
- Dursun Zafer ŞEKER

Overview

- Aims of This Study
- Test Field and Dataset
- Safranbolu Historical City
- Web Base GIS
- Application of Safranbolu Historical City
- Conclusions
Aims of This Study

The purpose of this study is established an internet based information system and cooperation system for the documentation of the old part of the city of Safranbolu. For this purpose:

All data from different sources with different resolutions are brought together in GIS.

All the constructions in Safranbolu will be recorded permanently and architectural features of them will be created database.

Test Field And Dataset

Because of having lots of historical heritage sites, Turkey takes part an important place among the other countries. Protection and revitalization are the most important issues of the historical heritage sites. UNESCO takes historical heritage sites in to world historical heritage list to protect them. In Turkey, nine historical areas are under protection of UNESCO and one of them is Safranbolu historical city.
Safranbolu is located in the inner part of the Western Black Sea Region. Safranbolu is a typical Ottoman city that has survived to the present day. Safranbolu is one of the significant examples of a well preserved human habitation in its original surroundings in the world. Calling Safranbolu as “The Capital of preserved cultures” is quite suitable since the preservation has been accomplished at a city scale.
There are numerous historical places in the city 1300 of which are under protection. This number constitutes an important portion of 50 thousand historical places which are under protection in the country. Those places which are under protection at two different locations turned Safranbolu to a vast museum.
WEB BASED GIS FOR THE HISTORICAL MONUMENTS

Geographic Information Systems (GIS) are now widely accepted as powerful and integrated tools for storing, visualizing, and analyzing spatial data. GIS are usually centralized and need knowledgeable users for effective operation.

With Internet technology, GIS was able to make its concepts more open and mobile to everyone thereby facilitating notions such as democratization of spatial data, open accessibility, and effective dissemination.

WEB BASED GIS FOR THE HISTORICAL MONUMENTS

Access to spatial data and interactive database applications with querying capabilities over the internet is growing rapidly. Internet has already been one of the important developing platforms of GIS, the function of GIS has been extended by Internet, and furthermore it becomes a kind of new GIS architecture.
Major advantages of web-based GIS system:

1. GIS client software is not required since GIS software is installed only on the server.
2. The client interface is the web browser. All the user needs for access a web browser such as Netscape or Internet Explorer with a connection to the Internet.
3. The end user does not need special GIS training or skills.

Web GIS have been widely used for online route selection, city planning, environmental exploration, watersheds management, land-use planning, road/rail construction, business analysis, airport construction, data integration and dissemination.
In this study, ArcGIS Server is used for Web-GIS applications. Because of forming the Geographic Information System can transferred and serviced, first a server computer that installed Windows Server 2003 operating system was needed. Available databases are transformed with the interface of ArcGIS Server on the internet. With created current services, the new web application is created.
Creating layers of the Safranbolu historical city

The next stage, three query functions was separately created as for the name of building, the number of Registration and the name of street to. In this query types, the user sees what they want and when the selection are made in these lists, the election result is selected on the chart.
Application that starts the publication can be opened in separate browser window. Information System consists of three separate windows and a toolbar.

First of the window being in the map

The second of the window that control layers

Finally, the window that display the results of searching.

As for the toolbar, there are the basic tools and functions which we are formed the web application when they are created.
CONCLUSIONS

✓ Cultural heritage protection and restoration is important issue for the historic monuments.

✓ Conservation of cultural heritage is a major issue for modern societies, both from economical and cultural viewpoints.

✓ Similar studies oriented for modeling and preserving of the cultural heritage sites should be encouraged and supported by the decision makers. It was seen that, based on the extracted results, development of an information and management system for recording analysis, protection and revitalization of cultural heritage sites of Safranbolu can successfully undertaken and integrated to the GIS environment.
CONCLUSIONS

This study will be reference for future studies. In addition, by the help of web based GIS which is the fast way to reach the information, the system will be help to increasing the number of tourists reaching the data much more and easy way and increase in the cultural heritage tourism.

http://safran.karaelmas.edu.tr/safranbolu/

Thank You For Your Patient