

Project Title: Borehole Data Dissemination Project, CGS Project 2002

Sponsor(s): Dr. Jennifer N. Swift, Dept. Civil Engineering, USC

Partner(s): California Geological Survey (CGS).

Background:

The goal of this project is to develop a means of disseminating geotechnical borehole information belonging to CGS, using their recently deployed GeoMedia WebMap (a GIS IMS (Geographic Information System, Internet Map Server)) system. Their public webmap website can be viewed at <http://gmw.consrv.ca.gov/shmp/SHMPgetgisdata.asp>.

Problem Statement:

The Sponsor requests a team from CS577 to participate in this project, to assist with development of the dissemination code. The WebMap project utilizes customized Vbscript and Jscript code and GeoMedia WebMap and WebEnterprise (<http://www.intergraph.com/gis/products/>), which is already installed and functional on a server maintained by the sponsor. The borehole information resides on the same server in an Access database. There is no other auxiliary information or files outside of this database to be included.

The scope of the problem includes 3 main tasks: 1) dissemination of data from single points on the interactive map (borehole locations), 2) dissemination of multiple point (borehole) information from the interactive maps, and 3) Viewing of borehole information as graphics on-the-fly. At present basic borehole information can be downloaded in an html format by clicking on a single borehole point on an interactive map; this is written in Vbscript and Jscript primarily as ASP's. The partner would like an end user to be able to download the information in full detail, in several formats (Excel, ASCII), for there to be some sort of shopping cart functionality.

Constraints:

Any code developed for this project is the sole property of CGS. The students may not retain any code for this project already existing on the server used in this project.

The Sponsor requests a small team of not more than 3 persons. The students should work as much as practical with the sponsor, in KAP 230A. The CGS Webmap project is currently mirrored on a WIN NT 4 sever in KAP 230A. This mirror is fully functional, and in reality the only practical place for the students to implement any code they will write. The code for the data dissemination must be written in Vbscript and Jscript only. The code for the graphics may be in another language, such as Java (preferred) or SVG.

The students should be proficient in Vbscript, Jscript, SQL, Java, and have knowledge of Win NT4 and possibly 2K server platforms. Knowledge of MS Access, and familiarity

with and TCP-IP; any knowledge of GeoMedia WebMap products would be highly preferred. The students may use the GeoMedia Tutorials on the server to learn the program.

Desired Deliverables:

- 1)Development of VbScript and Jscript code for downloading the borehole information in the following formats from the Access database:
 - a.Excel, using the com object ExcelWriter LE Development version (<http://excelwriter.softartisans.com/>, already installed on the server) – the final ExcelWriter template is already complete
 - b.ASCII – simple format, i.e. duplicate table structures (vertically) in Access database in 1 ASCII txt file per query

View Geotechnical Borelogs as graphics, on-the-fly (Java or SVG, though Vbscript and Jscript could be supported by clients); example output and pattern/color definitions based on data dictionary are the responsibility of the Sponsor to provide the students