

SDSU

presents a thesis defense for
Master of Science degree in
Computer Science

Wednesday, May 14, 2014
10:00am GMCS 405

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Simple Tools to Convert Oracle Spatial Tables to ESRI Shape Files

Abstract

This thesis concentrates on developing software tools to convert Oracle spatial tables, which contain an SDO_GEOMETRY column, into ESRI (Environmental Systems Research Institute) shape files, commonly known as Shapefiles. Shapefiles provide a simple, non-topological file format for storing geographic and attribute data. It is comprised of three main files with extensions .shp, .shx and .dbf. The .shp file has geodetic descriptions, the .shx file is an index into the shape file, and the .dbf file contains the descriptive attributes of the spatial object, such as area, population, etc.

The thesis is comprised of two parts (applications). The first part of the thesis is a “MULTI-SELECT Tool”, which is an addition to MOJO (Map Objects Java Objects) and aims at tying JTable attributes to MOJO layers and will enhance the syllabus for the San Diego State University Geographic Information Systems (GIS) class, CS 537. This tool is useful for anyone who uses MOJO and finds the code.

The second part can assist anyone who wants to access an Oracle database and does not have experience with Database query languages like SQL, to be able to query and generate custom shapefiles, using the simplified and interactive “GeoDatabase Query Tool”. JavaFX is used to create the User Interface and Netbeans IDE was used to develop the tools.

Thesis Committee

Carl Eckberg, Thesis Chair, Department of Computer Science
Alan Riggins, Department of Computer Science
Ming-Hsiang Tsou, Department of Geography