

The logo for FOSS4G 2006, featuring a stylized red and white graphic that resembles a ribbon or a stylized letter 'G'.

Contribution ID : 29

Development of an algorithm to analyze data from fishing activities and to generate themes to be visualized via WEB

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Nowadays, many projects from the environment area count with the support of geospatial technologies. These technologies are related directly to concepts such as computer mathematics, statistics and geospatial databases. This project is based on this type of technologic development, once it creates an algorithm for the dynamic definition of sectors to consult and analyze database from the fishing industry. This tool gives, to the specialists in the fishing administration area, mainly the ones from the Group of Fishing Studies (Grupo de Estudos Pesqueiros) of Centro de Ciências Tecnológicas da Terra e do Mar from Universidade do Vale do Itajaí, a mean of dynamic definition of consultations and geospatial analyses. The products generated through this tool are themes to visualize points such as the fishing effort by area units or the abundance of species. In addition, the project uses the internet as a mean of visualizing themes, distributing the information among different elements involved with the fishing administration. Handling geospatial datum via internet is a challenge for this state of the art in geotechnologies. Besides the technologic limitations, the culture of collecting datum about fishing activities without the due georeferencing contributes to the slow development of applications in this field. To respond to the proposal, the algorithm was developed in PHP language, utilizing the PHP Mapscript module from UMN Mapserver for reading and handling geospatial objects from the PostGIS database. For the analysis, the /Kernel/ method, widely used by geospatial analyses in resident geographic information systems, was utilized. The project's result was incorporated into Mapserver Guarani as a new functionality. The tests made indicate the viability of this kind of geospatial analysis via internet, opening new perspectives for handling and visualizing geographic data through the Web.

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