

The logo for FOSS4G 2006, featuring a stylized red and white graphic that resembles a map or a globe, with a red curved shape below it.

FOSS4G2006 - Free And Open Source Software

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A Chamaleon link to GRASS

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Web-GIS services is one of the most growing sectors in the Geographical Information System (GIS) science. Its popularity mainly resides in an easy-to-use interface for non-specialists to access geographical information for decision making.

In most cases these web applications are focused on distributing geospatial information on the Internet in a ?static? way: users can access and navigate the different maps, build combinations of layers and print the results. More ?dynamic? applications are now requested by different specialists: geologists ask for digitalization tools, hydrologists ask for watershed analysis tools, and so on. Providing these kinds of geoanalysis tools requires full access to typical GIS capabilities like map generation, map editing and map analysis.

In the FOSS (Free and Open Source Software) world two software packages are widely used for building Web mapping services and computing geographical analysis:

1. Chameleon

(<http://www.dmsolutions.ca/technology/chameleon.html>)

is a highly customizable and adaptable environment for deploying and managing Web mapping applications. By using MapServer

(<http://mapserver.gis.umn.edu/>) as the backend mapping engine that generates map images, manages mapped data and handles all of the geographic processing, Chameleon provides a tag system similar to HTML (Hypertext Markup Language) to incorporate the required mapping functionality into your current HTML page.

GRASS (Geographic Resources Analysis Support System, <http://grass.itc.it/index.php>) is a GIS used for geospatial data management and analysis, image processing, graphics/maps production, spatial modeling, and visualization. It provides import/export capabilities for extensive data formats (by using the GDAL/OGR libraries and specific commands) and data reprojection (by using the PROJ library).

A new procedure for linking these two geospatial Open Source software packages is presented. Such a procedure allows for the development of custom Chameleon functionality (in the form of Chameleon ?widgets?) to seamlessly access GRASS functionality.

Due to the FOSS environment of both of these software packages, this is a free, transparent and highly customizable solution for developing ?Web-GIS analysis tools?.

Primary authors : Dr. CANNATA, massimiliano (supsi)

Co-authors :

Presenter : Dr. CANNATA, massimiliano (supsi)

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