

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

Contribution ID : 13

## OSSIM and osgPlanet

Tuesday 12 Sep 2006 at 09:00 (03h30')

A workshop and/or presentation on OSSIM - Open Source Software Image Map - pronounced "awesome". The OSSIM distribution provides an advanced C++ framework for remote sensing, image processing, and advanced geo-spatial processing. The ImageLinker application allows the user to perform precision terrain correction, ortho-rectification, and very large cross sensor mosaics and fusions. All map projection and datum transformations are performed automatically by the program transforming arbitrary input to user specified views or output. Additionally, there will be an overview of the osgPlanet application which provides advanced 3D geospatial visualization of data sets through OSSIM and OGC WMS interfaces.

The OSSIM distribution is centered around a C++ object oriented software library. Key functionality is implemented in the library for use in command line tools, GUI applications, and web based services. The software distribution includes utility programs, image viewers, and sophisticated custom production applications. As improvements are made to the core library all applications and services that use the library benefit.

OSSIM can load and process a wide range of geo-spatial and image formats. It supports rigorous sensor models, map projected products, and Residual Polynomial Coefficient (RPC) mechanisms. Most government and commercial formats are supported by OSSIM.

When geo-spatial data is loaded the associated meta-data is typically processed to correctly map project and provide precision terrain correction over elevation data where appropriate. OSSIM understands and handles all of the map projection and datum transformations and resampling to arbitrary resolutions.

### Dynamic Image Chains

Basic to OSSIM is the support of Dynamic Image Chains. Loaders, Combiners, Filters, and Outputs can be dynamically connected to each other within a running program by the user. This building block approach allows complex image processing flows to be interactively constructed and modified. Each object or image unit in the chain may have its own controls and adjustable parameters. The entire state of the chain,

including adjusted parameters, can be easily saved and retrieved for OSSIM enabled programs.

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