



# OPEN SOURCES #17: COLLABORATION FOR ALL

THE OPEN GEOSPATIAL CONSORTIUM  
SUPPORTS STRONG COLLABORATION WITH  
THE OPEN SOURCE COMMUNITY

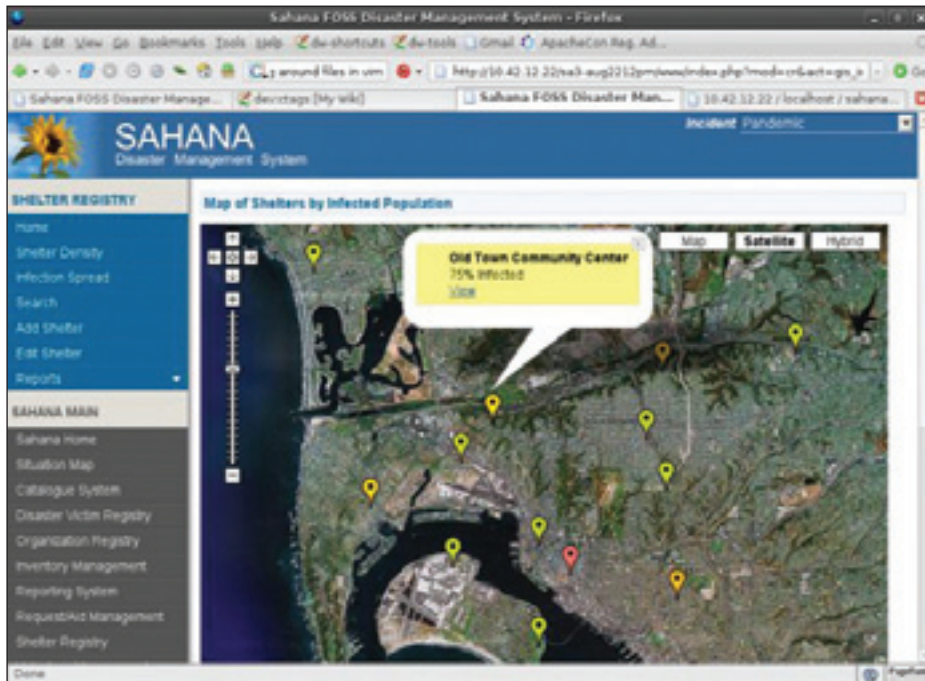
John Donne wrote, "No man is an island, entire of itself . . ." Donne's meditation suggests that human beings do not thrive when isolated from others, and the same is true for standards organizations. In today's information and telecommunications environment, any standards organization that exists and operates in isolation lacks broad relevance and their standards will not be broadly implemented.

The OGC (Open Geospatial Consortium) encourages strong collaboration with other standards organizations. For example, the OGC currently have memorandums of understanding (MoU) with numerous organizations, including the International Standards Organization (ISO), the Organization for the Advancement of Structured Information Standards (OASIS), the Open Grid Foundation (OGF), the Web3D Consortium, and the Workflow Management Coalition. Most recently we signed a formal MoU with OSGeo – the Open Source Geospatial Foundation.

The collaborative relationship between the OGC and the Free and Open Source Software for Geospatial (FOSS4G) community has evolved over the past ten years. Today, many FOSS4G projects use OGC standards in their applications. More importantly, the geospatial open source community has made significant contributions to numerous OGC standards, including the OGC Web Map Service, Web Map Context, Style Layer Descriptor, and Catalogue standards. Also, as part of the OGC Compliance Testing Program, the FOSS4G community has provided the Reference Implementations for a number of OGC standards.

## **An Understanding**

Until recently, the collaboration and communication between the OGC and the FOSS4G community was ad-hoc and like any ad-hoc relation-



FOSS The Sahana Disaster Management System

ship at times suffered due to a lack of guiding principles and rules of engagement. This is why the OGC and OSGeo have entered into a formal memorandum of understanding. Defining the guiding principles of the MoU and then having both communities agree to the content of the MoU took time. We needed to honor the values of the each organizational culture, deal with intellectual property issues, and gain consensus as to the best approach while at the same time striving to maximize the value of the collaboration and avoiding the procedural barriers that would inhibit collaboration. From the MoU:

*The purpose of our relationship is to keep each other well informed of our respective activities and directions, so that our activities may be coordinated in such a way as to maximize the achievement of our respective mission and goals.*

A recent example of the benefit of a strong OGC-OSGeo collaboration is the Web Map Service Tiling (WMTS) candidate standard. The WMTS document has just been submitted into the OGC standards track. For the last year, there have been discussions on how to best define a standard approach for implementing tiling with a WMS enabled server. Various approaches were identified and tested. What is interesting about these discussions is that they occurred across organization boundaries. The OGC members approved the use of public email discussion lists and wikis to enhance communication. OSGeo also provided a discussion list. Initially, various approaches were proposed and tested. However, after this testing and considerable debate, an approach was defined that incorporates input and lessons learned from both communities. For example, the REST definition for the WMTS interface, the concept of tile sets, and the use of profiles originated from work done in

OSGeo. Another important aspect of this approach is that there are already reference implementations for the WMTS candidate standard.

During the recent FOSS4G conference in Cape Town, there was a special Birds of a Feather (BoF) meeting to discuss WMTS and to gather any additional concerns, suggestions, and comments regarding the WMTS document. The meeting notes were immediately distributed to the Web Map Service Standards Working Group for that group's use. At the end of the day, this collaboration has allowed the geospatial community to create a better, more mature candidate standard. As one individual who attended the BoF stated (my summary from meeting notes), "I read the WMTS spec and it took me 45 minutes to implement it; it works, so I'm happy with it." This type of rapid prototyping and evaluation is critical to defining standards that meet community requirements.

### Interactions in Action

The Sahana Disaster Management System ([www.sahana.lk](http://www.sahana.lk)) is an excellent example of an open source application that leverages the work of numerous open source projects as well as OGC standards. The Sahana GIS module consists of both client and server modules. The map-viewing client of Sahana is based on OpenLayers but other open source client solutions can be used. The Sahana mapping client can access data from various GIS servers, such as GeoServer. The GIS sub-modules of Sahana support and take advantage of OGC standards, such as OGC WMS and OGC Catalog Services-Web, to serve, access and display geographic data. From a database perspective, Sahana uses both PostgreSQL/PostGIS and MySQL. Sahana supports the ability to ingest

and display GeoRSS based feeds. Support for OGC KML is being discussed.

Going forward, we are hoping for continued collaboration between the open geospatial standards community as represented by the OGC and the free and open source geospatial development community as represented by OSGeo. I believe that OGC's collaborations with communities of interest such as OSGeo, as well as with other standards organizations, will enable the geospatial community to more quickly define, document, and approve international standards of increased value and benefit to all information communities, not just the geospatial domain. Continuing areas of collaboration include:

- Additional reference implementations of OGC standards;
- Defining new requirements and use cases for extensions to existing OGC standards as well as new OGC standards;
- Having a community of practice that can very quickly implement and test any candidate OGC standard and provide implementation experience feedback;
- A "birthing" place for new candidate standards that have been developed outside the OGC process but are submitted into the OGC standards track;
- Helping us define how to implement OGC standards in a variety of architectural patterns, such as REST (ROA) and SOA.

These objectives are fundamental to the spirit of the recently signed MoU. A number of OGC Member organizations are also involved in OSGeo and participate in both OGC and OSGeo activities. Further, as part of the MoU, the OGC is providing a number of free individual memberships in exchange for help with reference implementations and being involved in the OGC standards setting process. Both mechanisms allow for continued collaboration and better communication.

### Author's Bio

*Dr. Carl Reed has 35 years experience in the geospatial technology industry and is currently the Chief Technology Officer and an Executive Director of the Open Geospatial Consortium, Inc. (OGC). As CTO, he is responsible for working with members and the community to define the geospatial interoperability requirements and impacts on our industry standards resulting from evolving technology and architecture directions. Prior to working for the OGC, Reed was vice-president for geospatial marketing at Intergraph, and from 1989 to 1996, he was president and CTO of the Genasys Americas operation. In the late 1970's through the mid 1980's, Dr. Reed helped design and implement two major GIS packages, MOSS and GenaMap. Reed received his PhD in Geography in 1980, specializing in GIS systems architecture, from the State University of New York at Buffalo. Dr. Reed has published numerous papers and book chapters. He is also one of the originators of GeoRSS.*