**Workshop**

**Semantics in Geospatial Architectures: Applications and Implementation**

October 28-29, 2013

University of Wisconsin-Madison

This is a call for position papers (about 500 words) expressing interest to attend and/or present at a two day workshop focused on including semantic components in geospatial applications and architectures. Goals of the workshop are to identify and describe existing semantic geospatial systems as well as to discuss semantic needs in future statewide geospatial information systems and national spatial data infrastructures (NSDIs). As States and the Federal government create new geospatial information systems, a goal is to foster the building of semantic architectures. Geospatial domain and GIS people not currently involved in the semantic area are encouraged to come to the workshop to listen or help guide users’ needs. Also, because semantics are newer in geospatial applications compared to other areas, other disciplines with semantic systems are welcome to present to potentially serve as models.

Workshop topics can range from ideas for scenarios as to how semantics would benefit future geospatial systems to how to actually build such systems. Semantic technology in database systems and also the use of database systems in semantic software are of interest. The use of semantics can be for searching, querying, data integration, question answering, or other areas. Semantic components can encompass ontologies, repositories, mappings, semantic mediators, reasoners, and other semantic software, as well as linked data and associated linked data software. For the latter, for example, what are the pros and cons for representing geospatial data in RDF and using RDF systems rather than using relational or other database systems? How could a system accommodate both RDF data and databases?

Goals of the workshop include identifying current applications or systems that use semantic technologies, showing how semantics are useful in those domains and systems, and descriptions of how those systems are built (i.e., the architecture, what technologies are being used both conceptually and in software development). As a result, commonalities or differences in concepts and software will be identified to recommend designs and best practices to make semantic technology more widely used. Also, it is likely that unmet needs will be identified for future architectures, regarding both functionality and software. Types of architectures could include portals, Database Systems, SDIs, cloud, HPC, information systems, and cyberinfrastructures such as proposed for EarthCube. Again, the focus in this workshop is on geospatial applications and data so results will target geospatial data. OGC work on semantic mediation will be presented.

Attendees will be asked to contribute to a report write-up of the workshop regarding existing or future use, designs, and software development of semantics in various geospatial architectures, especially to verify accuracy for descriptions of systems they have presented. Workshop format will be presentations with follow on discussions and summaries. There are some partial funds available for participant support from the NSF SOCoP INTEROP grant on geospatial semantics, PI Nancy Wiegand, http://interop.socop.org.

Format for the position paper:

* About 500 words, 12 pt. font, Times New Roman, 1 inch margins
* Name, affiliation, and email at the top
* Indicate if you can present in addition to attending. If you can present and discuss a particular semantic application or system, please name it.
* Describe the system you are presenting or other interest in attending

Due by Sept. 16, Notification of acceptance by Sept. 18