**Developing Ontologies for Geospatial Standards: Progress and Issues...** [ intro slides TBD ]

As with the recent session-4 (The Case for a "Quantities and Units of Measure" Ontology Standard ) this is a continuation of the [OntologyBasedStandards](http://ontolog.cim3.net/cgi-bin/wiki.pl?OntologyBasedStandards) mini-series that was started in late 2012 as a joint venture of [OASIS](http://ontolog.cim3.net/cgi-bin/wiki.pl?OASIS), [OMG](http://ontolog.cim3.net/cgi-bin/wiki.pl?OMG), various [ISO](http://ontolog.cim3.net/cgi-bin/wiki.pl?ISO) working groups, [IAOA](http://ontolog.cim3.net/cgi-bin/wiki.pl?IAOA), [OOR](http://ontolog.cim3.net/cgi-bin/wiki.pl?OOR)  and [ONTOLOG](http://ontolog.cim3.net/cgi-bin/wiki.pl?ONTOLOG).. This session, is part of a [program of 8 topics](http://ontolog.cim3.net/cgi-bin/wiki.pl?ConferenceCall_2013_09_12#nid3XDX) which are planned to be held over the remaining time in 2013, and partly in 2014.

We are over 10 years from Smith and Mark’s [Geographical Categories: An Ontological Investigation](http://www.ncgia.buffalo.edu/ontology/SmithMarkIJGIS2001p591_s.pdf)– one of top 10 cited articles in the geospatial (GS) field. Many technical geospatial standards exist and there is increasing intersection of the GS technical community and the ontological and semantic technology communities. Still many geospatial data & web feature services have standardized terms but lack adequate semantics. Some of the concepts in need of improved semantics, such as quantity and observation, are not specific to the GS domain. This session explores some efforts to reduce the ambiguities in GS definitions, as well as the interrelationships of concepts across GS and related domains. The session builds on work coming out of standards bodies like the Open Geospatial Consortium ([OGC](http://www.opengeospatial.org/)), but also looks to progress on ontologies such as started on the [W3C Geospatial Incubator Group](http://www.w3.org/2005/Incubator/geo/) which defined seven categories of Geospatial Ontologies[[1]](#footnote-1):

* Geospatial Feature Ontology
* Feature Type Ontology
* Spatial Relationship Ontology
* Toponym (Place name) Ontology
* Coordinate Reference / Spatial Grid Ontology
* Geospatial Metadata Ontology
* (Geospatial) Web Services Ontology

Notable also was the benchmark survey of the GS ontology landscape ([Geospatial Ontology Trade Study](http://books.google.com/books?hl=en&lr=&id=cLKJhI0VkhEC&oi=fnd&pg=PA179&dq=#v=onepage&q=)) conducted in 2007 which reviewed spatial conceptualization in foundational and upper level ontologies but also concepts in domain and commercial standards (e.g. the Geography Markup Language [GML](http://www.opengeospatial.org/standards/gml)) as well as spatial ontologies that are embedded in other ontologies such as [SWEET](http://sweet.jpl.nasa.gov/). Several of the GS ontologies discussed in the trade study have been made available in the [SOCoP OOR](http://socop.oor.net/ontologies) as part of NSF’s funding of the [SOCoP INTEROP](http://ontolog.cim3.net/cgi-bin/wiki.pl?NsfInterop_Grant/SemanticsInGeospatialArchitectures_2013_05_07) effort.

Another notable development has been the formalization of GeoSPARQL which was presented previously in the Ontolog [Virtual Workshop on Semantics in Geospatial and Other Architectures: Design and Implementation](http://ontolog.cim3.net/cgi-bin/wiki.pl?NsfInterop_Grant/SemanticsInGeospatialArchitectures_2013_05_07) (2013-05-07).

For our session today, we have invited presentations by people involved in the geospatial arena and with standards. Following a very brief overview, they will each present for about 20 minutes on their areas of work and interest. This will be followed by Q & A and an open discussion of issues.

For more detail on the mini-series please also refer to details on the **[OntologyBasedStandards](http://ontolog.cim3.net/cgi-bin/wiki.pl?OntologyBasedStandards)** mini-series homepage.

1. [↑](#footnote-ref-1)