

OGC's February 2005 GeoWorld column

Title: **Widen Your Geospatial Perspective -- Read these OGC Papers!**

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To take advantage of opportunities afforded by evolving technologies and markets, the OGC membership continue to expand OGC's focus beyond GIS and imaging. OGC's widening standards purview includes:

- Service chaining (to make geoprocessing part of the web services environment).
- Vehicle information, telematics and location services. (These domains can't grow or fulfill their potential without a standards platform.)
- Information interoperability and the Spatial Semantic Web. (Relatively simple to sophisticated technology can help us overcome basic to complex differences in data models)
- Management of geospatial digital rights management, lineage, and online ordering.
- Enterprise architecture (to help information system architects put spatial capabilities everywhere they are needed).
- CAD/AEC/GIS integration (to break down the barriers between survey, civil engineering, architectural, and GIS applications and data).
- Sensor Web Enablement (SWE) (Enable web-connected sensors to be discovered, controlled, accessed, read, and their results integrated with other spatial data).

Much of this ongoing work is documented in official, public OGC "discussion papers" (<http://www.opengeospatial.org/specs/?page=discussion>). OGC Discussion Papers describe technology issues being considered in the various Working Groups of the OGC Technical Committee. Discussion papers do not represent official OGC positions. But technologists can have confidence that these discussion papers document in some detail how geoprocessing services will work with other web services to integrate geoprocessing into web-based information systems. Example discussion papers are the "Integrated Client for Multiple OGC-compliant Services," "OGC Web Services SOAP Experiment Report;" and "Web Pricing and Ordering."

Discussion papers about the Geospatial Portal Reference Architecture and the Critical Infrastructure Collaborative Environment Architecture show how to bring diverse spatial technologies together into integrated application and enterprise systems. These papers will interest anyone developing geospatial portals or complex enterprise architectures that provide geospatial capabilities.

Currently, there are 36 OGC discussion papers that represent many, but not all of OGC's ongoing focus areas. For example, discussions are ongoing among members and in the broader community about what OGC might do to standardize service interfaces for data collection using GPS, RFID, and image based decision systems. And OGC's Sensor Web Enablement (SWE) experts, looking beyond sensors, are talking with others who are working on web-based communication with actuators and tiny robotic devices. Discussion papers in these areas will probably be written after member discussion has resulted in preliminary consensus on what ought to be standardized. Most investigators contacted by OGC welcome the connection, because they know that standards based on technical authority and consensus spur innovation, investment and progress.

Not surprisingly, cooperation with other standards organizations continues to expand. The Organization for the Advancement of Structured Information Standards (OASIS), for example, has developed a Common Alert Protocol that is germane to SWE. The Object Management Group (OMG), Open GIS Consortium (OGC), Simulation Interoperability Standards Organization (SISO), and Web3D Consortium collaborate on open, non-proprietary standards for Modeling and Simulation (M&S) and related technologies. OGC continues to work jointly with ISO TC/211 and other standards groups.

Proving it

Application domains like Critical Infrastructure Protection are "where the rubber meets the road." Do users find value in these standards-based services? OGC has shown repeatedly in its Interoperability Initiatives -- mainly testbeds and pilot projects -- that commercial products implementing the standards do indeed interoperate. At the initiatives' concluding demonstration events, users invariably applaud what they have seen. User uptake of standards-compliant products continues to rise as users discover how much money they can save and how much flexibility they can gain.

OGC's next major Interoperability Initiative, OGC Web Services 3 (OWS3) will advance specification work in Sensor Web Enablement (SWE), Geospatial Digital Rights Management (DRM), and other priority areas.

A growing population of stakeholders

OGC outreach efforts inform people involved in decision support, emergency response, insurance, transportation, homeland security, utilities, architecture/engineering/construction, utilities, logistics, and many other domains. Until they are informed through OGC outreach activities, most people in these domains don't know they can benefit from the steady disappearance of the boundaries that once confined geospatial data and technologies. Decision support applications, often complex and often constrained by proprietary stovepipes, can now draw on many more resources. Sensor and imaging devices can now be integrated with other useful data as part of the spatial web. A refinery engineer's CAD data can be used -- in real time - - with a fire and rescue department's GIS Data, an aerial photo or a security company's dispatching system.

Do you want to know more? OGC's specifications, discussion papers, staff and technical working group chairs can accessed through <http://www.opengeospatial.org>.

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