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Platform for Digital Rights, Sensor Webs and …

On the occasion of the OGC's 50th Technical Committee meeting in Southampton, England, members, staff and directors reflected on OGC's ten year history, marveling at what has been accomplished. One measure of OGC's success is the validation of the phrase "standards platform for the industry."

During the first three years, OGC members worked on agreeing to a common model, or lingua franca, called the OGC Abstract Specification. This agreement was required before the first OGC standard could be adopted. Reaching consensus on such things as “what is a point” and “how does one model a coordinate” required hard work and considerable debate. But without the Abstract Specification, there could be no solid foundation upon which to build our interface specifications (standards). The OGC members have now defined and approved 12 OpenGIS standards that provide a framework for the development and deployment of interoperable, standards based geospatially enabled applications, portals, and services.
Evidence that OGC's standards platform supports a much larger structure is apparent in two efforts now underway in OGC, Geospatial Digital Rights Management (GeoDRM) and Sensor Web Enablement. Internet Age geospatial data ownership issues and sensor webs were not part of OGC's original work plan. Even so, the OGC's existing Abstract Specification and adopted standards platform provides the foundation that will enable coherent technology development in these domains.

GeoDRM Working Group

Early this year, OGC and the GeoData Alliance issued a draft program plan entitled “Business Plan for Geospatial Digital Rights Management” that presented a business case and market analysis for geospatial digital rights management. This led to the formation at the latest OGC Technical Committee meeting of a GeoDRM Working Group. The mission of this working group is to address requirements for Digital Rights Management and the related fields of electronic commerce and information security as they apply to geospatial applications.

Digital Rights Management (DRM) is about creating, packaging, distributing, controlling and tracking content based on rights and licensing information. DRM is closely integrated with Content Management System (CMS) technology for creating metadata, storing and organizing digital content in support of workflow, search, browse, access and retrieval processes by users in workgroups, enterprises and information communities. It is also dependent on Information Security technologies to provide the trusted infrastructure for DRM and E-commerce. The GeoDRM Working Group will leverage DRM strategies developed in the larger IT community.

Many organizations want to be able to specify, manage, control and track geospatial data distribution within safe, open and trusted environments. This is critical for development of the geodata market, but it is also critical for development of data sharing arrangements within communities of practice where profits may not be the main issue. Over the last decade, for example, DRM has been an important topic for such US organizations as the GeoData Alliance, the Federal Geographic Data Committee (FGDC), the National States Geographic Information Council (NSGIC), and the University Consortium for Geographic Information Science (UCGIS), and for similar groups in many other countries, as well as local and regional data coordination groups worldwide. Every data sharing plan such organizations look at follows a model that requires a framework of operating agreements. A for-profit map publishing house, a lending library, a reference library, and a data commons are just a few of the possible models. The GeoDRM Working Group aims to assemble a standards framework that supports the operating agreements necessary in any such model.

GeoDRM Working Group participants hope to attract a broad range of participants who will bring the experience necessary to be sure the standards framework supports this full range of operating agreements.

Sensor Web Enablement

Web accessible sensors and sensor networks offer the potential for significantly improved tracking, monitoring, forecasting and decision-making if we have the ability to rapidly discover, access and integrate sensor observations, and if this can take place in an environment that supports authentication and security. OGC's Sensor Web Enablement (SWE) is creating the XML-based encodings that make this possible. SWE is attracting organizations involved in environmental monitoring, weather prediction and warning, utilities, public works, critical infrastructure monitoring, defense and intelligence, intelligent transportation and navigation, and mobile asset logistics.

OGC's Emerging Technology Summit III (ETS-3), "Advancing the Sensor Web," being planned for November of this year in the Washington, DC area, will focus on the integration and application of sensors and sensor networks comprised of in-situ, airborne and spaceborne sensors. Participants will learn about the issues and help define a course of action.

Current "plug-and-play" and future surprises supported

OGC's standards platform already underlies the interfaces and encodings that enable over 200 commercial products to work with other vendors' products to provide Web mapping, catalog services, grid analysis, coordinate transformations, access to vector feature data and other capabilities. You can look at OGC Discussion papers (under "Documents" on the OGC web site) to learn more about SWE and other new capabilities that are in progress. No one can tell you what discussion paper topics will be on that OGC web page next year or the year after, because standards platforms support innovation, unpredictable innovation.

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