

Pilot Projects Catalyze Global Spatial Data Infrastructure

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Open GIS Consortium Inc. (OGC) pilot projects are limited-duration public/private partnerships that act as a catalyst to broadly engage industry in “building out” local, national and global spatial data infrastructure (GSDI). Completed and current OGC pilot projects include the following:

- Upper Susquehanna-Lackawanna Pilot Project
- Geospatial Fusion Pilot Project
- Military Pilot Project Testbed, Phase 1
- North Rhine Westphalia Pilot
- Multihazard Mapping Initiative, Phase 1
- Object Domain Modeling Support Initiative
- Critical Infrastructure Protection Initiative
- Geospatial Information for Sustainable Development Initial Capability Pilot
- Geospatial One-Stop—Transportation Pilot

In pilot projects, collaborating user communities test interoperability in “real-world” settings using standards-based off-the-shelf geoprocessing products that implement OGC’s OpenGIS interface and encoding specifications. (OGC pilot projects are different from OGC testbeds, which focus on rapid prototyping of new interfaces and schemas that usually result in new OpenGIS Specifications.)

Maximize Benefits

OGC pilot projects help “communities of common interest” validate the ability of interoperating geoprocessing products to improve access, integration and application of diverse sources of spatial information. The communities of common interest may be defined geographically or by a shared interest, such as transportation or sustainable development, that spans all regions. Public announcements of proposed pilot projects (see <http://www.opengis.org/ogcSubscribe.htm>) invite participation by all interested vendors, integrators and stakeholder organizations.

The projects are carefully designed to maximize benefits for all participants. For example, user organizations that sponsor pilot projects benefit in several ways. They address their own requirements as well as their information-sharing partners’ requirements in the same exercise, so they develop shared understanding of common technical, semantic and institutional issues. The temporary involvement of their staff gives them precisely the expertise that’s required after the pilot ends.

The sponsors’ interaction with vendors and contractors in the collegial setting of a pilot helps users develop accurate perceptions about the suppliers’ offerings. Finally, pilot projects leave behind a working integration prototype to guide coordinated acquisition of commercial products that work together in spatial information networks. This provides a more solid foundation for procurement than isolated demos by individual vendors.

Also, the participating vendors and integrators quickly become familiar with customers' real needs in the new interoperable environment. They become familiar with the offerings of current or potential partners and competitors, so they're better able to position themselves for future business. Now that OGC is offering new memberships and pilot opportunities for sub-national levels of government, small- and medium-sized integrators have much to gain from participation.

In addition, university organizations can play various roles, including technology provider, advisor, sponsor, documenter and trainer of future experts. All of OGC's members and stakeholders benefit, because feedback from pilot projects results in improved OpenGIS Specifications.

Communities Collaborate

OGC's pilots promote the deployment of interoperable geoprocessing software and also GSDI best practices that involve metadata capture and data content standards. (See the "GSDI Cookbook" at <http://www.gsdi.org/pubs/cookbook>). Ultimately, the growing availability and use of such software and practices results in new "spatial Web" constructs that become increasingly interlinked. As researchers and practitioners of sustainable development, for example, become connected in a global sustainable-development geodata exchange, overlapping or included communities, such as the international disease surveillance community, come together, and this ties to the network of local public-health officials. Each community of interest becomes part of the greater GSDI.

The geospatial community and a few other communities (e.g., EDI, Digital Libraries, eGov, etc.) are at the forefront in their work with metadata. Metadata encoded in standard Extensible Markup Language (XML) schemas and registered in Web-based catalogs enable extraordinarily efficient discovery, evaluation, integration and presentation of complex and heterogeneous information. Self-organizing "Information Communities" (in our industry, people who share a set of geospatial feature and feature-relationship definitions) will benefit immensely from advancing technical issues such as semantic translation and Web services.

The World Wide Web Consortium's emerging "Semantic Web," based on these principals, will greatly extend peoples' information gathering and communication capabilities. The vision of the spatial Web, GSDI and OGC all depend on continuing involvement of industry, government, academia and non-governmental organizations.

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