OGC: Standards in Action

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News Flash!

• Open GIS Consortium, Inc., becomes:

Open Geospatial Consortium, Inc.

• Recognizes breadth of focus to include
  – Location Based Services
  – Imagery Exploitation
  – Cartography and Mapping
  – Transportation
  – Along with GIS
What is the OGC?

• The Open GIS Consortium, Inc. (OGC) is a not-for-profit international voluntary consensus standards organization leading the development of standards for geospatial and location based services.

• The OGC facilitates a consensus process in which government, private industry, and academia collaborate to create open and extensible software application programming interfaces for geospatial and other mainstream information technologies.
When was the OGC founded?

- OGC was founded with eight charter members at the time of its first Board of Directors meeting on September 25, 1994.
- Incorporated in the U.S., U.K., and Australia
- A complete history of the OGC can be found on the OGC website at http://www.opengeospatial.org/about/?page=history
The OpenGIS Consortium Vision

A world in which everyone benefits from geospatial information and services made available across any network, application, or platform.
To lead the global development, promotion and harmonization of open standards and architectures that enable the integration of geospatial data and services into user applications and advance the formation of related market opportunities.
The Growth of OGC

- Over 260 members worldwide – 31 countries & 5 continents
  - 91 European members - 19 countries
  - 36 Asia-Pacific members - Japan, Republic of Korea, Australia, China, and Thailand
- Broad participation with other industry and international standards organizations
- Fourteen approved, publicly available Implementation Specifications
- Numerous candidate Implementation Specifications in work
- OGC Reference Model defines interoperable geo architecture
- Rapidly growing list of vendor implementations
Current OGC operating objectives

1. Promote the use of “interoperable geoprocessing” throughout the Information Technology marketplace.
2. Synchronize “geoprocessing technology” with commercial “Information Technology standards”
3. Arrange cooperation of “GI product suppliers” and “GI users” to develop interoperable software interfaces
4. Involve the entire community in the “interoperability process”
Current OGC operating objectives

5. Provide an “industry forum” for “partnerships” and cooperative business development projects.
6. Promote “co-opetition”
7. Promote Standards based, off the shelf software from commercial (SCOTS) and other sources.
Where does OGC fit in the ‘standards’ world?

ISO/ CEN / Nations

Domains: Object / Abstract Models, Content, Vocabulary

OGC

Software Interfaces: Instantiate Domain and Dejure into Infrastructure

IETF / W3C

Infrastructure: WSDL, UDDI, SOAP, XML
What does the OGC provide?

- An *agreed upon consensus process* for defining, testing, documenting, and approving interface specifications.

- **Staff knowledge, expertise and support** to work with the members to facilitate the consensus process the culminates in approved and adopted specifications.

- A *process framework* to encourage effectiveness and efficiency in advancing OGC member goals.

- A *consensus-based forum* for conflict resolution.

- A comprehensive *Communications infrastructure*. 
Membership Growth / Diversity

- **Integrators**
  - Lockheed Martin, Mitsubishi, SAIC, Harris, MITRE, BAE Systems, Boeing, General Dynamics, Raytheon, Accenture, …

- **Major Hardware and Software Companies**
  - Sun Microsystems, Oracle, HP…

- **Developers of Geospatial Technologies and Services**
  - AutoDesk, eSpatial, ESRI, GE Network Solutions, Intergraph, LaserScan, MapInfo, NAVTEQ, PCI Geomatics, Questerra, Navigation Technologies, SICAD …

- **Government agencies that depend on geoprocessing**
  - United Nations, National Governments: Canada, United Kingdom, United States, Japan, Republic of Korea, Australia; Sub-National Governments: City/County of San Francisco, Consellería de Medio Ambiente (Spain)…

- **Location Services/Telecoms**
  - Webraska, Kivera…

- **Others**
  - Content Providers, Power, Universities, Consultants, Startups, …
The Evolution of the OGC Strategic Focus…

Current Strategic Focus is:
Steady improvement in the Technical Baseline and inter-community resource sharing capacity

OGC Technical Baseline


Open GIS Consortium established and Technical Committee organized

Enhanced understanding of geoprocessing interoperability and digital representation of Earth and Earth phenomena

First generation of web-based interoperable services

Improved multi-source information operations for technical interoperability in web-based environments, enabled enterprise applications and location services, broad base of operational implementations

Second generation web-based interoperable services and decision support systems

Improved inter-community and multi-enterprise data and processing resource sharing and platform-independent interoperability

Improved integration of geoprocessing with mainstream information technology capabilities

Capacity to share geospatial information and services across multiple computing environments, integrated with mainstream information technology

Broad scale application of geoprocessing technology and expanded understanding of global inter-community relationships

Technical and Socioeconomic Impact
Approved OpenGIS® Specifications

• Simple Feature Access – OLE, SQL, CORBA (3 specs)
• Catalog 2.0
• Coordinate Transformation 1.1
• Grid Coverages 1.0
• Web Map Service 1.3 (WMS)
• Geography Markup Language 3.0 (GML)
• Web Feature Service 1.0
• Filter 1.0
• Style Layer Descriptor 1.0 (SLD)
• Web Coverage Service 1.0 (WCS)
• Web Terrain Service 1.0 (WTS)
Summary

- OGC represents a large swath of geospatial software and data providers and integrators
- Cooperation with other standards bodies is required
  - ISO, IETF, W3C, OASIS