The OGC: Standards and Compliance Testing

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Is there life on Mars?
The OpenGIS Consortium Vision

A world in which everyone benefits from the use of geographic information and supporting technology services.
What is the Core Mission of the OGC?

The OGC leads the development, promotion and harmonization of open and freely available geospatial standards and supports their effective implementation and use worldwide.
Accomplishment of the OGC Mission will enable a global geospatial and IT community

Composed of many collaborating organizations... authoring and publishing open standards for geospatial interoperability
OGC’s Approach for Advancing Interoperability

• **Interoperability Program (IP)** - a global, innovative, hands-on engineering and testing program designed to accelerate interface development and bring interoperability to the market.

• **Specification Development Program**
  – Consensus processes similar to other Industry consortia (World Wide Web Consortium, OMG, etc.).

• **Outreach and Community Adoption Program**
  – education and training, encourage take up of OGC specifications, business development, communications programs.
Compliance Testing

• OGC has had compliance testing available for some years.
• In 2002, the OGC members determined that a new approach was required for the emerging suite of OpenGIS Web Services (OWS) specifications.
• Initiated an OGC Interoperability Initiative called “Compliance & Interoperability Testing & Evaluation – CITE”
  – A collaboration between numerous OGC members and funded by a number of sponsoring organizations
  – Completed in September 2003 with the availability of the CITE online compliance testing framework
  – The project was done in close collaboration with the Open Group. They conducted the original feasibility and planning study.
The Operational Objectives for CITE

• Provide adequate coverage of the underlying specification
• Clearly indicate cases where the implementation is deficient
• Be available and affordable to the implementers
• Be impartial in the manner in which it implements tests
• Be easy to use and produce a clear result
• Provide a strategy for release control and appeal management
Using The Tests

• Freely available and accessible via the CITE Portal
• Self administered.
• All tests within a test suite for a given OGC specification are written around assertions conformant to the IEEE (IEEE Std 1000.3.3-1991) standard.
  – Assertions are basically statements of fact that the device under test must adhere to. There are 4 types of assertions.

<table>
<thead>
<tr>
<th>Classification</th>
<th>Description</th>
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<tbody>
<tr>
<td>A</td>
<td>Mandatory testable assertion.</td>
</tr>
<tr>
<td>B</td>
<td>Mandatory but untestable assertion.</td>
</tr>
<tr>
<td>C</td>
<td>Optional testable assertion.</td>
</tr>
<tr>
<td>D</td>
<td>Optional but untestable assertion.</td>
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The “Rule”

- Only those organizations that submit completed paperwork that is vetted by staff and pay appropriate fees will receive a compliance brand and can then claim compliance in their sales and marketing literature.
What does compliance testing and branding mean for users and buyers of geospatial technology?

• An OGC Compliance Brand certifies that a given product or application properly implements a particular version of an OpenGIS Specification.
• Such brands serve to assure users that are purchasing or using said software that the OpenGIS specifications are properly implemented and that interoperability is better assured.
Caveat

• Compliance does not insure interoperability!! A different level of testing is required to insure full interoperability.
  – OGC has now implemented a new process we call “Interoperability Experiments.”
Also, Coordination and Harmonization with the work other standards bodies is imperative

- ISO/TC 211 – ISO Standards for the Geospatial Community
  - Abstract models for a variety of topics
- OASIS E-Government and Emergency Management Technical Committees
  - OASIS UDDI
  - BEPL
  - Registries
- W3C
  - SOAP
  - XML
  - Web Architecture
  - Ontology and semantics
- IETF
  - Geopriv (geography and privacy)
Thank you for your attention

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• http://www.opengis.org/resources/?page=testing