



23-27 April, 2012
Amsterdam, The Netherlands
www.geospatialworldforum.org



Theme: GEOSPATIAL INDUSTRY AND THE WORLD ECONOMY

Strategic Institutional Partner

OGC[®]

Making location count.

www.opengeospatial.org



Public Private Partnerships: a consortium perspective

Steven Ramage, Executive Director
Open Geospatial Consortium (OGC)
sramage@myogc.org
@OGC_Steven

Athina Trakas
Director European Services
Open Geospatial Consortium (OGC)
atrakas@opengeospatial.org

Presentation overview

- Input on the OGC
- Open standards and interoperability
- OGC Interoperability Program as PPP model

Public-Private Partnership (Wikipedia)

http://en.wikipedia.org/wiki/Public%E2%80%93private_partnership

Public-private partnership (PPP) describes a government service or private business venture which is funded and operated through a partnership of government and one or more private sector companies. These schemes are sometimes referred to as PPP, P3 or 3P. (...)

OGC at a glance – OGC Mission



- 440+ member organisations (industry, government, academia) (04/2012) <http://www.opengeospatial.org/ogc/members>
- 21 staff members (plus Global Advisory Council and Board)
- 35+ adopted OGC Standards (some are ISO Standards) <http://www.opengeospatial.org/standards>
- Broad user community worldwide, many policy positions for NSDI based on OGC standards and hundreds of software products implementations <http://www.opengeospatial.org/resource/products>
- Alliance partnerships with other standards and professional organisations <http://www.opengeospatial.org/ogc/alliancepartners>

To serve as a global forum for and lead the development, promotion and harmonization of open and freely available geospatial standards.

Cross-Boundary / Limited Connectivity Information Sharing



→ Continues to be one of our biggest challenges!

甲仙鄉小林村災害
(複合型災害)

Source: David Rydevik, Thailand Tsunami, 2004

**Pre-
typhoon**
2008/11



**Post-
Morakot**
2009/8



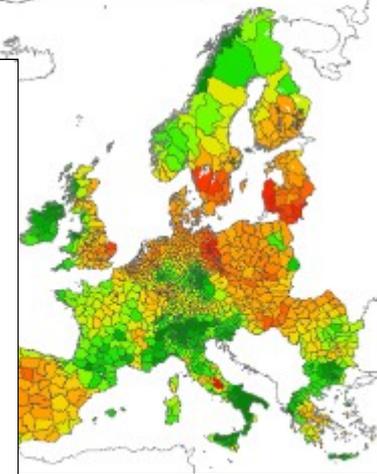
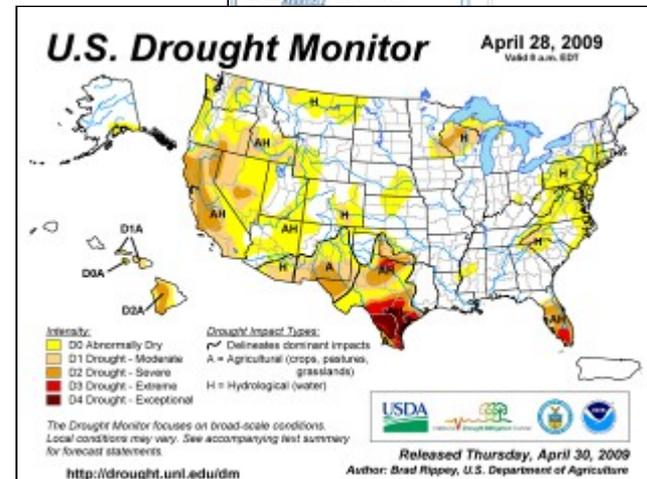
Improving Knowledge Transfer

In addressing critical issues, that need cooperation



→ Cross domain and multi-discipline

- Growth in urban centers and coastal areas
- Climate Change, Environmental Monitoring
- Water Resource availability and quality
- Emergency planning, preparedness & response
- Aviation Safety



<http://www.ogcnetwork.net/pub/ogcnetwork/GEOSS/AIP3/index.html>

Interoperability: issues in information integration



“We don't have a common

language to speak
about our geospatial

data or our services.”

“We need to find and pull
together data from our
automated sensors.”

“We need to deliver data
to different systems.”



“We need to share maps on the Web,
across devices or platforms.”

Value of
Open
Standards

“We have security issues relating
to geospatial data exchange.”



Standards development is not easy!



- Requires understanding of differences
- Requires cooperation on a global basis
- Requires consensus by many organizations
- Requires certified, repeatable process

OGC Activities Driven by Community Needs...



Education & Research



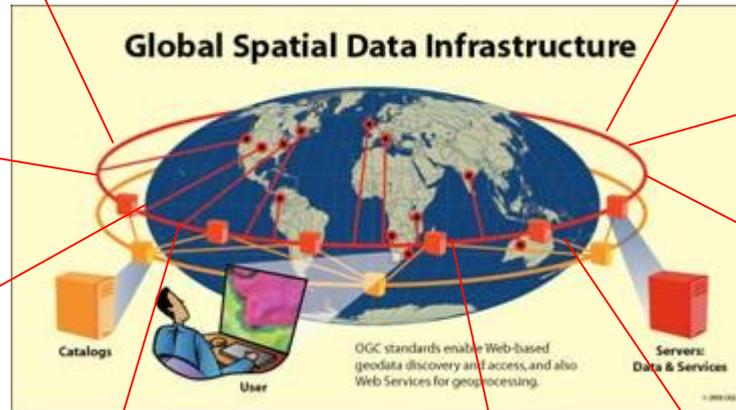
Sustainable Development



Defence



Health



E -Government



Emergency Services,
Disaster Management



Energy



Consumer Services,
Real Time
Information



Geosciences:
land, sea, air information



... lead to OGC Domain Working Groups

<http://www.opengeospatial.org/projects/groups/wg>

Domain Working Groups

Domain Working Groups (DWG or WG) provide a forum for discussion of key interoperability requirements and issues, discussion and review of implementation specifications, and presentations on key technology areas relevant to solving geospatial interoperability issues.

Name	Lead **
3DIM DWG (3DIM DWG)	Scott Simmons, CACI International Inc.
Architecture DWG (Arch DWG)	Doug Nebert, US Geological Survey (USGS)
Aviation DWG (Aviation DWG)	Navin Vembar, FAA System Operations Airspace and Flight Office
Catalog DWG (Cat DWG)	Doug Nebert, US Geological Survey (USGS)
Coordinate Reference System DWG (CRS DWG)	Victor Minor, Blue Marble Geographics
Coverages DWG (Cover DWG)	Peter Baumann, FORWISS (Bavarian Research Centre for Knowledge-Based Systems)
Data Preservation DWG (PreservDWG)	Steve Morris, North Carolina State University
Data Quality DWG (DQ DWG)	Matt Beare, 1Spatial Group Ltd.
Decision Support DWG (DS DWG)	Stan Tillman, Intergraph Corporation
Defense and Intelligence DWG (D and I DWG)	Lucio Colaiacono, European Union Satellite Centre
Earth Systems Science DWG (ESS WG)	Phillip Dibner, Ecosystem Research
Emergency & Disaster Management DWG (EDM DWG)	Lewis Leinenweber, SE Solutions, Inc.
Geo Rights Management (GeoRM) DWG (GeoRM DWG)	Roland Wagner, BHT-Berlin (Beuth Hochschule für Technik Berlin)
GeoBI DWG (GeoBI DWG)	Raj R. Singh, Open Geospatial Consortium, Inc.
Geography Markup Language (GML) DWG (GML DWG)	Ron Lake, Galdos Systems Inc.
Geometry DWG (GeometryDWG)	John Herring, Oracle USA
Geosemantics DWG (Semantics)	Joshua Lieberman, Deloitte Financial Advisory Services LLP
Hydrology DWG (Hydrology DWG)	David Lemon, CSIRO
Location Services DWG (LS DWG)	Marwa Mabrouk, Esri
Mass Market DWG (MassMarket DWG)	Ed Parsons, Google
Metadata DWG (Metadata DWG)	David Danko, Esri
Meteorology & Oceanography DWG (Met Ocean DWG)	Chris Little, UK Met Office

... provide a forum for discussion of key interoperability requirements and issues (...)

... and OGC Standards Working Groups

<http://www.opengeospatial.org/projects/groups/swg>

Standards Working Groups

Standards Working Groups (SWG) have specific charter of working on a candidate standard prior to approval as an OGC standard or on making revisions to an existing OGC standard.

Name	Lead **
ARML 2.0 SWG (ARML 2.0 SWG)	Martin Lechner, Wikitude GmbH
Catalogue Services 3.0 SWG (Cat 3.0 SWG)	Doug Nebert, US Geological Survey (USGS)
CF-NetCDF 1.0 SWG (CF-NetCDF1.0SWG)	Ben Domenico, University Corporation for Atmospheric Research (UCAR)
CityGML SWG (CityGML SWG)	Carsten Roensdorf, Ordnance Survey
ebRIM AP of CSW SWG (ebRIM AP of CSW)	Frédéric Houbie, Intergraph Corporation
ebXML RegRep SWG (ebXMLRegRepSWG)	Frédéric Houbie, Intergraph Corporation
GeoAPI 3.0 SWG (GeoAPI 3.0 SWG)	Martin Desruisseaux, GEOMATYS
Geographic Linkage Service 1.0 SWG (GLS 1.0 SWG)	Peter Schut, GeoConnections - Natural Resources Canada
GeoServices Rest SWG (GServRestSWG)	Satish Sankaran, Esri
GeoSPARQL SWG (GeoSPARQL SWG)	Carl Reed III, Open Geospatial Consortium, Inc.
GeoSynchronization 1.0 SWG (Geosync SWG)	Panagiotis (Peter) A. Vretanos, Cesium
GeoXACML SWG (GeoXACML SWG)	Jan Herrmann, Technische Universität München, Dept. of Informatics
GML 3.3 SWG (GML 3.3 SWG)	Clemens Portele, interactive instruments GmbH
GMLJP2 1.1 SWG (GMLJP2-1.1SWG)	Lucio Colaiaicomo, European Union Satellite Centre
IndoorGML SWG (IndoorGML SWG)	Ki-Joune Li, Pusan National University
KML 2.3 SWG (KML SWG)	David Burggraf, Galdos Systems Inc.
O&M 2.0 SWG (OM 2.0 SWG)	Simon Cox, CSIRO
OLS 1.3 SWG (OLS 1.3 SWG)	Carl Stephen Smyth, MAGIC Services Foundation
Open GeoSMS SWG (Open GeoSMS SWG)	Kuo-Yu Chuang, Industrial Technology Research Institute
Ordering Services for Earth Observation Products SWG (order-eo1.0.swg)	Daniele Marchionni, European Space Agency (ESA)
OWS Common 1.2 SWG (OWSCommon1.2SWG)	James Greenwood, SeiCorp, Inc.
OWS Context SWG (OWScontextSWG)	David Wesloh, US National Geospatial-Intelligence Agency (NGA)

... work on candidate OGC standards prior to approval, make revisions to existing OGC standards.

PPP discussion points



1. Role of private sector as provider of data/services to SDIs
This is important because it can bring in additional resources - expertise, skill, the data and value added services which help innovate and stimulate the SDI. As well as share the ownership of SDI delivery. A key aspect is payment models for those data and services and if it should be cost sharing or not.

2. Role of private sector as user of SDI to support its business
This is critical for an SDI in terms of organisations seeing the value of an SDI and participating in it, as well as driving the reuse of the data (irrespective of who provides it). A critical requirement here is open standards to enable interoperability.

PPP discussion points



3. Examples of shared public-private investment in SDI development and maintenance

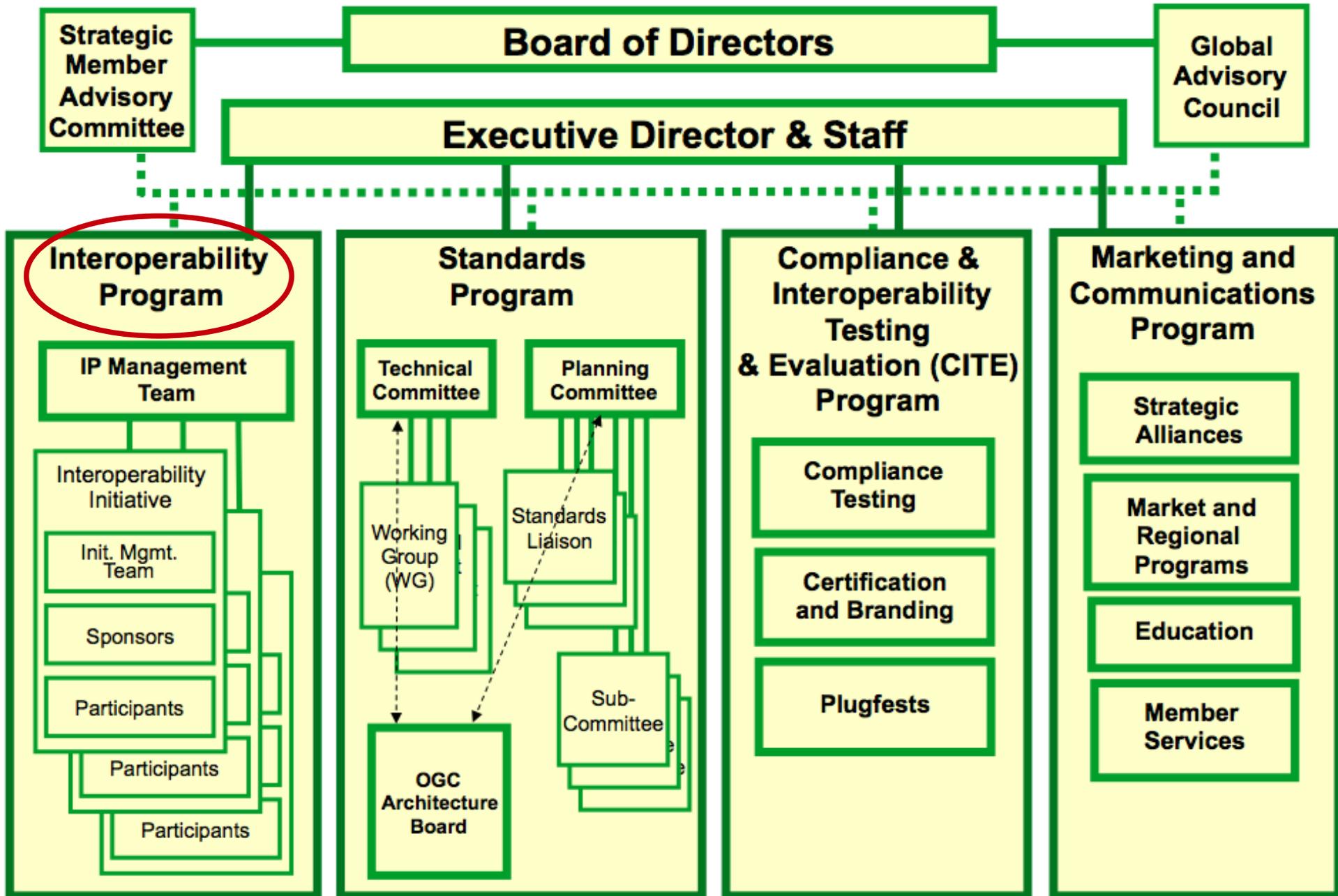
OGC Interoperability Program where it relates to SDI activities, notably CGDI and INSPIRE, as well as FI-PPP and other developing relationships.

4. Opportunities of SDIs and open data access policies to foster innovation and growth

Governments are driving open data access policies, but there is not a clear body of evidence yet regarding the business benefits, i.e. real metrics. Anecdotally however, bringing down barriers to public sector information reuse and encouraging the wider community to develop applications on top of those data should foster innovation and growth.



OGC's Interoperability Program



How does the OGC work?

<http://www.opengeospatial.org/projects>



- **Consensus process** – that is reflecting a common understanding of requirements and a membership driven process.

- **Formalised standards development process** – based on commonly agreed, structured and well defined policies and processes (→ Standards Program <http://www.opengeospatial.org/ogc/programs/spec>).



Standards
Setting

- ***Making use of innovative processes*** – for testing, verifying and documenting user requirements (→ Interoperability Program <http://www.opengeospatial.org/ogc/programs/ip>).



Rapid Interface
Development

IP - Emphasis On Testing and Validation



Testbeds, Pilots and Experiments

Participants work with sponsors to define and/or refine standards to solve a given interoperability problem.

- Joint actions by technology providers/users
- Driven by user community scenarios
- Produce:
 - Tested and validated draft standards
 - Industry technology implementations
 - Architectural recommendations
 - Live demonstrations to validate utility of standards in user context

Over 50 initiatives have been successfully completed since 1999.

Most OGC standards are advanced through this process.

OGC staff manage the entire process with policies and procedures proven to produce results.



The IP (PPP) approach



Ability to test issues - OGC's RFQ process validates need to address specific interoperability issues

Rapid prototype development yields ***workable interface specifications in 4-6 months*** instead of years

Vendors validate and demonstrate interface integrity by implementing candidate specifications in products

Accelerated process encourages ***rapid time to market*** for standards-based solutions

IP Advantages

- Multiple sponsors = reduced share of costs
- Technology providers want to participate
- Project management done by OGC staff
- Total integration cost much lower
- Technology investments protected
- Risks reduced, innovation encouraged and openness developed

IP Return on Investment



- Participants in OGC testbeds and pilot initiatives make more in-kind contributions (labour, software, infrastructure etc.) than is provided in sponsor funding.
- For every one Euro or Dollar in sponsorship funding, the following initiatives have yielded an ROI figure:
 - Web Mapping Testbed I (1999) 4 times
 - OGC Web Services 3 Testbed 3 times
 - OGC Web Services 4 Testbed 3.5 times
 - OGC Web Services 5 Testbed 3.3 times
 - OGC Web Services 6 Testbed 3.1 times
 - OGC Web Services 7 Testbed 2.5 times
 - OGC-FAA SAA Pilot 1.9 times
 - OGC Web Services 8 Testbed 2.8 times
- Vendors want early influence in specification development, early skill building, visibility & opportunity for early market deployment
- Works well for Government organisations, technology vendors and research organisations. Meeting place for interoperability testing.

Testimonials



Arnaud Cauchy of Spot Image, an EADS Astrium company, explained, " (...) **The AIP-3 Disaster Management Reference Scenario is a key contribution, helping participants to define efficient procedures and related GEOSS services to provide the right response at the right time to an emergency situation. The scenario demonstrates information flows involved in providing real-time updates to an evacuation plan during a flood disaster.**"

GEOSS Architecture Implementation Pilot (AIP) 3 –

<http://www.opengeospatial.org/pressroom/pressreleases/1323>

Navin Vembar, Aeronautical Information Management (AIM) Acquisition Lead, FAA, reported, "The (...) pilot proves that **OGC Web Services can be used in concert with domain-specific information exchange standards** to satisfy the operational needs of a wide variety of users. The use of the standards means that all of the **stakeholders' costs decrease while the benefits of the communication are realized quickly.**" OGC Aviation Information Brochure

Dave Wesloh, NGA: "We are very much a **supporter of the OGC Interoperability Program. It provides us with a opportunity to set our requirements out in the community.**"

OGC Web Services (OWS) 4 demo - <http://www.opengeospatial.org/pub/www/ows4/index.html>

Interoperability Program Governance



- **Tested and proven policies and procedures guide OGC's Interoperability Program**
 - <http://www.opengeospatial.org/ogc/programs/ip>
 - <http://www.opengeospatial.org/ogc/policies/ippp>
- **Active Initiatives**
 - <http://www.opengeospatial.org/projects/initiatives/active>
- **Past IP Initiatives**
 - <http://www.opengeospatial.org/projects/initiatives/past>

Closing thoughts



**Participate
in the process...**

What is the OGC?



<http://www.youtube.com/ogcvideo>

→ more videos on OGC's YouTube Channel:

<http://www.youtube.com/user/ogcvideo/videos>



**Thank you for your
participation!**

Athina Trakas

**Director European Service
OpenGeospatial Consortium, Inc.**

**Heerstr. 162
53111 Bonn**

Tel.: +49 – 228 – 54 88 99 42

Mobil: +49 – 173 – 211 2623

eMail: atrakas@opengeospatial.org

web: <http://www.opengeospatial.org>

**"The conventional
view serves to protect us from the
painful job of thinking."**

John Kenneth Galbraith, economist