An Overview of the OGC

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Open Geospatial Consortium (OGC)

- Not-for-profit, international voluntary consensus standards organization

- 265+ industry, government, and university members

- Founded in 1994, with 8 Charter members

Mission

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.

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OGC Today

- Over 265 members worldwide – 31 countries & 5 continents
  - 98 European members - 19 countries
  - 34 Asia-Pacific members 5 countries
- 90+ Academic and Research Members

- 14 approved, publicly available Implementation Specifications

- 30+ Candidate Specifications in work

- Significant interaction with ISO and many other standards organizations

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OGC Member Sampling

- Geospatial: AutoDesk, AEG-SICAD, Cadcorp, ESRI, e-spatial, Intergraph, Ionic, Laser-Scan, MapInfo, PCI Geomatics…

- H/W S/W: Sun Microsystems, Oracle

- Integrators / Engineering: BAE Systems, Lockheed Martin, GeoDecisions, Raytheon, Northrop Grumman, General Dynamics, Parsons Brinkerhoff, Mitre, Hansa Luftbild, Michael Baker…

- Government: US EPA, Census, Geological Survey, Army Corps, NASA; United Nations; Natural Resources Canada, Geosciences Australia; and others at the national, provincial, state and local levels.

- Academia/Research: 95 institutions worldwide

- Telecommunications: Kivera, Telecontar, Webraska…

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What Drives OGC Specification Development?

Sustainable Development

E-Government

Insurance/Re-Insurance

Earth Science

Logistics / Asset Management

Defense & Intelligence

Disaster / Emergency Management

Critical Infrastructure Protection

Research Validation

Mobile Enterprise

Regional Planning

Web Mapping

Location-Based Services

Sensor Webs

OGC Web Services

Modeling & Simulation

Multi-Source Operations

Decision Support

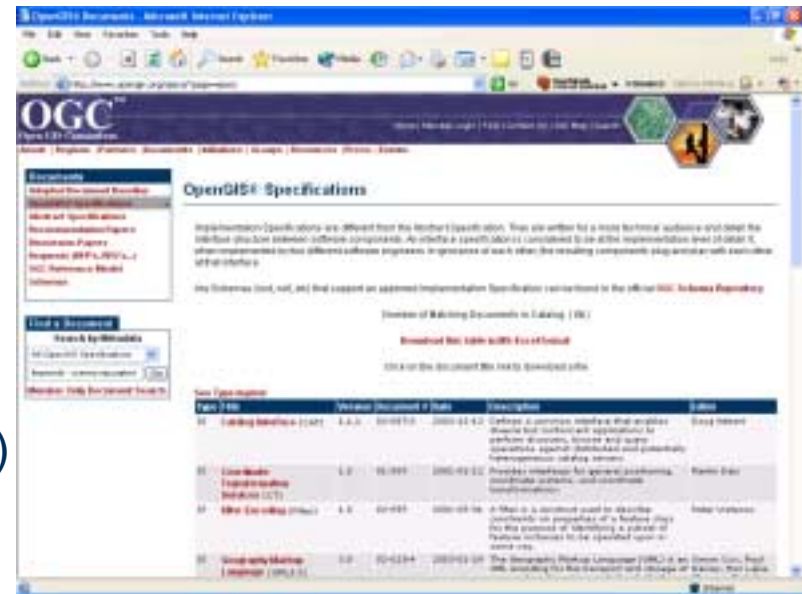OGC members are tackling major interoperability challenges of next-generation data / service sharing and collaboration….

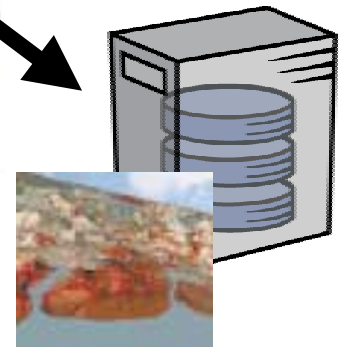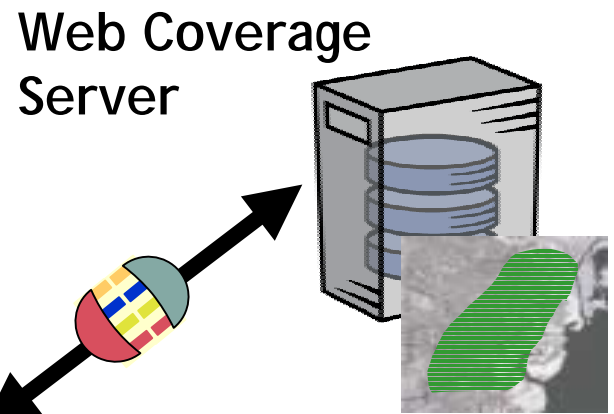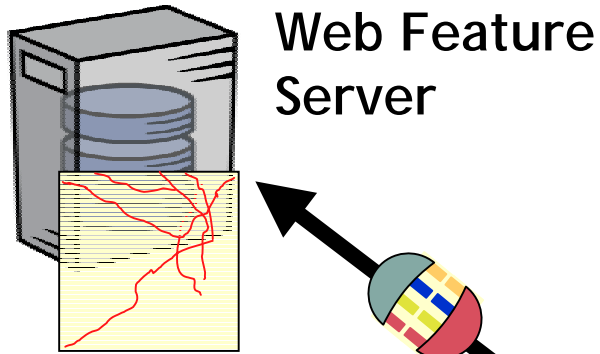Developing new specifications for geospatial interoperability and spatially enabling the systems and enterprises

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Approved OpenGIS® Specifications

- Tightly coupled:
  - Simple Feature Access – OLE, SQL, CORBA
  - Grid Coverages 1.0

www.opengeospatial.org (Documents)

- Focus on Web Services
  - Catalog 1.1.1
  - Coordinate Transformation 1.1
  - Web Map Service (WMS 1.1.1)
  - Web Feature Service (WFS 1.0)
  - Filter Encoding 1.0
  - Geography Markup Language 3.0 (GML)
  - Style Layer Descriptors 1.0
  - Web Coverage Service 1.0
  - Web Map Context 1.0
  - Open Location Service Specification Set 1.0

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Web Feature Server

Web Coverage Server

Web Map Server

Web Terrain Server

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OGC's Approach for Advancing Interoperability

- *Interoperability Program (IP)* – a global, innovative, hands-on prototyping and testing program designed to accelerate interface development and validation, 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.

Rapid Interface Development

Standards Setting

Market Adoption

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The OGC Interoperability Program

- A global, collaborative, hands-on engineering, prototyping and testing program started in 1998.

- Designed to rapidly deliver :
  - candidate specifications into the Specification Development Process
  - product implementations that use these candidate standards
  - demonstrated capability achieved through comprehensive testing, validation and public demonstrations

- Sponsors and Participants work together.
  - Sponsors provide requirements, use / business cases and funding
  - Participants work with sponsors to define and/or refine OGC interface specifications to solve a given interoperability problem

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OGC Impact on Geospatial Technologies

- Several hundred products are implementing OpenGIS® Specifications

  - See OGC "Registered Products" List under "Resources" at www.opengeospatial.org

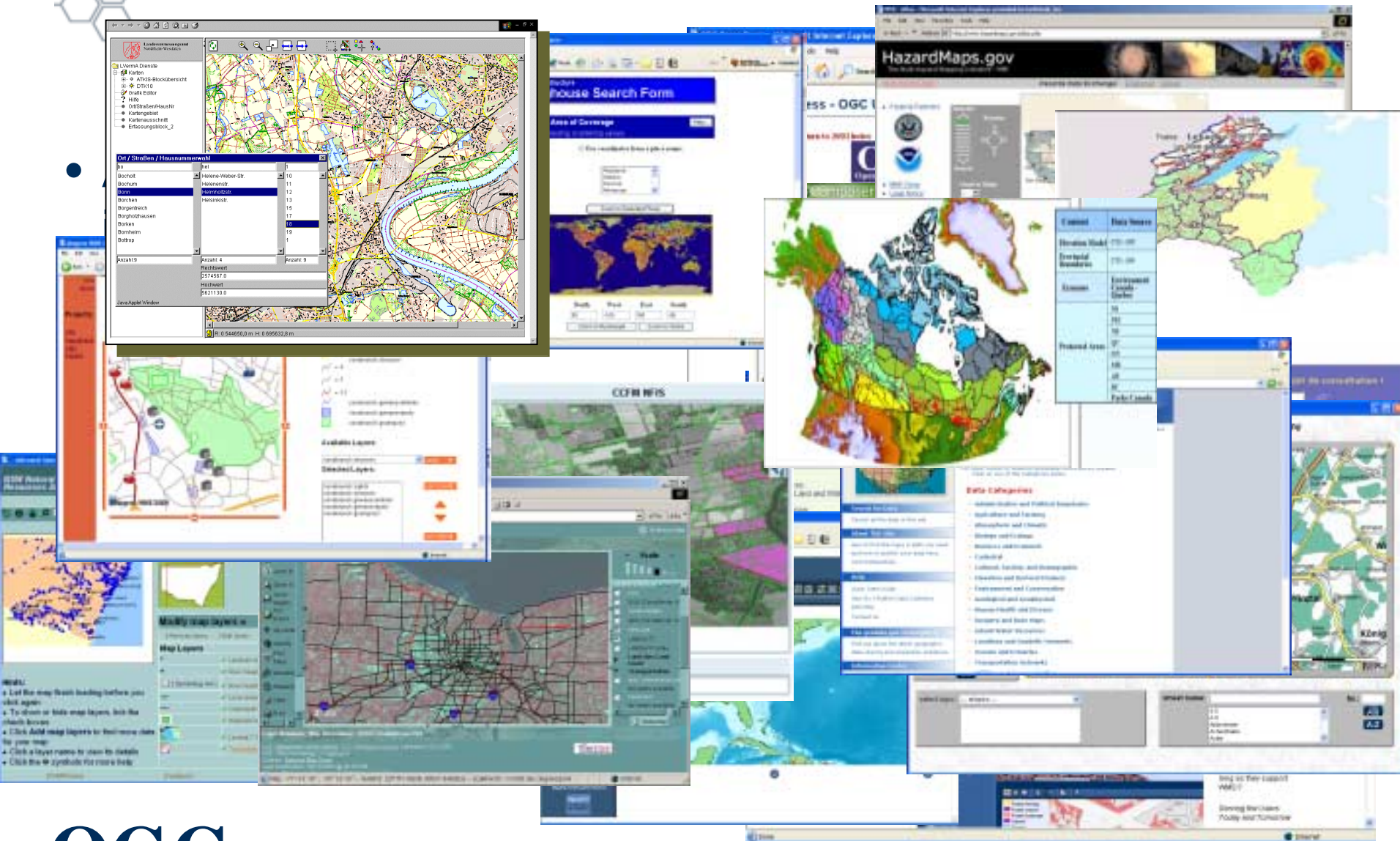- Formal Compliance certification is increasing in importance

OGC Resources / In Work Programs

- Many resources available from www.opengeospatial.org to speed understanding and adoption of OpenGIS® Specifications:
  - OGC Reference Model
  - OGC Cookbooks
  - OGC User (visit the OGC Press Room)

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Market / User Community Implementations

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Current OGC Member Focus Areas

- Sensor Web Enablement
- Geospatial Digital Rights Management
- Multi-source Integration
- Information Interoperability / Semantics
- CADD / Geospatial / 3D Integration
- Web-based Modeling and Simulation
- Enterprise Architecture
- Symbology and Style Management
- Service Chaining / Decision Support
- Open Location Services

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Summary

- OGC has a growing framework of standards to enable geospatial technologies and services to "plug and play"

- OGC members are tackling a number of fundamental problems related to achieving the goals of ubiquitous web-based simulation.

- We are delighted to be part of WebSIM 2004 partnership with OMG, SISO and Web3D, and look forward to advancing activities to achieve the WebSIM vision.

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A Question to Consider

The true test of anything we decide to do together from here on out is supported by the question:

"In one year – what's changed (for the better) as a result of WebSIM and its follow on actions?"