Geospatial data collection, management and dissemination issues: some tools facilitating their solutions

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Data Collection Trend
Data Explosion

Digital cameras
LIDAR
Feature extraction
Stereo Collection
Sensors
Data Management
Open Standard Database Technology – Why?

- Security
- Open
- Replication
- Reliability
- Scalability
- Enterprise access
- Performance
- Cost effective
- Potential
- Multi-user
The Importance of Industry Standards

- Geospatial Technology and IT must converge
  - Remove proprietary barriers
  - Migrate stovepipe solutions

- Industry must make an investment in standards
  - Spatial Data Infrastructure
  - Metadata
  - Data access and interoperability – GML
  - Data management and storage
  - Data distribution
  - Application interoperability
What Standards?

- It is Important to Recognize the benefits of OPEN Standards Instead of so-called “Defacto” Standards
- Why?
  - Open Standards serve a democratic purpose
  - They level the playing field
    - Large as well as small players are able to compete
  - The focus is on solving the real problems
    - Not force-fitting the solution to a data format or accepting mediocre solutions because you are locked into a “defacto” standard
- Who Benefits?
  - The user benefits with...
    - More choices
    - Better solutions
    - Higher value
What Standards?

- International Standards Bodies for the definition of standards
  - ISO/TC211
    - top-down approach, technical standards, data modeling, meta-data
  - OGC
    - Bottom-up consensus process, interoperability specifications & interfaces, test-bets, rapid prototyping
  - Especially, ISO & OGC working together

- Regional Standards Bodies – the enforcers
  - An example: CEN - European Committee for Standardization

- National Standards Bodies – the enforcers
  - An example: AdV and IMAGI in Germany
Interoperability Broadens Use of Geospatial Data

- Data interoperability
- Application interoperability
- Critical to information sharing and collaboration
Application Interoperability

- Becoming increasingly important as enterprises seek “best of class” solutions – they don’t come from a single vendor
- Critical to enable a global spatial data infrastructure

OGC – a driving force defining geospatial services

OGC Web Services – addressing the growing demands for data access
Interoperability Via Web Services

- Web Services offer an infrastructure for interoperability but… interoperability is not possible without agreement of communication standards
Dissemination issues

- Heterogeneous data holdings create the need for:
  - Multi source data access
  - Standards
  - Catalogues and metadata
Search for Geospatial Resources

**Content**
- Information Resource Type
- Topic Category

**Using search word(s):**
(Separate multiple keywords by spaces)

- Search NSDI Clearinghouse

**Time:**
- Do not use date range
- Before 2005
- Between 2005 and 2005

**Location**

Search for place name:

- Choose a region: World Atlas
- Placename:

Use Map Tools to define an Area of Interest:

- [Map Tools]

[SEARCH] [HELP]