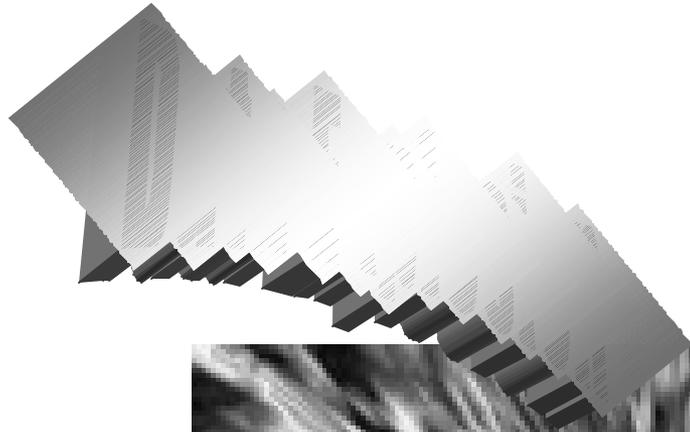


# Geospatial data collection, management and dissemination issues: some tools facilitating their solutions

Dr. Ignacio Guerrero



# Data Collection Trend



# Data Explosion

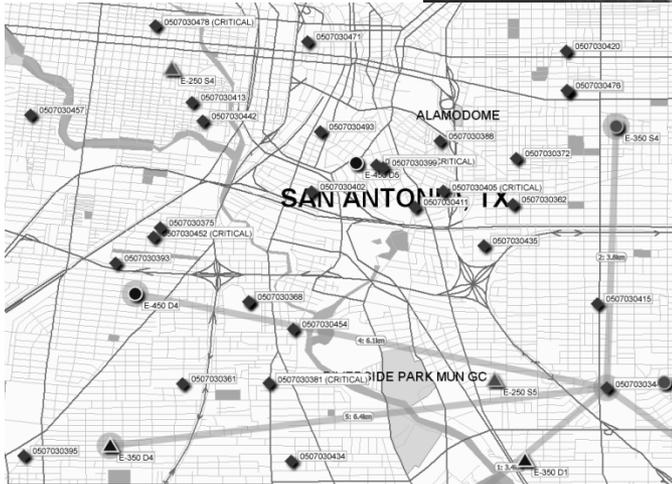
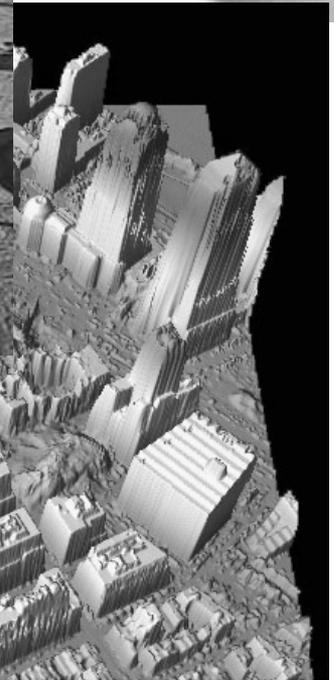
Digital cameras

LIDAR

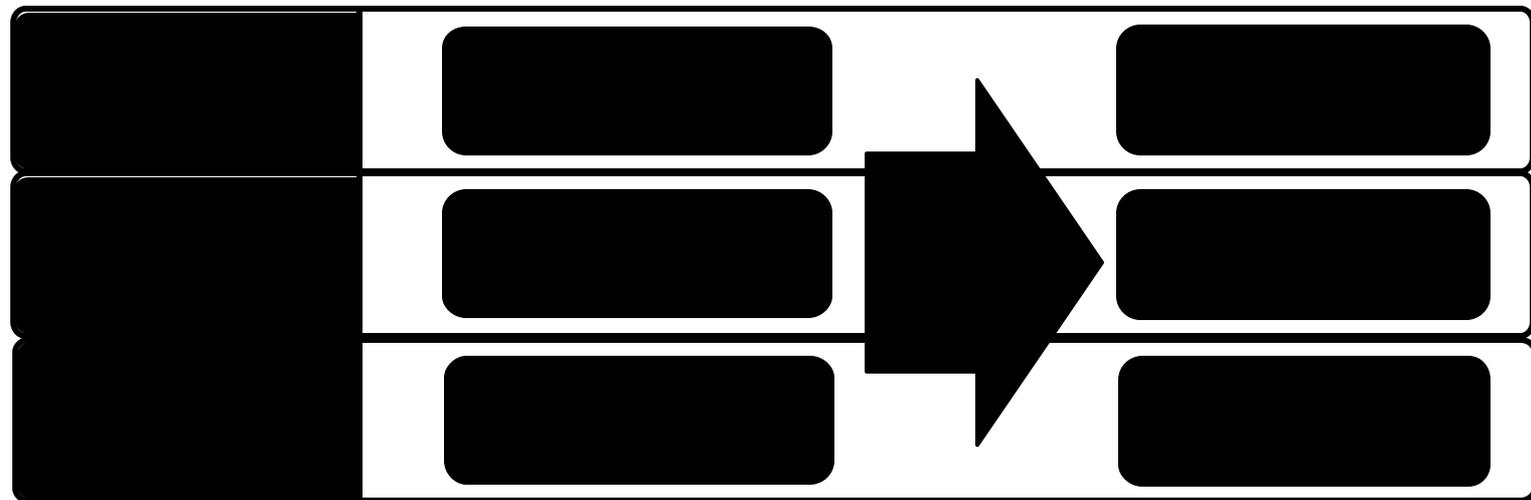
Feature extraction

Stereo Collection

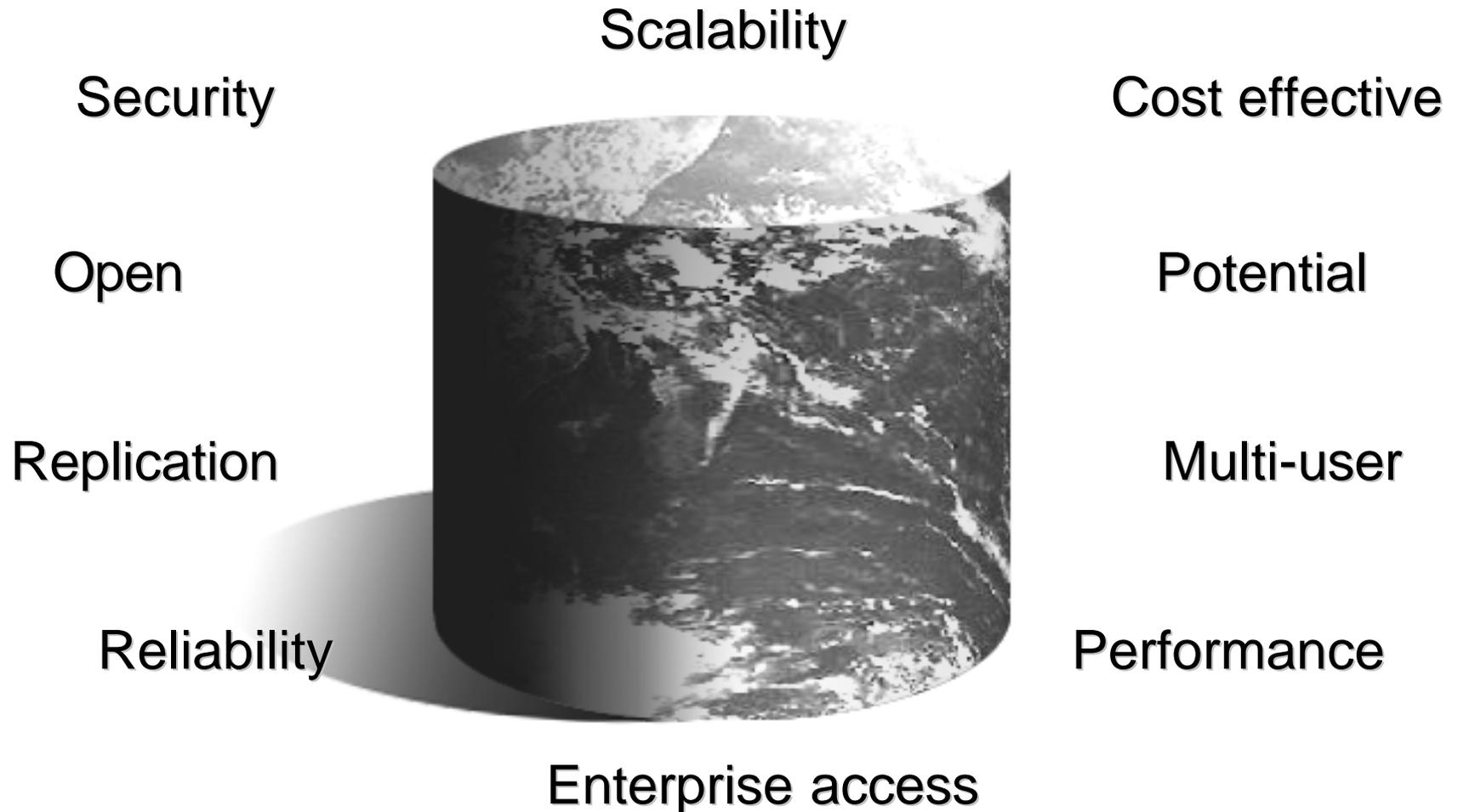
Sensors



# Data Management



# Open Standard Database Technology – Why?



# 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

**OPEN**

# What Standards?

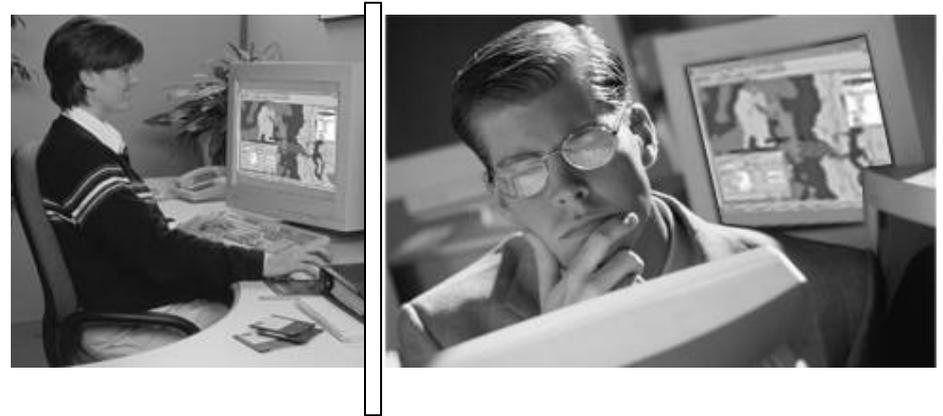


- International Standards Bodies for the definition of standards
  - ISO/TC211
    - top-down approach, technical standards, data modeling, meta-data
  - OGC
    - Bottom-up consensus process, interoperability specifications & interfaces, test-bets, rapid prototyping
  - Especially, ISO & OGC working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



## Search for Geospatial Resources

Search

Map Viewer

Predefined Maps

### Content

Select one or more of the following to narrow your search:

Information Resource Type

Topic Category

### Using search word(s):

(Separate multiple keywords by spaces)

Search NSDI Clearinghouse

### Time:

Do not use date range

Before

Between and

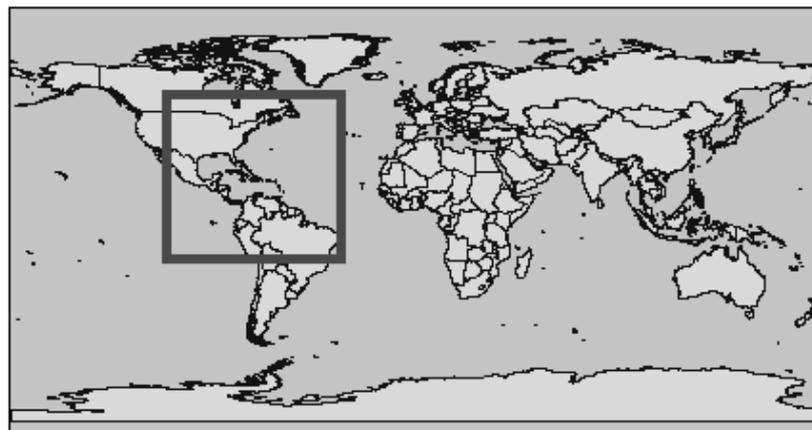
### Location

Search for place name:

Choose a region:

Placename:

Use Map Tools to define an Area of Interest:



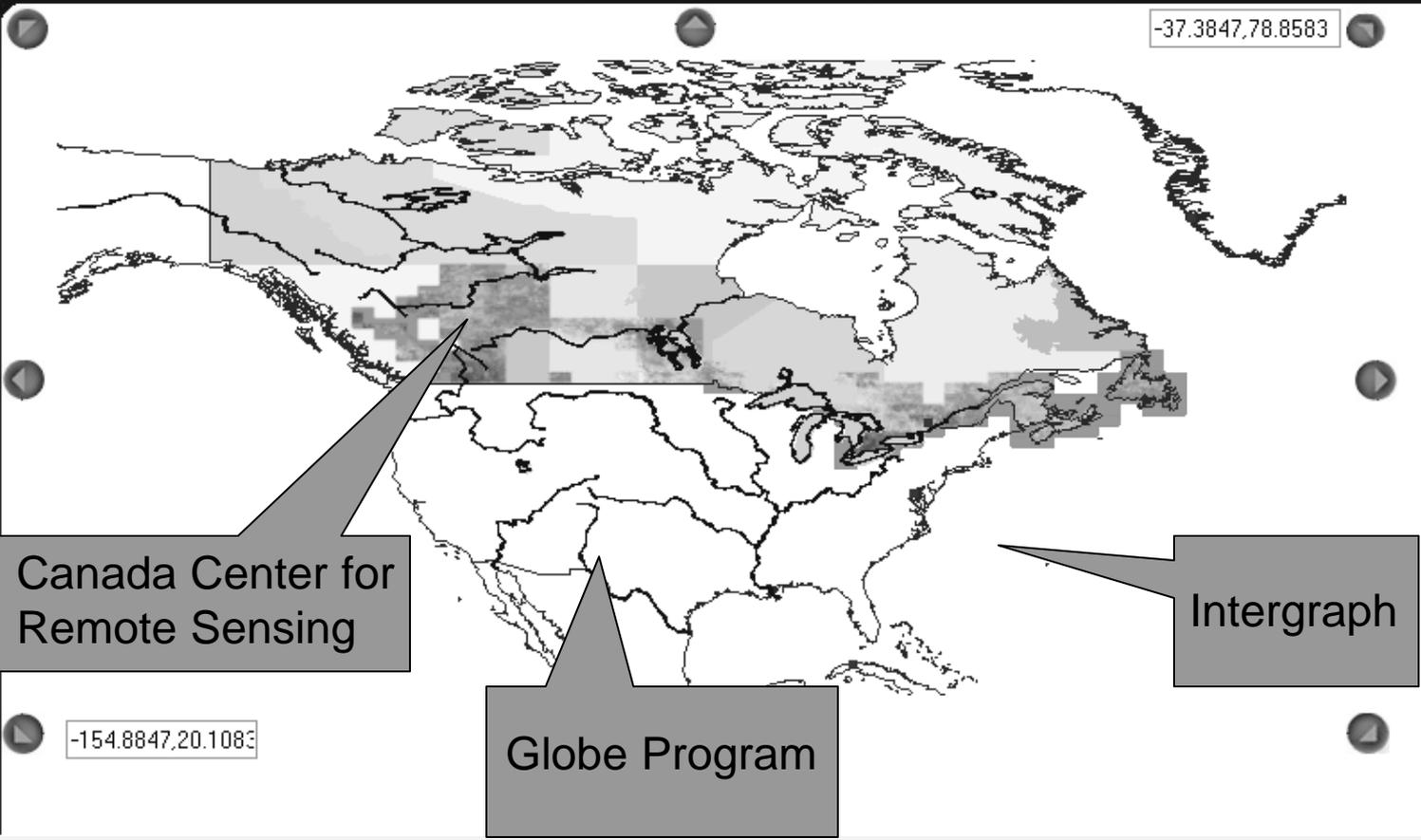
SEARCH

HELP

# OGC WMS Viewer

DISCOVERY CATALOG   EDIT SERVERS   EDIT LAYERS   EDIT CONTEXT

- LAYERS**   **LEGEND**
- THE GLOBE PROGRAM VISUALIZATION SERVER:**
    - RIVERS
  - INTERGRAPH WORLD MAP:**
    - CAPITALS
    - OCEAN LABEL
    - LAKES
    - COUNTRY
  - CANADA CENTRE FOR REMOTE SENSING WEB MAP SERVICE:**
    - FORESTRY 250K
    - PROVINCES AND TERRITORIES 7.5M





Coordinates: x:  y:  GO Select AOI Scale 1: 17890632 { -8.095 , 50.55 } FR | EN

