Geo Sensor networks: The future for spatial data infrastructures?

Sensing a Changing World: 20 November 2008

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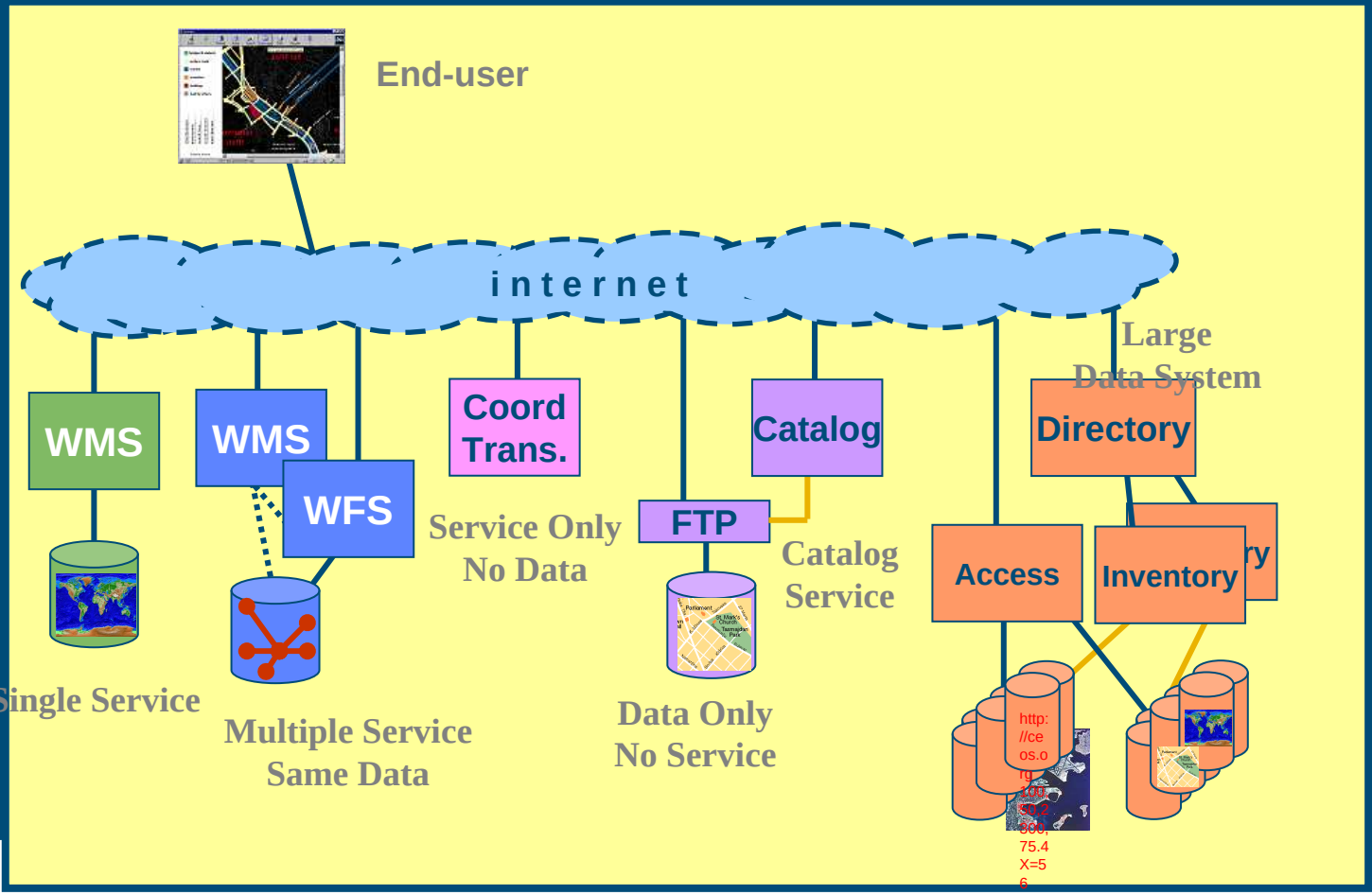
Introduction

- Spatial data Infrastructures (SDI)
- Geo sensor networks → SDI
- SDI → Geo sensor networks

Spatial data Infrastructures (SDI)

- Spatial Data Infrastructure (SDI): Integrated spatial data support for societal issues!
- Components: Data, Technology, Standards, Policy and People
- World development (e.g INSPIRE in EU)



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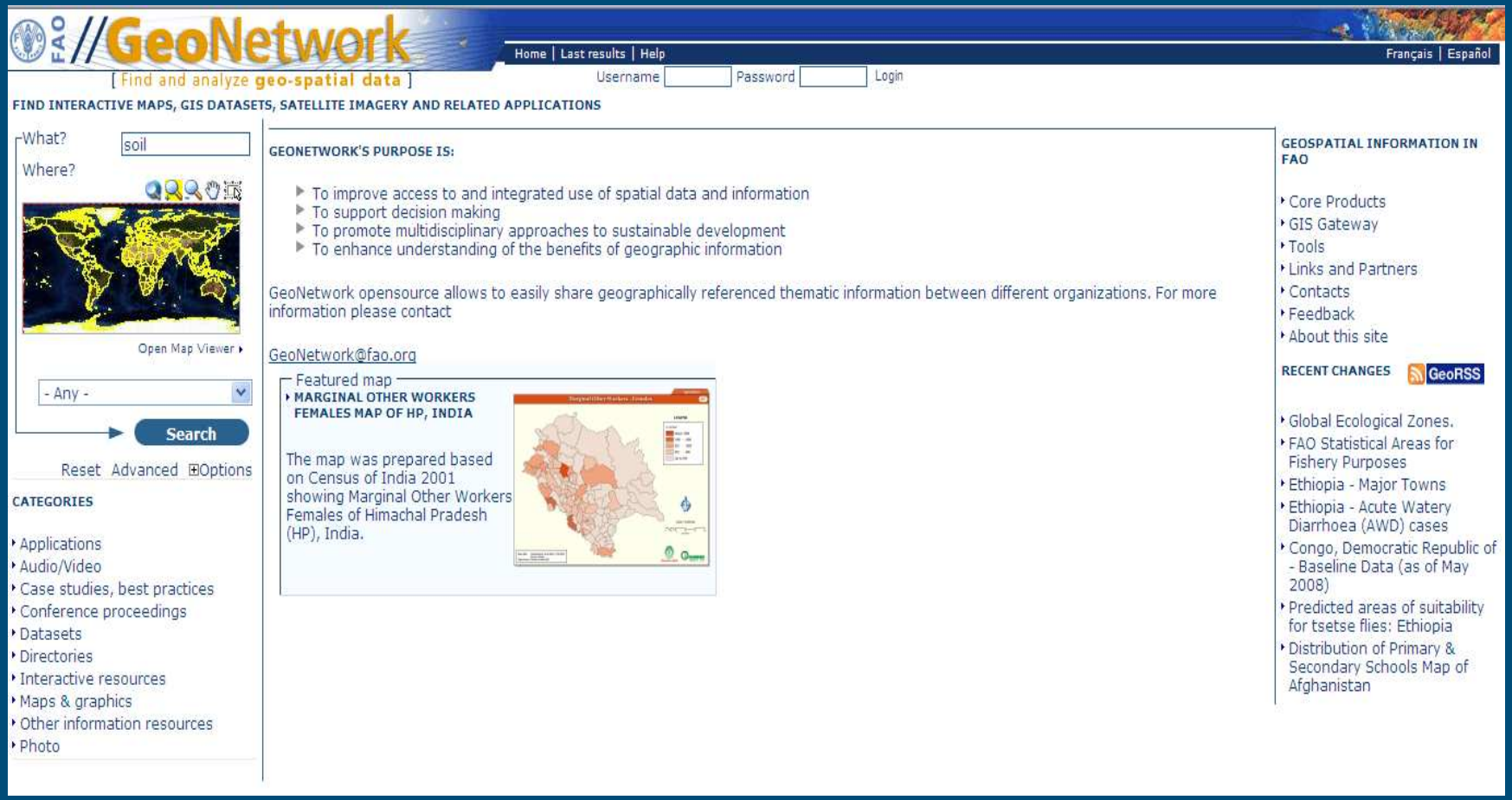
GEO Portal GEO

Example


FAO //GeoNetwork
[Find and analyze geo-spatial data]
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Username Password Login
FIND INTERACTIVE MAPS, GIS DATASETS, SATELLITE IMAGERY AND RELATED APPLICATIONS
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GEONETWORK'S PURPOSE IS:
To improve access to and integrated use of spatial data and information
To support decision making
To promote multidisciplinary approaches to sustainable development
To enhance understanding of the benefits of geographic information
GeoNetwork opensource allows to easily share geographically referenced thematic information between different organizations. For more information please contact
GeoNetwork@fao.org
Featured map
MARGINAL OTHER WORKERS FEMALES MAP OF HP, INDIA
The map was prepared based on Census of India 2001 showing Marginal Other Workers Females of Himachal Pradesh (HP), India.
GEOSPATIAL INFORMATION IN FAO
Core Products
GIS Gateway
Tools
Links and Partners
Contacts
Feedback
About this site
RECENT CHANGES
GeoRSS
Global Ecological Zones.
FAO Statistical Areas for Fishery Purposes
Ethiopia - Major Towns
Ethiopia - Acute Watery Diarrhoea (AWD) cases
Congo, Democratic Republic of - Baseline Data (as of May 2008)
Predicted areas of suitability for tsetse flies: Ethiopia
Distribution of Primary & Secondary Schools Map of Afghanistan

Components of SDI

Problems (Challenges) with current SDI's

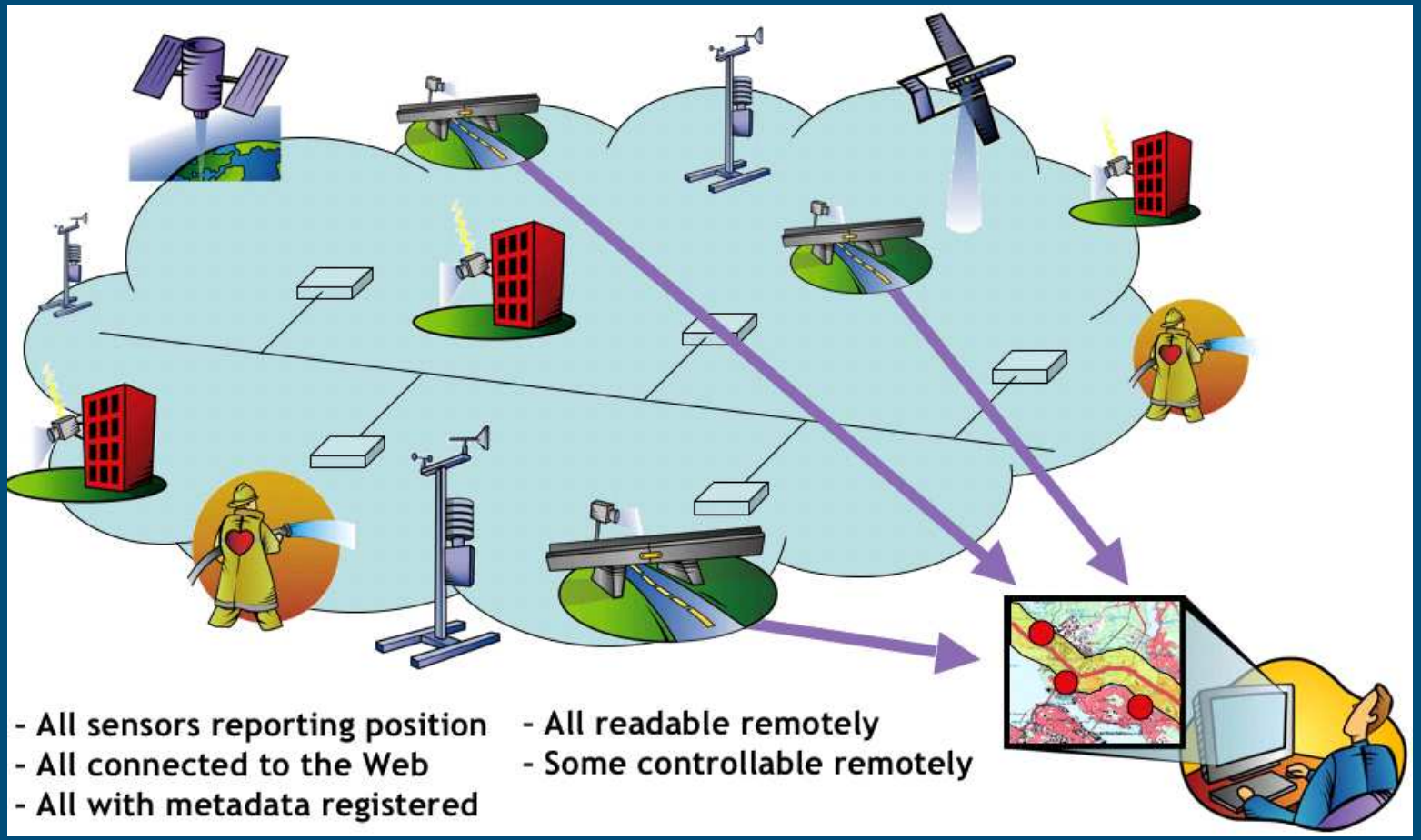
- Use of SDI:
  - Spatial data integration
  - Real support for spatial problems in society
  - Use restrictions (data policies)
- Data content:
  - Real time data
  - Link with Remote Sensing domain

Geo sensor networks → SDI

- Geo sensor networks can supplement SDI with:
  - Real time data
  - Link with remote sensing

- It is not easy, due to different cultures (SDI is NMA's dominated, Geo sensor networks are "jumping scientists")

Geo sensor network



SDI → Geo sensor networks

Spatial Data

- SDI
  - Core spatial datasets (authentic registrations)
  - Other datasets
- GSN
  - Identification of key aspects to be sensed (focus)

SDI → Geo sensor networks

Technology

- SDI
  - There is no unique SDI technology (mainstream IT technology)
- GSN
  - There is quite some unique GSN technology

SDI → Geo sensor networks

People

- SDI
  - Many different actors involved (researchers, companies, policy makers, mapping agencies, etc)
- GSN
  - Mainly researchers and developers.

SDI → Geo sensor networks

Standards

- SDI
  - Relative stable set of international standards (ISO, OGC)
- GSN
  - Many industry standards and SWE quite young.

SDI → Geo sensor networks

Policy

- SDI
  - Data access and use policy are defined by governments
  - Funding from government (it is an infrastructure)
- GSN
  - Funding from institutions (high initial investment and maintenance)
  - Development of a data access and use policy

SDI & GSN

A fertile marriage !

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