INSPIRE and Open Source GIS

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Why does Europe have an SDI Directive?

A Spatial Data Infrastructure comprises: technological, legal, and social framework.
Does everybody need an SOA?
Title of the presentation
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“Discovery Services” must implement these search criteria (INSPIRE, Art. 11.2):

a) keywords
b) classification of data sets
c) quality and validity of spatial data sets
d) degree of conformity with the Implementing Rules
e) geographical location
f) conditions on access and use of spatial data sets & services
g) public authorities responsible for management, maintenance and distribution of spatial data sets and services
Open Source GIS:

Real-world problems solved by compulsive problem-solvers
Open Source Geospatial has many origins

OSGeo projects originate from:

• Academic institutions
• Research consultancies
• “dot.org” non-profit corporations
• UN Food and Agriculture Department
• SMEs
• Large corporations
• Community cycling groups
OSGeo software stack

Metadata
Data services
Data display/manipulation
Data processing/analysis
Data storage
Data abstraction
Metadata
How to comply with INSPIRE in ten days?

Focus on metadata, build what you need now, share it as widely as possible, and stay close to the data.
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Metadata
- not most peoples' idea of fun.

OSGeo projects with close connections to metadata tend to have originated with public agencies.
DCLite4G – minimal INSPIRE-compliant metadata
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 the easy and secure sharing of geographically referenced thematic information between different organizations. For more information please contact: GeoNetwork@fao.org or send us Feedback/comments.

**Featured map**

- Sub-national administrative boundaries of Africa (1993).
- National and sub-national administrative boundaries of Africa.
- Administrative map of Africa closed with coastal line, contains water bodies, rivers and islands.

**Recent Additions**

- Hydrological basins in Africa
- Global limited yield for rain-fed grain maize
- Global agronomically attainable yield for 120-day rain-fed grain maize
- Global expected output for all rain-fed grain maize
- Global expected output for all rain-fed and irrigated grain maize

**Categories**

- Agriculture
- Base maps
- Climate
- Fisheries
- Forestry
- Livestock
- Population

Title of the presentation
GeoNetwork

• Metadata management and sharing
• OGC, ISO and other standard web publishing interfaces
• Originated in the UN FAO and in use across UN agencies.
• “Support for GeoNetwork is support for social collaboration”
Global map of irrigated areas

Abstract: Grid with percentage of area equipped for irrigation with a spatial resolution of 5 arc minutes or 0.083333 decimal degrees. This dataset is developed by the Land and Water Development Division of Food ... more...

Keywords: irrigation, irrigated areas, irrigated agriculture, World

Irrigation intensity in Sub-Saharan Africa

Abstract: As part of the World Bank’s review of its rural development strategy, the Bank sought the assistance of the Food and Agriculture Organization of the United Nations (FAO) in evaluating how farming ... more...

Keywords: IRRIGATION, Global Farming Systems Study, Sub-Saharan Africa, Africa

Irrigation intensity in East Asia Pacific

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Keywords: IRRIGATION, East Asia Pacific, Global Farming Systems Study, Asia

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“Internet GIS” designed to connect to web services
Direct client connection to catalogs and catalog services
Semi-automatic generation of metadata upcoming
Both are public agency sponsored projects
Title of the presentation
Metadata Challenges

- Translation and transformation
- Schema translation and maintenance
- Ontology mapping
- Following data through processes, workflows
- Refining searches through large data volumes
- Machine-exchangeable usage contracts
Returning the surplus, maximising ROI

Tools exactly tuned to existing projects and processes maintaining strong standards-compliance at the edges.

Active engagement in a community of best practise
Not just a role in standards design, but the power to ensure standards designs work.

Tendency towards open access to data?
UK's Office of Public Sector Information

- OPSI are moving to an open license model for PSI
- Metadata about data holdings in RDF
- Click-use license, no re-use constraints
- Work on machine-useable click-use licenses
- (GeoHub, Ordnance Survey Northern Ireland)
- Resource rather than service orientation
Futures: different ways in which, following an open process and looking to non-traditional “solutions” can maximise use of existing resources, improve and assure data quality, lower the perceived burden of “cost recovery” and get spatial information into new and wider use.
Futures: spatial search services
Learning from “Web 3.0”

Collectivised, socialised, spatialised search

Feedback-based association of data

Highly responsive client interfaces
Futures: citizen co-production
OpenStreetmap model
Openstreetmap's commercial applications

Local authorities, SMEs are contributing

Even some proprietary products support the OSM data format now
Draw Lines, Save to GeoServer

Using GeoServer and the WFS-T support in OpenLayers, draw on a map, save the results, reload the page and see the results still there!
Hold shift to turn on freehand mode while drawing.

Show WFS Transaction | Export GML | Export GeoRSS | Save | Refresh (removes all)
Futures: open annotation
Open and collaborative creation of geospatial ontology models (classification systems, rulesets)

Augmenting the use value of existing data

*Many eyes make better metadata...*
Futures: distribution mechanisms
Discover the Difference, Share the Load

Project developed with ESA for distribution of very large spatial data sets

BitTorrent p2p distribution mechanisms, sharing the burden of publishing and updating very large data sets with the data usage constituency
Futures: network-based licensing

Music and Media publishing model;
Network subscription includes collective license
A means of getting public information at very low cost into the hands of the public with immediate need for it.

Facilitating new kinds of search services.
Futures: data barter

Semi-formalising existing “under the table” data exchange. “A river network is worth 1/10 of a road network” Credit unions for the exchange of civic information. Chains of contracts stored in data broker libraries.
There is such a thing as *too* futureproof.
Thanks.... Questions?

More questions? :
info@osgeo.org

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