GeoNetwork & INSPIRE

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• SME (8 employees) in Netherlands and Spain
• Founder of GeoNetwork opensource project
• Provides services, training and hosting around GeoNetwork and related SDI software
GeoNetwork open source

• Catalogue for (spatial) data, services and maps
• Data Discovery, Management, Conversion, Harvesting, Validation
• Support for OGC, W3C, TC211 & INSPIRE standards
• http://geonetwork-opensource.org
GeoNetwork 3 released

- Total rewrite of User Interface (AngularJS/Bootstrap)
- Components moved to Spring MVC + hibernate
- Configurable metadata editing forms and views
- OpenLayers 3
- ISO19115-3
- Monitoring and reporting options
Create a

Create a Dataset

From Deegree22 WFS Fragments Philosopher Database Test Template

- Geosever WFS Fragments Country Boundaries Test Template
- HARVESTING TEMPLATE - THREDDS - UNIDATA DISCOVERY
- Template for Raster data in ISO19139
- Template for Vector data in ISO19139 (preferred!)
- Template for Vector data in ISO19139 (multilingual)

In ...

Sample group
GeoNetwork to set up INSPIRE services
Configure GeoNetwork

• Activate INSPIRE extension
• Configure CSW server
• Register dataset by uploading data and publish to GeoServer
• Configure GeoServer CSW harvest (iso19115)
• Configure WMS, WMTS, WFS, WCS or Atom service harvest (iso19119)
INSPiRE Directive configuration

**INSPIRE**
Enable INSPIRE CSW (ie. language support and INSPIRE GetCapabilities document) and INSPIRE indexing. INSPIRE themes thesaurus MUST be installed to properly index themes and annexes.

**INSPIRE search panel**
Enable search panel (Ext search only).

**Atom feed**
Disabled

**Schedule for feed retrieval**
0 0 0/24 ? * *

**Atom protocol value**
INSPIRE-ATOM
• Data Server supporting WM(T)S, WCS, WFS
• Embedded in GeoNetwork
• Publish data from GeoNetwork to GeoServer and/or harvest metadata from GeoServer
Configuring GeoServer

- Install INSPIRE and CSW extension
- Set properties of CSW
- Fill required form fields when creating workspaces, services and layers
Installing the INSPIRE extension

The INSPIRE extension is an official extension available at GeoServer download pages (starting with GeoServer 2.3.2).

1. Download the inspire zip release file from the download page of your version of GeoServer.
2. Extract the archive and copy the contents into the `<GEOSERVER_ROOT>/WEB-INF/lib` directory.

To verify that the extension was installed successfully, please see the next section on Using the INSPIRE extension.
Some related themes
Iso19139 to DCAT RDF

- Link with Open Data Community (import in CKAN)
- Export iso19139 from GeoNetwork (as DCAT)
- Import in Virtuoso (sparql)
- JRC has a working group on dcat-ap-geo
- Questions:
  - How to encode geometry
  - How to link to data (data encoding)
  - Persistent URI’s for geometry records
  - Map service metadata to DCAT-catalog?
Conformance testing (MIWP-5)

- Use cases for testing – ATS – ETS
  - https://github.com/inspire-eu-validation

- Some expect ETS could be based on Team Engine
  - https://github.com/opengeospatial/teamengine

- Alternative Testing Framework (SoapUI)
  - http://elfproject.eu/documentation/geotool/etf

GeoNetwork & Citizen Science

- GeoCat is part of an FP7 research project to improve data acquisition and reuse of data in citizen science; COBWEBproject.eu
- Observations from mobile phones are managed as sensor readings
- Exposed to GEOSS/INSPIRE as Sensor Observation Services
- Data is conflated with other datasets to validate the quality
Software in COBWEB

• GeoNetwork improved for SAML support and Sensor services.
• FieldtripOpen is a mobile framework to support dataquisition on phones
• GeoServer and 52North for OGC services
• (Virtuoso?) for SPARQL/RDF services
• Sixth is a sensor framework
• R for statistical analysis
Find a survey and start contributing

- (MEET) Underwater Experience
  "Mediterranean Experience of Ecotourism" Record the fish species that you encountered. Help us find what species of tree grow in and around your school.
  [Read more]

- Ysgol Bro Hyddgen Tree Survey Edit 2
  Help us find what species of tree grow in and around your school.
  [Read more]

- LLL Bird Sounds
  A test to Identify Birds within Coed Gwern
  [Read more]
Some related Software Packages
• Framework for INSPIRE services based on deegree
• Embedded ETL and Web GUI to define ETL
• Creates required metadata from web forms

https://github.com/CDS-INSPIRE/InSpider
• Spatial extension on Talend Open Studio
• GUI to define ETL and export as jar
stETL.org

- Streaming ETL
- Python scripting framework based on XSLT and GDAL/OGR
  - Shape -> OGR -> GML -> xslt -> INSPIRE GML
  - Streaming (chunks of xml)
- Originated at dutch cadaster and maintained by nlextract.nl community
GeoCat Bridge

- Extension for ArcGIS to publish data from ArcMap to Mapserver, Geoserver, Postgis and/or GeoNetwork
  - Converts and uploads data
  - Creates SLD from ArcMap styles
  - Converts metadata to INSPIRE profile
DAOBS

• INSPIRE Monitoring and Reporting tool
• Based on Banana (SOLR port of Kibana)
• Harvesting based on Apache Camel

https://github.com/titellus/daobs
Thank you