INSPIRE in practice: Experiences with INSPIRE data and services

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What’s INSPIRE?
European Commission Directive & regulations

Technical Guidance
19131 19110
19109 19103
OGC Simple Geometry
19111 19112
19113 19115
19118 19139

19142 19143
Web Services
OGC WPS W3C Atom
OGC CSW

19136 GeoTIFF
Data

19135

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What’s this presentation?

OGC / OS Plugfest (UKIAP)
Dec 2013/March 2014

Hackday, February 2014

23 companies; 14 ‘desktop’ software; 6 server software
4 View servers; 4 Download servers; 2+ INSPIRE datasets;
Summary

- Discovery Service (OGC CSW)
  - Informal test: service OK, clients don’t understand the metadata
- View Service (ISO 19128 Web Mapping Service)
  - Well supported by server software
  - In spite of this being a 2005 ISO standard, some client software still only supports OGC’s 2001 WMS 1.1
  - Also, service operators often prefer OGC’s tiled spec: WMTS
- Download Service (ISO 19142 Web Feature Service)
  - Reasonable support server side, but rarely implemented
  - BECAUSE only one client even claimed to support it
- Data encoding (ISO 19136 Geography Markup Language)
  - A simple subset is well supported, roughly as defined by OGC Simple Features Profile
  - In spite of this being a 2007 ISO standard, some software still only supports (a subset of) OGC’s 2002 GML 2.1
Discovery Service (OGC CSW)

- Informal trial during the OGC plugfest
- Two clients – plug-ins to desktop GIS
- Both “work fine” with csw.data.gov.uk

*But don’t work with the View Service URLs that they find*
View Service (ISO 19128 WMS, or OGC WMS 1.1 or WMTS)

- Client software from
  Autodesk, CADCorp, Intergraph, Envitia, Esri, OSGeo, Pyxis, QGIS
  Worked well with server software from
  Caris, Esri, Intergraph, MapServer, OSGeo
  *A couple were INSPIRE View Services*

- **BUT**
  - Some clients prefer OGC WMS 1.1
  - Many server operators prefer OGC WMTS
    (due to a more predictable server load?)
Download Service (ISO 19142 WFS)

- Client software from Esri and QGIS
  Worked with *simple data* returned by server software from Caris, OSGeo, Snowflake

*Even some software that claims INSPIRE compliance isn’t quite compliant*
Data encoding (ISO 19136 GML)

- Desktop & server software from Astun, Autodesk, CADCorp, Intergraph, Envitia, Esri, MapBox, MapMaker, OSGeo, Pyxis, QGIS, Safe Software, Snowflake
  - Worked well with *simple* data created by software from Safe Software & Snowflake
  - *Two datasets claimed INSPIRE compliance*
  - Most software can’t handle multiplicity > 1
  - *Therefore preference for OGC Simple Features level 0*
  - *See INSPIRE Maintenance Work Package 11, 12*

- Some software can’t handle coordinates in 3D
- Most software hardly uses the XSD
- No software used the GML ‘wrapper’ of grid data
OGC UK Interoperability Assessment Plugfest

- 9th December 2013 and 3rd March 2014
- Five scenarios: GML, WMS, WMTS, Cascading WMS, WFS
- Two sprints, with time to fix issues in between
- Eleven companies participated, using nine GIS clients: Arc, Astun, CadCorp, Helyx, Magellium, Intergraph, QGIS, Snowflake, Safe,
- We looked briefly at OGC Catalogue Services for the Web, and Web Coverage Services too
- OGC Engineering report & OS ‘Best Practices paper’ to come
  (This presentation is from a draft & my own notes on the day)
OS Insight Hackday

- Six recent / ‘under development’ products, including three that are in ISO 19136 GML
  - Two claiming INSPIRE compliance:
- Twelve organisations, seven pieces of software
  - Five of which could open the ISO GML
- OS Terrain® vector: easy
- OS Terrain® grid: no one used the GML; loaded ASCII grid
- OS MasterMap® Networks - Water layer: easy
  - Simplified INSPIRE Hydrography network specification
  - except some software can’t handle 3D coordinates
- OS VectorMap® Local 2.0: easy
- (we also looked at a couple of CSV products & a GeoTIFF)
- OS Terrain 50 and OS VectorMap District are open data
Links for further information

OGL: Open Government Licence

OGC UK Interoperability Assessment Plugfest:
http://www.opengeospatial.org/OSplugfest

http://www.ordnancesurvey.co.uk/blog/2013/12/sprint-1-of-the-uk-interoperability-assessment-plugfest/

http://www.snowflakesoftware.com/2013/12/plugfest/

Ordnance Survey’s OS Insight programme:

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Located: http://data.ordnancesurvey.co.uk/id/postcodeunit/SO160AS