Evolution of INSPIRE – interoperability solutions for e-government

INSPIRE Implementation State-of-Play 26/05/2015
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www.jrc.ec.europa.eu

Serving society
Stimulating innovation
Supporting legislation
Why?

Support technical evolution and use of INSPIRE data & services
Outline

1. ISA programme and actions

2. Geospatial interoperability solutions
   a. Developing ideas
   b. Putting them in practice
ISA Programme

EU Interoperability Solutions for European Public Administrations (ISA) Programme run by the EC for the EU Member States

- Facilitates efficient and effective cross-border electronic collaboration between European public administrations

- Contributes to the e-Government Action Plan 2011-2015 and the Digital Agenda for Europe by supporting multi-sector interoperable cross-border e-services and resources to help share and reuse them
Interoperability - What is it about?

If … then

- Open processes/data
- One-stop-shop
- Once-only principle
- Digital-by-default

Interconnection
Information Sharing
Spreading knowledge

Results in

- Decision making
- Business opportunities
- Informed citizens
European Union Location Framework

**Strategic framework**
based on EU survey

**Practical problems solved**
through pilot studies

**Benefits in multiple use cases**
- Policy and strategy alignment
- Return on investment
- e-Government integration
- Effective governance and partnerships
- Standardisation and interoperability

**Recommendations and guidance in 5 focus areas**

**Working together** with MS to address priorities

Delivering savings, growth and better services through “location-enabled government”
EULF Workshop

- Friday 1330-1500
- **Have your say & ‘Bring and Buy’**

**Ideas Exchange**
- Delivering e-government across sectors and borders
- EULF guidelines in Interoperability Frameworks
- Toolkit for location-enabled policies and services
A Reusable INSPIRE Reference Platform

ARRe³NA

Interoperability

Openness

Reuse

Collaboration

... sharing reusable components for INSPIRE implementation and interoperability in cross-border/cross-sector contexts.
Developments for INSPIRE and beyond

- VGI
- Cross-sector apps
- RDF & PID
- AAA
- Metadata
- Re3gistry +
- Validation
- Picrit
- SOS
- Metadata
- Re3gistry +
- Validation
- Picrit
- SOS
- Metadata
Evolution of the access control testbed
AAA study and software on JoinUp

- How best to manage access geospatial data and services?
- Common data usage/restriction terminology
- We want solutions to fit with e-government at the European level

https://joinup.ec.europa.eu/asset/are3na-aaa/home
Registry tools

V1.0 on JoinUp

- **Reuse** of Re3gistry tool in Slovakia
- Interested in promoting its reuse in **other sectors** and links to **similar tools**
- Recent study on registry interoperability will lead to more work on a **registry federation**

https://joinup.ec.europa.eu/software/re3gistry/home
The business need for Linked Data
...the LOGD ecosystem defined in the “Linked Open Government Data” study

The key stakeholders:

- Data providers
- Data consumers
- Data brokers
- Regulatory entities
Persistent URI Best Practices
10 Rules for Persistent URIs

1. Follow the pattern
   e.g. http://[domain]/[type]/[concept]/[reference]

2. Re-use existing identifiers
   e.g. http://education.data.gov.uk/id/school/123456

3. Link multiple representations
   e.g. http://data.example.org/doc/foo/bar.html
   e.g. http://data.example.org/doc/foo/bar.rdf

4. Implement 303 redirects for real-world objects
   e.g. http://www.example.com/id/alice_brown

5. Use a dedicated service
   i.e. independent of the data originator

Avoid stating ownership
   e.g. http://education.data.gov.uk/ministry/education/id/school/123456

Avoid version numbers
   e.g. http://education.data.gov.uk/doc/school/123456

Avoid using auto-increment
   e.g. http://education.data.gov.uk/id/school/123456
   e.g. http://education.data.gov.uk/id/school/123457

Avoid query strings
   e.g. http://education.data.gov.uk/doc/school2id/123456

Avoid file extensions
   http://education.data.gov.uk/doc/schools/123456.doc

Source:
DCAT-AP, Location RDF and PIDs in practice

Reuse of INSPIRE with linked/open data

Put draft guidelines into practice for

- Data (RDF)
- Governance around Persistent Identifiers
- What are the e-government use cases and common areas of interest?
GeoDCAT-AP

- Geospatial extension to DCAT application profile for data portals in Europe
  - *a metadata profile as an interchange format between EU Member States data portals*
- Developed through ISA
- Intended to provide a DCAT-AP compliant representation for the set of metadata elements included in
  - INSPIRE metadata
  - The core profile of ISO 19115
INSPIRE & GeoDCAT-AP: Why?

- Agree upon a common RDF representation
- an alternative representation of INSPIRE metadata
- Without a harmonised INSPIRE-to-RDF mapping, metadata interoperability is lost

- Facilitate cross-sector sharing of INSPIRE metadata
  - INSPIRE metadata harvested and published in cross-domain data portals at different levels
  - Development of a pan-EU Open Data Portal- single access point for the cross-border datasets discovery from EU data portals
  - DCAT-AP should be its metadata schema
GeoDCAT-AP: Current status

- First draft to be released in **early June** for public review (1 month)
- Final draft published in **July**

- All the **documentation** on GeoDCAT-AP is available on Joinup:

- An **XSLT** implementing the GeoDCAT-AP specification is publicly available:
  - [http://europa.eu/!VN33fk](http://europa.eu/!VN33fk)

- You are welcome to send **comments and feedback** to the GeoDCAT-AP WG mailing list:
  - [dcat_application_profile-geo@joinup.ec.europa.eu](mailto:dcat_application_profile-geo@joinup.ec.europa.eu)
INSPIRE Asset Constellation & Reuse

Semantic Assets
- INSPIRE GML Application Schemas
- INSPIRE ISO/XML Metadata Schema
- INSPIRE Code Lists

Software Assets
- INSPIRE Data RDF Vocabularies
- INSPIRE Metadata RDF Vocabulary
- INSPIRE ISO/XML Metadata Schema

Service Assets
- Re3gistry +

Organisational Assets
- ADMS
- CESAR

Legal Assets
- INSPIRE Directive + Regulations + IRs

Joinup

ARe3NA
Our guide to exploiting the INSPIRE infrastructure in 6 points:

4) INSPIRE components as a LEGO set
ARE3NA Re3ference Platform

Support for outreach/promotion

Projects, examples and good practices

Interactive guidance and workflows for implementation and reuse
Tomorrow 14-15h: INSPIRE Lunchtime Talk
For more information
EULF http://ec.europa.eu/isa/actions/02-interoperability-architecture/2-13action_en.htm
ARE3NA http://ec.europa.eu/isa/actions/01-trusted-information-exchange/1-17action_en.htm

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