Geospatial metadata on the (Semantic) Web
Lessons learnt in GeoDCAT-AP

Joint EuroSDR & EuroGeographics Workshop on Geodata Discoverability

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What is GeoDCAT-AP

An alternative representation of geospatial metadata by using Semantic Web technologies

Geospatial extension to DCAT-AP – the *de facto* standard for metadata interchange across European data catalogues, based upon the W3C Data Catalog Vocabulary (DCAT)

Developed in 2015 by a working group involving experts and stakeholders from EU Member States, chartered by the EU ISA Programme (now Interoperable Europe)

Version 2 of GeoDCAT-AP released in 2020
Objectives

Define a **harmonised RDF transformation & representation of geospatial metadata**

Facilitate the **sharing of geospatial metadata** with general-purpose data catalogues

Facilitate **cross-platform discovery of and access to geospatial data**
Data discoverability

The Web

Data Catalogues

Geospatial Data Catalogues

increased visibility
Data discoverability

The Web

Data Catalogues

Geospatial Data Catalogues

More generic

More specific
Data discoverability

The Web

Data Catalogues

Geospatial Data Catalogues
Data discoverability

The Web

Data Catalogues

Geospatial Data Catalogues
Data discoverability

The Web

Data Catalogues

Geospatial Data Catalogues
Data discoverability

The Web

Data Catalogues

Geospatial Data Catalogues
XSLT & API

Provide a working example on how GeoDCAT-AP can be supported without changing the underlying infrastructure

Show how to enable standard HTTP functionalities in CSWs, as HTTP content negotiation

Show how to increase visibility on the Web for geospatial metadata, using standards as HTML+RDFa
Lessons learnt

*Lack of common practices on how to specify some geospatial information in RDF*

Some examples:
- Service / API-based data access
- Data quality, spatial / temporal reference systems, spatial / temporal resolution

This situation has improved since GeoDCAT-AP v1 (2015)

In particular **DCAT v2 (2020) fills almost all the gaps**

Other relevant work:
- W3C/OGC Spatial Data on the Web Best Practices (2017)
- GeoSPARQL 1.1 (draft)
Limited use of global & persistent identifiers in geospatial metadata

Some examples:
• Resource / file identifiers
• Keywords
• Spatial reference systems
• Use and access conditions
• Responsible parties

The use of global and persistent identifiers, as HTTP URIs, is beneficial to geospatial data themselves, and enables better integration with other data

The latest versions of the INSPIRE Technical Guidelines are a first step in this direction
Thank you
References

GeoDCAT-AP specification
https://semiceu.github.io/GeoDCAT-AP/releases/

GeoDCAT-AP XSLT & API
https://github.com/SEMICeu/iso-19139-to-dcat-ap

GeoDCAT-AP issue tracker:
https://github.com/SEMICeu/GeoDCAT-AP

GeoDCAT-AP API – demo:
http://geodcat-ap.semic.eu/api/