Interoperability between metadata standards
Towards a reference implementation for metadata catalogues

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Introduction

> How can data providers keep it simple to describe and publish their data,
> with the ‘once only’ principle in mind,
> reaching the widest possible audience, and
> being at the same time in line with all regulations applicable to their data domain?
Information?
Solutions?

> On short terms:
> Mappings, translations from one metadata profile into another
>  - In general, the mapping is uni-directional from the more specific niche metadata profile into the more basic / core metadata standard.
> Taking into account the loss of metadata elements by adding the core elements of the niche profile, translated into the language of the simple profile, in its storage format, ...
# AS IS: METADATA STANDARDS, SYSTEMS, PORTALS

<table>
<thead>
<tr>
<th>LEVEL:</th>
<th>Flanders</th>
<th>Belgian</th>
<th>European</th>
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</thead>
<tbody>
<tr>
<td>OPEN</td>
<td>Systems: <a href="https://ckan.org">CKAN</a>, <a href="https://www.datatank.be">THE DATATANK</a></td>
<td>Standards: <a href="https://www.w3.org/TR/dcat/">DCAT</a></td>
<td>Portals: <a href="https://data.vlaanderen.be">Open data in Vlaanderen</a>, <a href="https://ecSEL-data.eu">ECSEL Data Portal</a>, <a href="https://data.europa.eu/89h/data">EUROPEAN DATA PORTAL</a></td>
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Solutions?

- On **long** terms:
- The better solution would be to **reconsider**, possibly even **reshape** one (or both) standards, so that the differences which data providers encounter are converging on one another.
  - But therefore the standardisation organisations / regulatory bodies have to come together, each with the experts in its niche, and try to **gather shared insights on semantics and standardisation**.
  - To come to a **loosely coupled but harmonized strategy** on metadata standards & catalogues.
Flanders (Belgium)

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Initiatives?
How to solve the semantics in transcending the silos

- Comparative study to close the metadata gap between the Geographic and the General Open government data world
- Implement a pilot to prove the effectiveness, automation, ... of the proposed solution
- Sharing knowledge with other member states
- Gather feedback on the uptake and effectiveness of the implementation
- Continuation of the work in the pilot with other data domains (e.g. Archival information)
- A harmonized strategy on Metadata Catalogues and a reusable reference implementation
- Publish and promote a Best Practices paper
- Promote the results at meetings and partner events (e.g. INSPIRE/JRC, ISA², OGC, W3C, Semantic Web Conference, ...)

Overview study & pilots

Geographic data & services
- ISO/INSPIRE
- GeoNetwork
- Geopunt
- Data/Services

Open data
- DCAT
- CKAN/TDT
- CKAN
- Data

Documents
- EAD
- ISAD-AP
- (to be)
- (to be)
- Documents

Metadata standard

Metadata management system

Publication via Portal / Catalogue

Data itself

Scope Information Catalogue

Study + pilot 1

pilot 2
Results on the study between Geo & Open data domains

GeoNetwork

Metadata standard

ISO/INSPIRE
SDI-Flanders Best Practices
Profile: Geo MD “19XXX”
Export: ISO “19XXX” XML
Geopunt (Sitecore & MapApps)

Export: GeoDCAT-AP

Open data

DCAT-AP
Profile: Open MD “DCAT XML”
Export: DCAT-AP
CKAN (portaal)
Conclusion on bridging the gap

- The study proves the gap between metadata standards and systems can be reduced
  - To improve exchange,
  - Reduce & simplify maintenance,
  - Reach efficiency, consistency, …
  - And keep it as simple as possible for data providers in describing their data once only, while reaching the widest possible audience

- But to really close the gap, the semantic differences should be picked up to solve by the standardization bodies itself (W3C, OGC, JRC, ISA², ISO)
How Standards Proliferate:
(See: A/C chargers, character encodings, instant messaging, etc.)

Situation:
There are 14 competing standards.

14?! Ridiculous!
We need to develop one universal standard that covers everyone's use cases.

Yeah!

Soon:

Situation:
There are 15 competing standards.
Questions?

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