Alternative encodings and INSPIRE Good Practices

Challenges and possible way forward

65th MIG-T Meeting, 15-16 April 2021

https://github.com/INSPIRE-MIF/2017.2

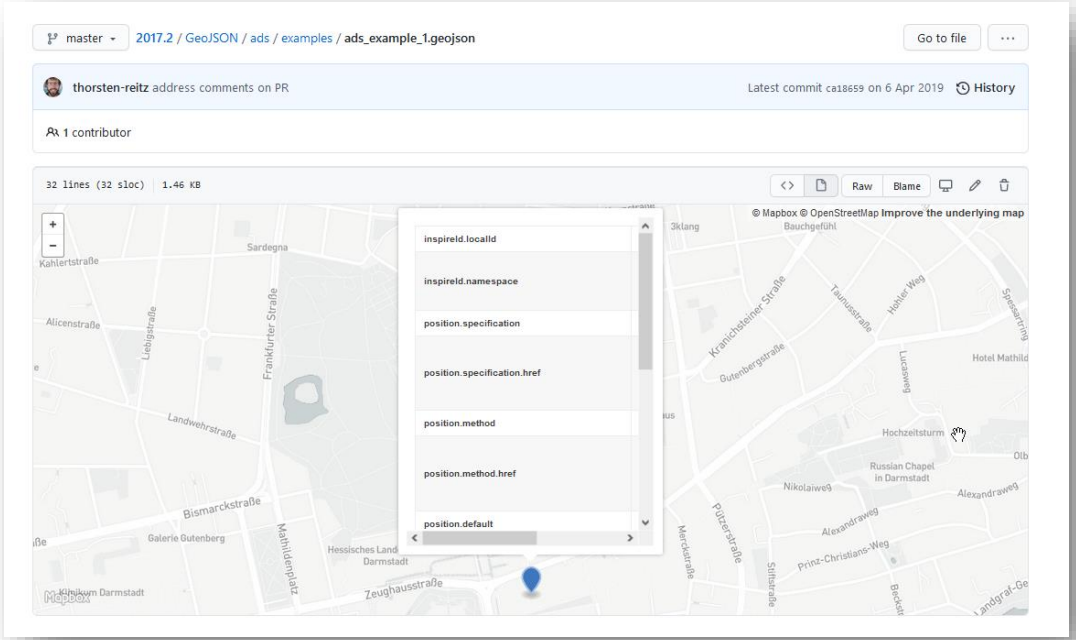
The context

Outputs of MIWP Action 2017.2

- Model transformation rules (encoding agnostic)
- GeoJSON-specific encoding rules (based on demand)
- Glossary
  - Default encoding
    - GML 3.3 together with the additional rules stated in [D2.7, Annex B].
  - Alternative encoding
    - meets all requirements from the INSPIRE IR on ISDSS
  - Additional encoding
    - does not have to meet all requirements from the IR on ISDSS

GeoJSON

- GeoJSON is web and developer friendly
- Preferred means for exposing data on the web
- Very well supported by server and client application



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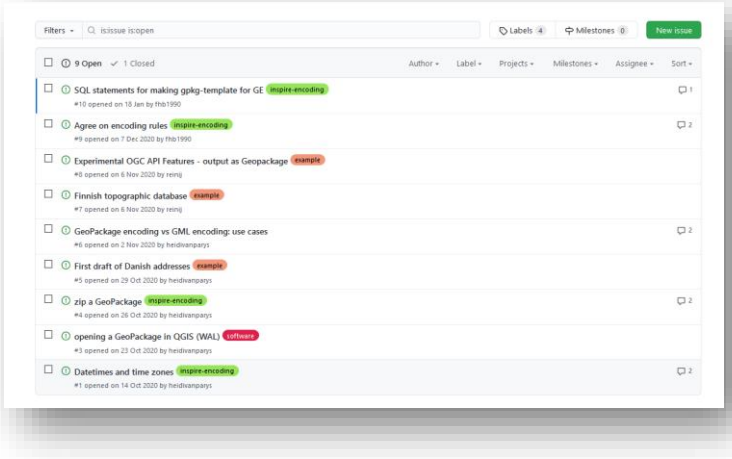
GeoPackage is a hot topic

- Findings of MIWP 2017.3 show excellent support for GPKG
- Many activities on the national level (DK, AT, ES, etc.)
  - Hackathons, prototyping & experimentation
- Environmental Noise Directive eReporting
  - Complex geometries; eReporting data model
- GitHub space for a discussion and a future Good practice on GeoPackage



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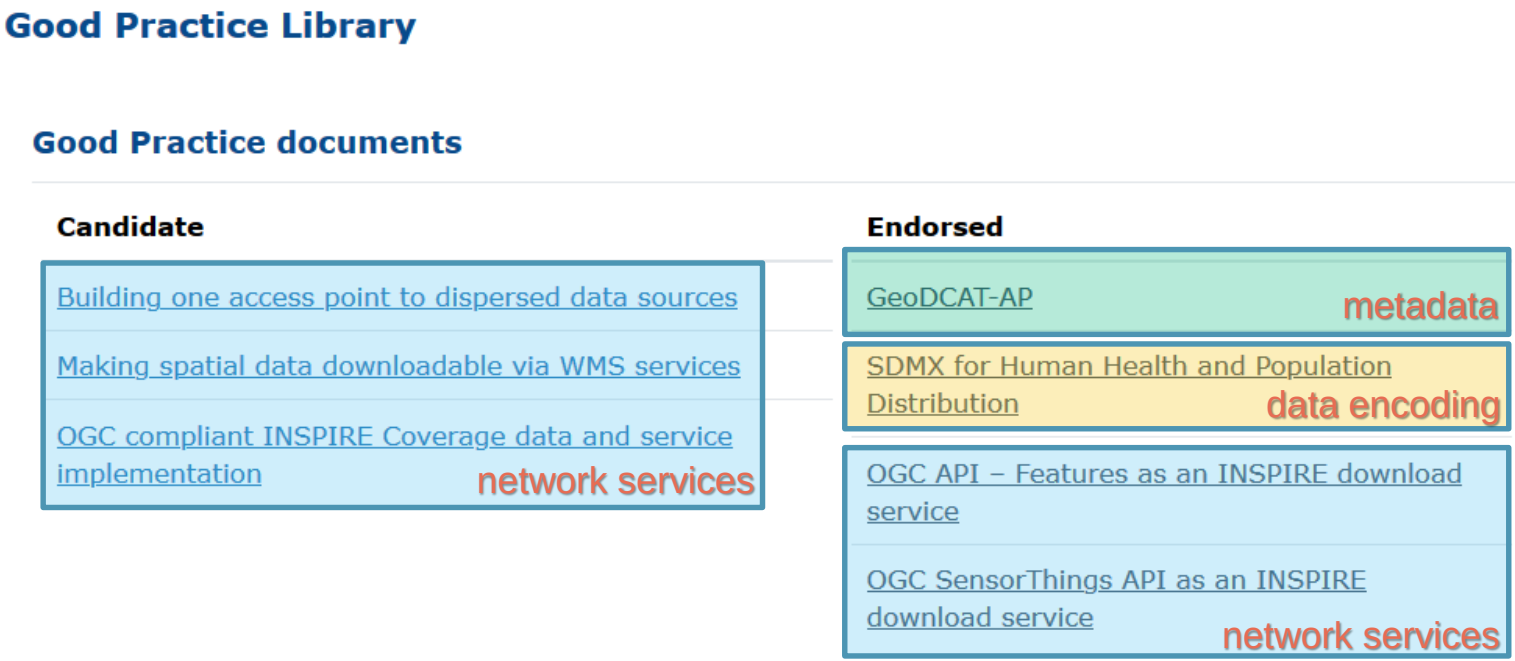
The context

- The INSPIRE Good practices procedure is now well established and confirmed in practice



The issues

- The existing model and encoding-specific rules (e.g. for GeoJSON) are defined on a high level only
- Implementation decisions by following the rules can be very different
- Having 34 good practices per encoding is not feasible
- It is not feasible to replicate all the ETS for the Reference validator for all encodings

Possible way forward

Step 1. Data encoding

Data should be encoded through the alternative encoding (e.g. GPKG or GeoJSON) by following the provisions of the INSPIRE UML models and/or Application schemas. When encoding the data the following should be consulted:

1. Model transformation rules that are encoding-agnostic, and
2. Encoding-specific rules developed per each data encoding (e.g. for GeoJSON, GeoPackage, etc.)

Step 2. Describe the mapping to the default encoding

Once the data instances prepared in accordance with Step 1. are generated, mapping to the default INSPIRE encoding (XML) should be made available together with an example excerpt of a dataset on GitHub through at least one of the following means:

1. Executable transformation script, incl. software-specific approaches that can be replicated.
2. INSPIRE Matching tables. Ideally, this should be done on the level of physical/format level, e.g. through mapping of xpaths versus jsonpaths, e.g.:

GML	GeoJSON
Ad:Address/inspireId/localId	$.properties.inspireId_localId
Ad:Address/inspireId/namespace	$.properties.inspireId_namespace
...	...

Step 3. Data validation

Confirming the approach through the INSPIRE reference validator can be achieved through deriving and validating GML instances based on the mapping performed in Step 2. The GML instances and the test report from the INSPIRE reference validator (html) should be made available.

Thank you

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