Quo Vadis Geospatial Metadata?

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Assumption 1:

(Quality) Metadata *is* important
Status 10 years ago...
- Important obstacles related to use of geospatial data*

- Spatial data is often missing or incomplete
- The description of available spatial data is often incomplete
- Spatial datasets can often not be combined with other spatial datasets
- The system to find, access and use spatial data often function in isolation only and are not compatible which each other.
- Cultural, institutional, financial and legal barriers prevent or delay the sharing and re-use of existing data.

*Agreement of 97 % of participants public consultation 2004
Source: EEA INSPIRE Dashboard (2016)
Assumption 2:

Geospatial metadata (& search) is *broken*
Issues

- Prototype Portal
- IT / web trends
- Inconsistency in ISO / OGC Standards
Assumption 3:

Broken geospatial metadata (& search) is *hard to fix*
Work programme Update TG Metadata

Issues in Release A June 20th 2015

- MIWP-8 (J) Metadata for SDS (draft)
- MIWP-8 (D) Integrate metadata for interoperability into the Metadata TG (draft)
- MIWP-8 (I) Language neutral identifiers (draft)
- MIWP-8 (L) Unique Resource Identifier (draft)
- MIWP-8 (M) Coupled resources (draft)
- MIWP-8 (E-1) Integrate Theme specific metadata (draft)
- MIWP-8 (A) Conditions applying to access and use (draft)

Issues in Release B December 20th 2015

- MIWP-8 (C) Harmonized restrictions/licenses
- MIWP-8 (E-2) Integrate Theme specific metadata
- MIWP-8 (F) Relation to ISO19115-1:2014
- MIWP-8 (G) Conformance classes in registry
- MIWP-8 (H) Metadata for monitoring
- MIWP-8 (K) Add Abstract Test suite
Challenges

- Metadata and Discovery Services were the first INSPIRE deliverables
- Involvement of broader community
- Dependencies within INSPIRE architecture
- Dependencies on standardization bodies
- ...
„CSW 2.0.2 ISO AP 1.0“ uses outdated ISO schema which can lead to unvalid metadata…
Schema issue

- INSPIRE Discovery Service / Metadata → „CSW 2.0.2 ISO AP 1.0“
  - OGC published „apiso.xsd“ which is not fully compliant to ISO 19115/19119/19139
  - gmx:Anchor Element → substitute for CharacterString-Element
  - Reference to GML-Version 3.2.0
  - → Schemavalidation ist hard to implement!

- OGC Change Requests pending for 4-6 years!
Schema references (currently)

MD-Dokument

Namespaces
- gmd (www.isotc211.org/2005/gmd)
- srv (www.isotc211.org/2005/srv)
- gmx

Schemata (ISO 19139)
- 2005 (TC211)
- 2006 (20060504)
- 2007 (20070417)

GML-Version
- 3.2.0
- 3.2.1

Schema-Wrapper (OGC AP ISO)
- apiso.xsd
Schema references (improved)

Namespaces
- gmd
  (www.iso.org/21139/gmd)
- srv
  (www.iso.org/21139/srv)
- gmx

Schemata (ISO 19139)
- 2005 (TC211)
- 2006 (20060504)
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GML-Version
- 3.2.0
- 3.2.1

Schema-Wraper (OGC AP ISO)
- "apiso.xsd"
Standardization outlook

- ISO activities
  - ISO 19115-1:2014
  - ISO 19115-2:2009
  - 19115-3:2016
  - ISO 19119:2016
  - 19139-2:2012
  - ...

- OGC
  - CSW 3.0
  - AP ISO ?
Assumption 4:

Several options for the future – strategic decisions to be made
1. Conservative: Stick with legacy data models, encodings & web service
   - Secure investments in software & people
   - Feel unhappy with results

2. Evolution: Adapt new data models, encodings & web service
   - Invest in standardization, software & people
   - Write new TGs
   - does it improve the situation?

3. Revolution: pivot strategy and rethink metadata approach
   - Try new things, e.g. GeoDCAT
   - Risks: see #2

4. \[ (1. + 2.) | (1. + 3.) | (2. + 3.) | (1. + 2. + 3.) \]
Conclusion:

The work on Geospatial Metadata is not done – this is the time to start the discussion on future directions.
Thank you for listening!