INSPIRE geophysical data specification – technical workshop

Date: 8. 6. 2017 13:00 – 9. 6. 2017
Place: Big meeting room of the Czech Geological Survey
Klárov 3, 118 21 Praha 1

Thursday, 8.6. 2017, 13:00 – 17:00

List of participants:

Sőrés	László	sores.laszlo@mfgi.hu	MFGI
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Diviacco	Paolo	pdiviacco@inogs.it	OGS
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1. Welcome of participants (Dana Čápová - CGS)

2. Geophysics in INSPIRE (László Sőrés – MFGI)

General introduction to the INSPIRE geophysical data specification. INSPIRE data and application models. Inspire code list register and its access. INSPIRE Core and Extension specification UML diagrams. INSPIRE Core obligations explanation. Description data tables (attributes) examples for Core featureType GeophMeasurement. Description of Core layer graphical styles. Explanation of the Observation and Measurements (O&M) specification as a part of the INSPIRE extension. Explanation of the O&M key process: Sampling Feature -> Observation (Data acquisition, data processing, interpretation) -> Result/Resource (coverages – point, curve, surface, …). Examples of the INSPIRE extension attribute tables including O&M specification. List of main open issues of the INSPIRE geophysical data specification (xsd schema for extension v.3.0, dictionaries, support for 3D geological models, …).

3. Presentations of geophysical data, services and applications, INSPIRE integration state and proposal:

Dana Čápová, Roman Kujal (CGS) - presentation of the CGS geophysical and geological data sources and access to them. Different forms of geophysical information, digital data types and their proposed relationships to the INSPIRE model. Open issues and problems to solve to reach INSPIRE implementation. INSPIRE complex structure questions and uncertainties. Classification of CGS data - proposal of the GeophMeasurement featureType (examples). Standards and specifications used to describe data are mainly the O&M and the SensorML. Visualisation services are based on the type Result from O&M.

Paolo Diviacco (OGS) - OGS experience in web based geophysical data management (mainly marine seismic data). Main department objectives are following: support of the collaborative e-research; data, information and knowledge bases and tools developed to support the geophysical community. Examples of data and metadata consolidation. Geophysical data translation to databases and graphical data presentation. Description of the main data user web supporting process: web GIS search -> metadata -> extended metadata -> data preview -> use of data. Preview services are important part of the description datasets. Examples of the SNAP (Seismic database Network Access Point)

http://snap.ogs.trieste.it

- seismic lines web mapping and linked web based seismic data interactive viewing services (Mediterranean Sea, Antarctica) and appropriate metadata xml codes and web tables. Comparison of the worldwide SNAP and European INSPIRE metadata model. Mapping SNAP to INSPIRE has no contradictions due to the use of O&M. Description of metadata – ISO 19115 for discovery, O&M for related observation, SensorML for domain-specific parameters . O&M offers the possibility to link data and interactive web based data viewers directly from metadata.

http://www3.ogs.trieste.it/bgta/provapage.php?id_articolo=679

http://www3.ogs.trieste.it/bgta/pdf/bgta0078_DIVIACCO.pdf

Tjerk Heijboer (GEUS) – need to create geophysical data index. Example of shallow marine geophysics (MARTA), deep wells and seismic surveys (SAMBA), near-surface geophysics (GERDA) – available on EGDI portal.

László Sőrés (MFGI) – INSPIRE implementation state at the MFGI. Harvested INSPIRE metadata are validated between 92 and 100%. Except the INSPIRE Geoportal and Predefined Download services there are also other services at the MFGI. These are Open Search Utilities, the ALFA Thesaurus and the ALFA Utilities. Examples of all of them are presented. Workflow processes between native and online datasets on the source side and the services on the other side are presented. INSPIRE services with open source components Geonetwork, PostGIS, Geoserver and ALFA system (http://geonetwork.mfgi.hu/) explained in the diagram. Examples were presented to demonstrate how to access standard data provided by MFGI using the EGDI portal functionalties. Download services and INSPIRE Core attribute table presentation.

4. Discussion:

- *Differences between featureTypes Model and Result*
  These types are similar, main difference is that Result is generated by some data acquisition process, Model is a result of some modelling procedure.
- Access to geophysical extension xsd
  The INSPIRE extension schema xsd available at the INSPIRE web site is not the final version. Published UML chart is correct.

Friday, 9.6. 2017, 9:00 – 12:00

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Discussion:

Open issues of the CGS

Mapping data to the INSPIRE specification. Main problem is the narrow extent of the INSPIRE code lists even in the Core specification (for the Campaign featureType). Different examples of codes were discussed both particular and general codes. The INSPIRE Core code lists can be extended and have to be approved by the INSPIRE consortium (see video on http://inspire.ec.europa.eu/videos/make-inspire-work-you). For the extension of the code lists it would be useful to initiate a working group. Here is a link to an "alpha" version of the INSPIRE registry federation: http://inspire-regadmin.jrc.ec.europa.eu/ror/ - already published dictionaries will be included there.

INSPIRE model structure and its implementation in the CGS. Practical realization, especially the relationship between Core featureType Campaign and Extension featureType Model, were discussed and explained. Intermediate extension featureType Project has to be used for the mentioned particular example. Links should be made from a Campaign to a Project and simultaneously from a Model to the Project. Generally the best practice to create the INSPIRE structure is to develop processes to make appropriate tables from native databases and then use these tables directly for publication of INSPIRE data. Different methods can point to the same geometry > no duplication of polygons needed. Grouping of layers is up to each provider.

Live demo of the APLHA system of MFGI

Discussion about open data – different strategies in individual countries.

Conclusions

- Introduction to the INSPIRE geophysical data specification was presented.
- INSPIRE Core and Extension specification UML diagrams was explained.
- The Observation and Measurements (O&M) specification as a part of the INSPIRE extension was explained and discussed with examples.

- Relation between ISO19115, O&M and SensorML was explained and implementation examples of these standards were presented.
- Validated implementation of the INSPIRE geophysical data specification was presented.
- INSPIRE model structure and its implementation was discussed and best practices explained.
- Mapping geophysical data to the INSPIRE was discussed.
  For the extension of the code lists it would be useful to initiate a working group.