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Metadata Capture, Management and Publication towards INSPIRE - Putting European theory into German practice

DELPHI IMM GmbH
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- founded 1997
- premises in Potsdam
- business activities:
  - remote sensing production centre
  - geo-data management software
- staff
  - more than 14 colleagues for software development
  - more than 70 colleagues for tasks regarding remote sensing
- customers
  - public authorities
  - industry
What are the requirements?
requirements:
- search and detection of metadata
- standardized exchange of metadata
- standardized metadata elements (min. INSPIRE)
- minimum of quality

requirements:
- support with regard to typing and administration of metadata
- integration in daily work process
- more than minimum metadata elements (more than INSPIRE)
- support with regard to ensure the quality of metadata
- 'search and detection of metadata' is not a basic requirement
These requirements are supported by

§ **geoway** SOLUTIONS - basic tools

§ **geoway** INTERFACE - exchange of metadata (CS-W 2.0.2.)

§ **geoway** MANAGER - metadata collection from different sources and integration in one or more target-catalogues

§ **geoway** CATALOGUE - web metadata editor

§ **geoway** VALIDATOR - compliance check for metadata

§ **geoway** TRANSFORMER - OGC and ISO metadata translation

§ **geoway** SEARCH - ‘search and detection’ metadata client

§ **geoway** SOLUTIONS - web applications

§ **geoway** SDI.NODE - publish your metadata, combine the basic tools shown above
geoway INTERFACE

§ OGC standard of the CS-W Catalogue Services Specification 2.0.2 for the ISO application profile version 1.0 including
  § a CS-W metadata server based on ISO 19115 and ISO 19119 ~ ISO 19139
  § a CS-W client API for the server request
§ automatic validation of imported metadata, CS-W requests and responses of the server
§ additional implementation of core + common queryable properties
§ cascading CS-W sending metadata requests
Organization of time-triggered collection, selection, transformation and validation

geoway MANAGER

Source 1
IC
CS-W 2.0.0
AP ISO 0.9.3
Selection
Transformation
Validation

Source 2
IC
CS-W 2.0.2
AP ISO 1.0
Selection
Transformation
Validation

Source n
IC
CS-W 2.0.0
AP ISO 0.9.3
Transformation
Validation

Source 4
geoway catalogue

CS-W

CS-W Target 1

CS-W Target 2
time-triggered collection of metadata of different sources

possibility of a

selection of the incoming metadata (e.g. filtering by BoundingBox or a thematic word)

transformation of the incoming metadata (e.g. AP ISO 0.9.2 to AP ISO 1.0)

validation of the incoming metadata (e.g. compliance with INSPIRE)

time-triggered distribution to more than one target

best practice: www.geoway.de/sdi-node/
Web metadata editor aiming at the INSPIRE-compliant capture and management of metadata and services
**geoway CATALOGUE**

§ web application based on:

§ Open Source Technology

§ Java Runtime 1.6 ([http://java.com](http://java.com))

§ Servlet Container as:

  • Apache-tomcat ([http://tomcat.apache.org](http://tomcat.apache.org))
  • Jetty ([http://www.mortbay.org/jetty](http://www.mortbay.org/jetty))

§ requirements for the development:

§ Java Standard Editon 6 ([http://java.sun.com/javase/6/](http://java.sun.com/javase/6/))

§ Grails-1.1 ([http://grails.org](http://grails.org))
Highlights:

- User-specific administration and management of metadata within low hierarchies
- Generation of metadata groups and documents via freely selectable style sheets
- Import of metadata documents via WMS (e.g. excel-files) and via CS-W 2.0.2 interface
- Automatic validation of metadata against INSPIRE via geoway VALIDATOR and geoway TRANSFORMER
- Support of specific metadata profiles of further user communities (e.g. GDI-BE/BB) and implementation of web application across Europe
Java (1.6.) web application to validate and scan metadata documents ‘against’ a profile (e.g. ISO 19115/19119 core, INSPIRE)

- multilevel web-based testing
- display of test results and explicit problem report
- optional service to transform metadata between different formats
geoway SOLUTIONS

- Java web applications based on Open Source technology for the development of sustainable and individual spatial data infrastructures
- Harmonized functional setting of all basic software components and possible independent use of single software tools
- Software character and usability supported by software multilingualism
- Standard-compliance with OGC, ISO, INSPIRE
- High compatibility with existent IT-infrastructures
Best Practice: Web-Metadata Editor

§ on behalf of the GMES Community www.land.eu/gmes-metadata-editor/

§ on behalf of the GDI-BE/BB www.metadaten-serviceportal.de/promis-online/

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Best Practice: Metadata Validator

on behalf of the GDI-BE/BB

www.metadaten-serviceportal.de/xmltools/validator

www.geoway.de/validator/

Supported Schemas
- ISO 19115/19119
- INSPIRE
- GDI-BE/BB version 1.0
- GDI-BE/BB version 2.0

Remarks
- The metadata validation consists of three levels. First structural tests and then check if one or more specific level tests pass. If any of the tests fail, the entire process will be canceled and the document will be considered invalid.
- Keyword tests take place according to GEMET Thesaurus, etc.
- Metadata validation through zip files may take a long time.

Hinweise
- Die Metadaten-Validierung findet in 3 Stufen (strukturrelle bzw. konditionelle Tests) statt. Falls in einer Stufe Fehler auftreten, wird die Validierung der verbleibenden Stufen nicht mehr ausgeführt und das gesamte Dokument als nicht valide gekennzeichnet.
- Der deskriptiv-konsistente Test wird getrennt gegen das Themen-Lexikon des BONET GEMET Thesaurus in deutscher und englischer Sprache durchgeführt.
- Achtung! Die Metadaten-Validierung im Rahmen von zip-Dateien kann in Abhängigkeit von deren Größe sehr lange dauern!
Presentation tool: Search results with metainformation in BoundingBox

Research tool: Input of search parameter via free text, keywords and source catalogue

Management tool: Time-triggered collection of metadata from different Source - CS-Ws
Best Practice: SDI Portal

§ ...on behalf of the GMES Community: Land Monitoring Portal

www.land.eu/portal/
Thank you for your attention!

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