Using the latest ISO Standard for Geographic Information (ISO19115-1) for an INSPIRE Discovery Service

Use case in Wallonia Region
Implementation in GeoNetwork3

Francois Prunaye and Vincent Bombaerts
Metawal

In 2013, discussion about improving description of spatial resources

1) Create/Improve ISO19139 profile
2) Move to ISO19115-1
ISO 19115-1

published in April 2014

Geographic information — Metadata —
Part 1: Fundamentals

Information géographique — Métadonnées —
Partie 1: Principes de base
“I am confused by all these numbers!”

source: Ted Habermann
Implementation work
Available on github
Implementation contains the schemas XSDs for each standards
Each packages contains

XSDs
Multilingual schematron rules
Diagrams
Implementation contains also

How to migrate from/to ISO19139?
Implementation

Will be published on standards.iso.org
ISO19115-3 GeoNetwork plugin
The ISO19115-3 plugin

Supported in GeoNetwork 3+

All features supported by ISO19139 (search, view, edit, multilingual, validation)
<table>
<thead>
<tr>
<th>Standards available</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dublin Core - CSW</strong></td>
</tr>
<tr>
<td>Metadata records produced by CSW services.</td>
</tr>
<tr>
<td><strong>Dublin Core</strong></td>
</tr>
<tr>
<td>The Dublin Core metadata standard</td>
</tr>
<tr>
<td><strong>Geographic information - Methodology for feature cataloguing (ISO 19110:2005)</strong></td>
</tr>
<tr>
<td>ISO 19110 standard for describing Feature Types</td>
</tr>
<tr>
<td><strong>Geographic information - Metadata (ISO ISO19115-3)</strong></td>
</tr>
<tr>
<td>iso19115-3 metadata standard</td>
</tr>
<tr>
<td><strong>Geographic information - Metadata (ISO/TS 19139:2007)</strong></td>
</tr>
<tr>
<td>ISO19139 metadata standard</td>
</tr>
</tbody>
</table>
Identification info

- **Title**: Banque de Données des Conditions de navigation (BDCN)
- **Alternate title**: BDCN
- **Date Creation**: 01/01/1996
- **Date Publication**: 01/01/1996
- **Date Revision**: 01/01/2009

Identifier

- **Code**: # Ne pas remplir #
- **Codespace**: http://geoportail.wallonie.be/ressources/id/

Abstract

Rassemble les dispositions temporaires de navigation sur l’ensemble des voies navigables. Permet d’établir pour chaque voie la liste de ces dispositions toujours d’actualité. Le positionnement géographique des événements perturbateurs – voie, cumulée, rive, etc. – est essentiel pour l’usager.

N.B. :
- il s’agit de dérogations temporaires aux dispositions réglementaires, elles

Validation

Compliance to metadata standard (XML Schema):

- XSD Validation Error: 0 Error
- INSPIRE rules: 0/0

Règles de validation pour le standard ISO 19115-1:2014: 28/28
The ISO19115-3 plugin

Includes also DataQuality, Imagery, Feature catalogue sections

Translated in English & French
Published in metadata101

https://github.com/metadata101/iso19115-3

<metadata>
<title>Metadata 101</title>
<subject>A repository of metadata profiles</subject>
</metadata>

This website hosts metadata profiles developed for use in catalog systems. Metadata documents describe data. Metadata profiles are usually subsets of existing metadata standards developed by subject matter expert groups.

Examples of such metadata profiles are the set of XML schemas and Schematron rules that define the structure of a particular metadata file like Dublin Core, ISO19139 and others.
“The ISO standards are evolving”

Wallonia
Problem solved by the new standard
Identifying metadata records

A codespace is added to the metadata identifier for unambiguous identification.
“Have access to other representations of the metadata (other format and/or other content)”
Different types of resources

Metawal is also cataloging maps & apps.
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creation</td>
<td>November 2015</td>
<td></td>
</tr>
<tr>
<td>Last Review</td>
<td>11/26/20</td>
<td></td>
</tr>
<tr>
<td>Publication</td>
<td>12/01/20</td>
<td></td>
</tr>
<tr>
<td>Next Update</td>
<td>?/01/2015</td>
<td></td>
</tr>
</tbody>
</table>

Tracking life cycle

Date includes 13 new data types
Connecting other documentation

- Evaluation procedure
- Algorithm
- Standard spec.
- License
- Rendering (e.g. SLD, Lyr)
- Format spec.
- Constraints reference
- Feature catalog document
- Feature catalog metadata
- Source metadata
- Source
- Dataset / Resource
- Keyword thesaurus & ontology
- Application reference
- Alternate metadata
- Service
- Associated resource
- Metadata
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Connecting other documentation
Connecting other documentation

“A reference to documents where there is more information about the resource”

The citation now support:

● online resource
● graphics
Connecting rendering style

QML, SLD, LYG could be described in the metadata record.
Describing feature catalogue

By citation or embedded
Aggregates
Constraints

“Reference the licence or the law that applies”
Constraints

“Know who can access the data”
Constraints

“Know who can access the data”
More flexible contact & organisation
Data quality to evaluate usage

Ongoing work to populate quality information on the MedSea checkpoint project
Using ISO19115-3 for INSPIRE?
IR for INSPIRE

“Use ISO19115/119”

“Use of ISO 19139 in the context of a Catalogue Service”

= A conversion from ISO19115-3 to ISO19139 is required and rules need to be defined
TG for INSPIRE discovery service

Implementation Requirement 1 An INSPIRE Discovery Service shall implement the mandatory behaviour of a [CSW ISO AP] compliant service and the extensions as required by the INSPIRE Directive and its associated Regulations.

= ISO19115-3 record should be accessible using CSW
A virtual CSW for INSPIRE
The ISO19115-3 plugin / What’s next?

Improve associated resources management
Improve directory support (for licenses, graphics, ...)
Workflow eg. obsolete/superseded record
Use feature catalogue for data preview in the mapviewer
FGDC to ISO19115-3 conversion
Thanks to all contributors

- Wallonia region users; Vincent Bombaerts (SPW)
- **TC211**; Ted Habermann (hdfgroup)
- Tufts university
- GeoNetwork community; Simon Pigot (CSIRO), François Prunayre (titellus), Arnaud De Groof (Spacebel), Jose Garcia & Maria Arias de Reyna (GeoCat.BV)