

05

Next steps

Workshop practicalities

Audio

Click on 'connect audio' but please mute your microphones



Chat

You can also share your questions for the Q&A session via the chat



Recording

The workshop will be recorded

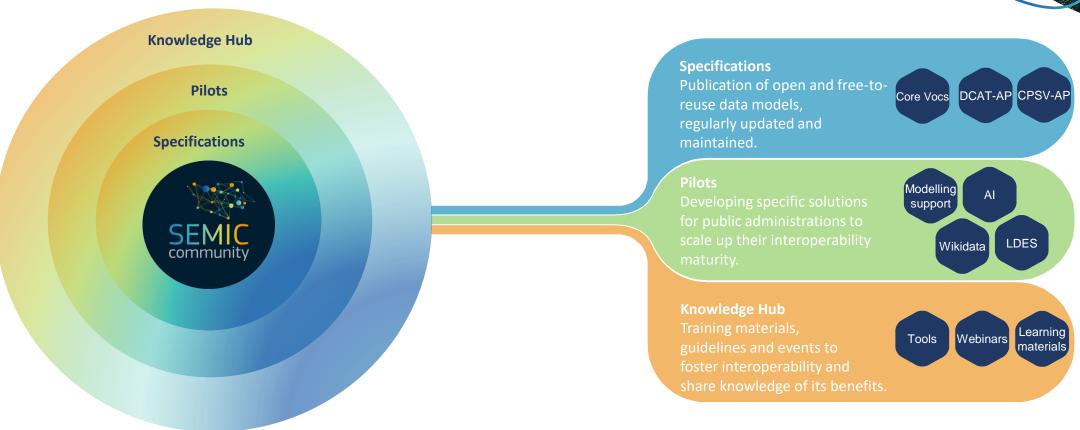




SEMIC

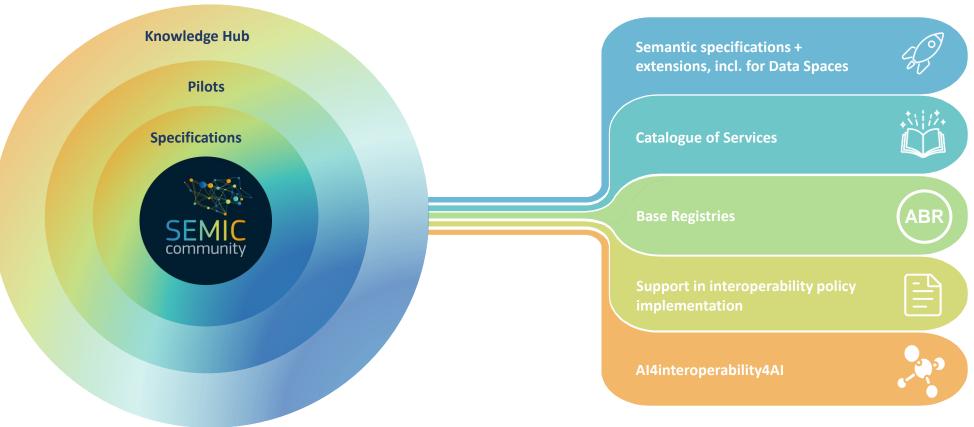
SEMIC's mission is to promote Semantic Interoperability amongst the EU Member States and deliver pragmatic support to help build an Interoperable Europe.





SEMIC Focus Areas









Specifications

SEMIC specifications enable interoperability:

- They make data transparent and available
- They support the **coherent** implementation of laws and policies
- They help implement cost efficiencies
- They help **digitalisation** and **harmonising** processes

Core Vocabularies

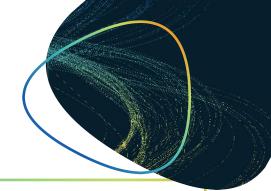
Core Vocabularies are a cornerstone element of semantic interoperability. They provide a standardised approach for describing key concepts such as locations, businesses, organisations and natural persons.

Application Profiles

Application Profiles make use of vocabularies for a detailed set of use cases to define mandatory relations, constraints and relationships.



SEMIC specifications



ADMS

DESCRIPTION

SCHEMA



A person's name(s), date and place of birth/death, identifier, addresses, citizenship, etc.

Vocabularies

CORE BUSINESS VOCABULARY

The legal name, address, identifier, company type, and activities of a legal entity.



The different ways of describing a location, e.g. via an address, a geographic name, or a geometry, in alignment with INSPIRE.



The requirements and evidence of a procedure or formal process.



The administrative information, hierarchy, identifiers, events and classification of a public organisation.



A public event, its time, audience, location, etc.

public event, it



Application Profiles

DCAT-AP FOR DATA PORTALS IN EUROPE

BRegDCAT-AP FOR BASE REGISTRIES GeoD CAT-AP FOR GEOSPATIAL DATASETS StatDCAT-AP FOR STATISTICAL DATASETS



Objectives of DCAT-AP



Supporting the discovery of/access to (open) data in a cross-border and cross-domain environment, by describing metadata to be harvested across a distributed network of portals.



In the form of an application profile of W3C DCAT, by

- expressing constraints and usages on DCAT properties and classes, and
- including additional properties and usages of controlled vocabularies

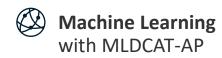
Domains of applications

Open data portals with an extension for statistics and geospatial data.





- NAPCORE-Mobility
- HealthDCAT-AP
- ...





Collaboration



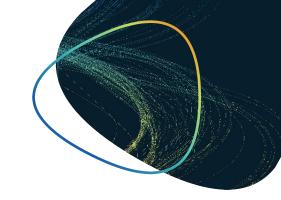


- The Joint Research Centre (JRC)
- DG ENV
- SEMIC (DG DIGIT)



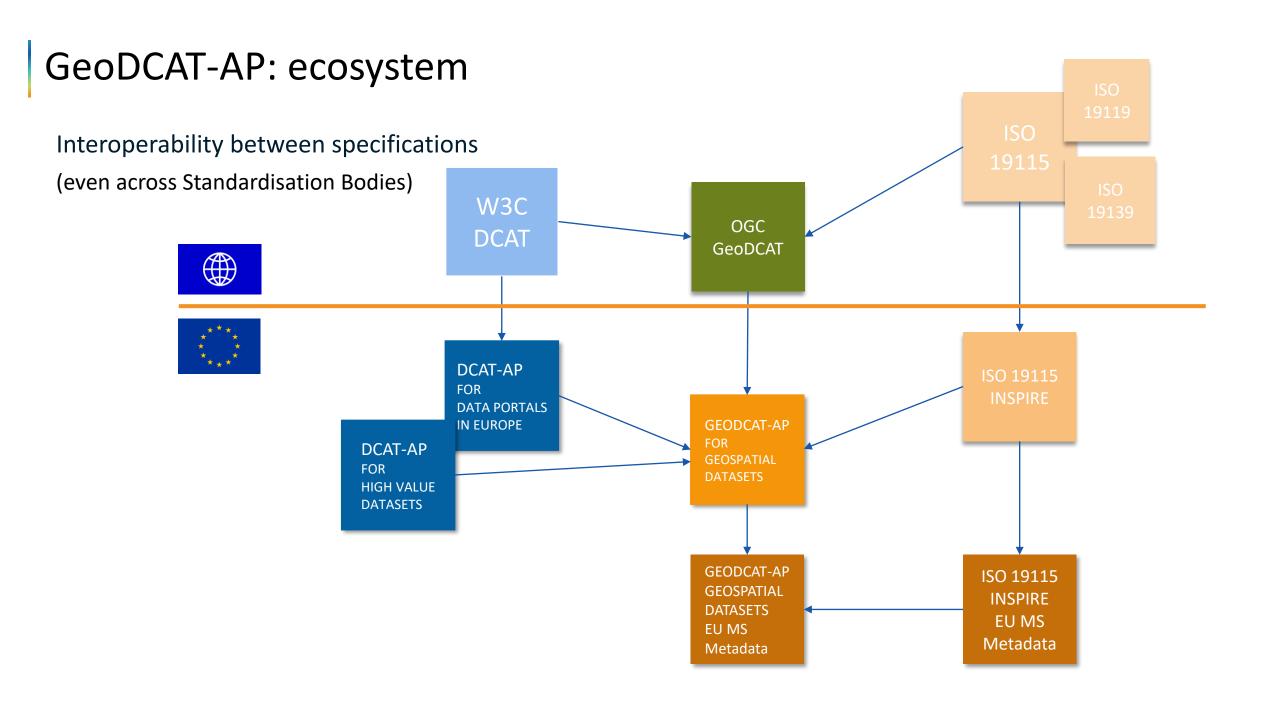








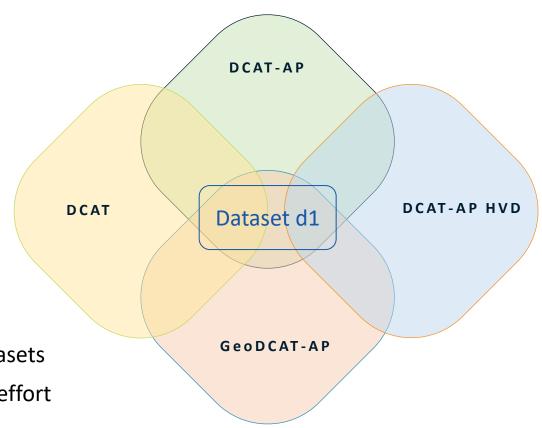
GeoDCAT-AP: DCAT-AP for geographical data



Multi-domain collaboration

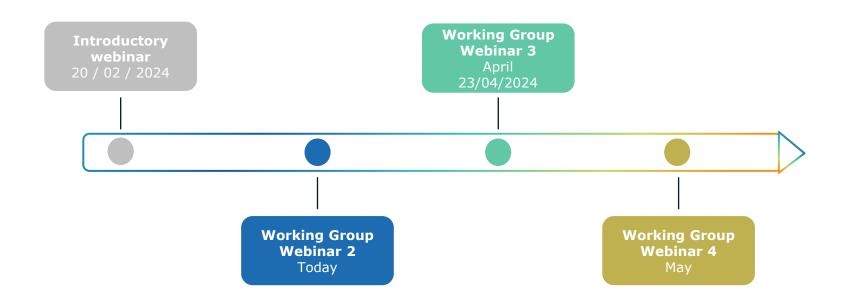
Interoperable Profiles

- Concise
 - o easiness to read, editorial effort
- Once-only effort for publishers of datasets resulting in acceptable implementation effort



GeoDCAT-AP 3.0.0 revision plan

GeoDCAT-AP Timeline



GeoDCAT-AP 3.0.0: revision plan

Revision on-going in https://github.com/SEMICeu/GeoDCAT-AP/issues

Working Group Webinar 2 - Concerning generic organisation & findability (today)

- Datasets, Distributions and their relationships
- Categories (alignment with DCAT-AP 3.0): keywords, categories, themes

Working Group Webinar 3 – specific geo-aspects (23/04/2024)

- Geospatial coverage & resolution
- Coordinate reference systems & spatial representation type

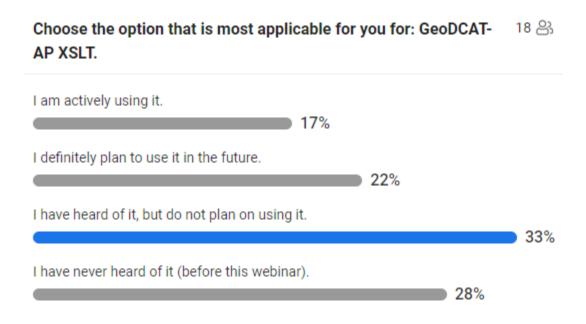
Working Group Webinar 4 – relationship with INSPIRE

GeoDCAT-AP related tools such as XSLT

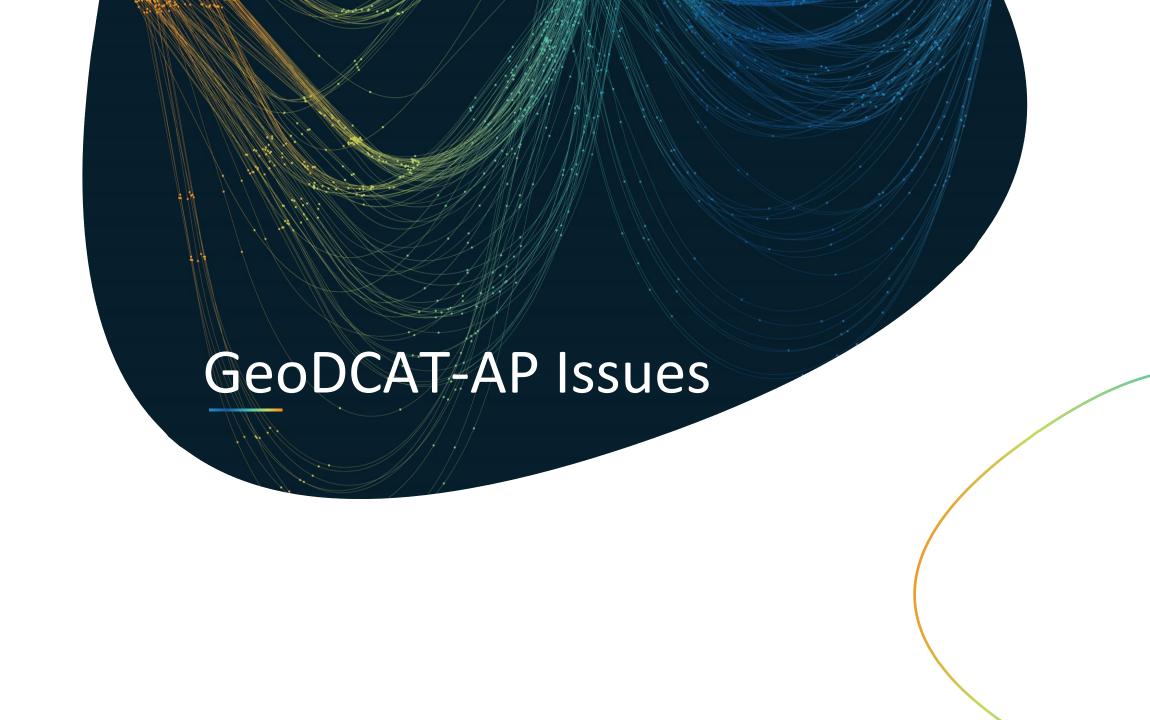
We are interested in which issues you are facing and we encourage you to post them as issues on the <u>GeoDCAT-AP</u> <u>GitHub repository</u>.

GeoDCAT-AP Supporting Tools

Poll results: GeoDCAT-AP XSLT



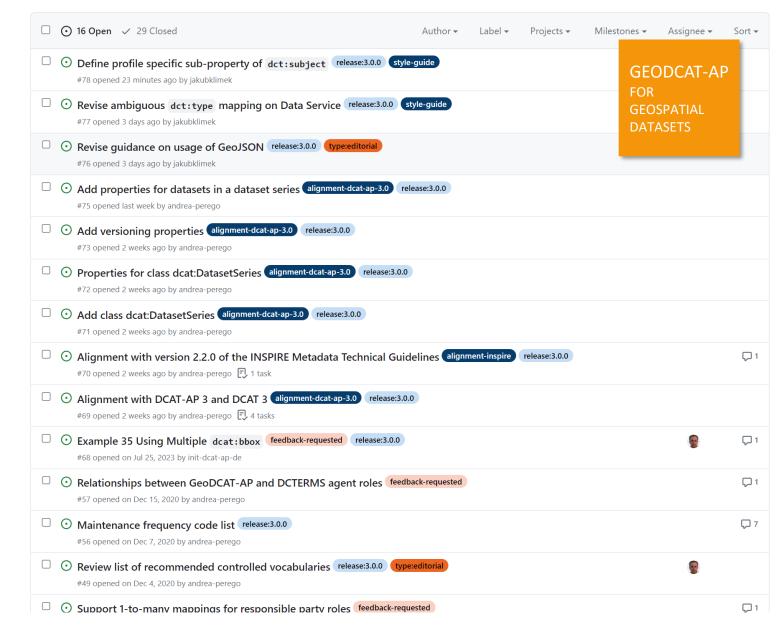
Other tools mostly not familiar to the community.



Currently 51 open issues

- 17x DCAT-AP 3.0 alignment
- 1x INSPIRE alignment
- 4x SEMIC Style Guide alignment
- 8x editorial
- 14x other

(7x) Feedback requested!





Issue types and their handling

1. Regular issues to be discussed and/or voted on () during webinars

webinar:2024-03-12

- Use the webinar:<webinar-date> label
 - 2024-03-12
 - 2024-04-23
 - 2024-05
- 2. Minor issues to be discussed and/or voted on () in GitHub
- webinar:2024-04-23
- status:resolution-proposed

- Listed in webinar slides
- To be resolved before the indicated webinar
- To be escalated to regular issues in case of bigger discussion

Datasets, Distributions and their relationships

Investigation of usage of Dataset series in INSPIRE community (#79)

Description

Need to determine how Dataset series is used in the INSPIRE community. Is it just a grouping of datasets, or does it actually use all properties defined for datasets and services?

Motivation

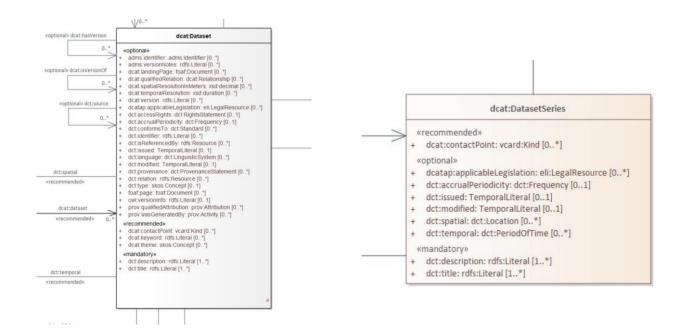
For mapping to DCAT-AP, it is important to know how the dataset series are actually being used.

If used just for grouping of datasets, similarly to DCAT-AP, there might be no need to map all Dataset properties also for Data Series in GeoDCAT-AP

Proposition

Collect Dataset Series usage evidence in #79.

Thanks @Kate-Lyndegaard and @GDIAnja!



DCAT-AP & INSPIRE - dataset series (#79)

DCAT & DCAT-AP

Dataset series:

A collection of datasets that are **published separately**, but share some characteristics that group them.

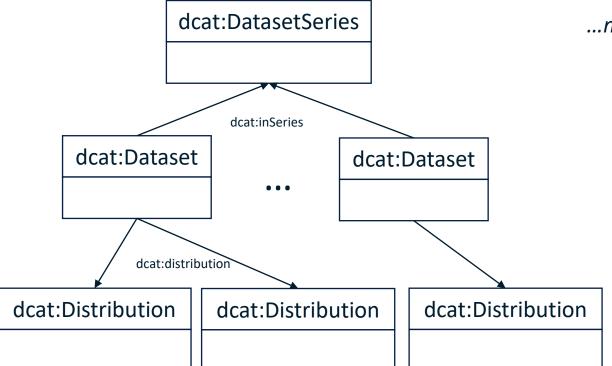
<u>INSPIRE</u>

'spatial data set series' means a collection of spatial data sets sharing the same product specification.

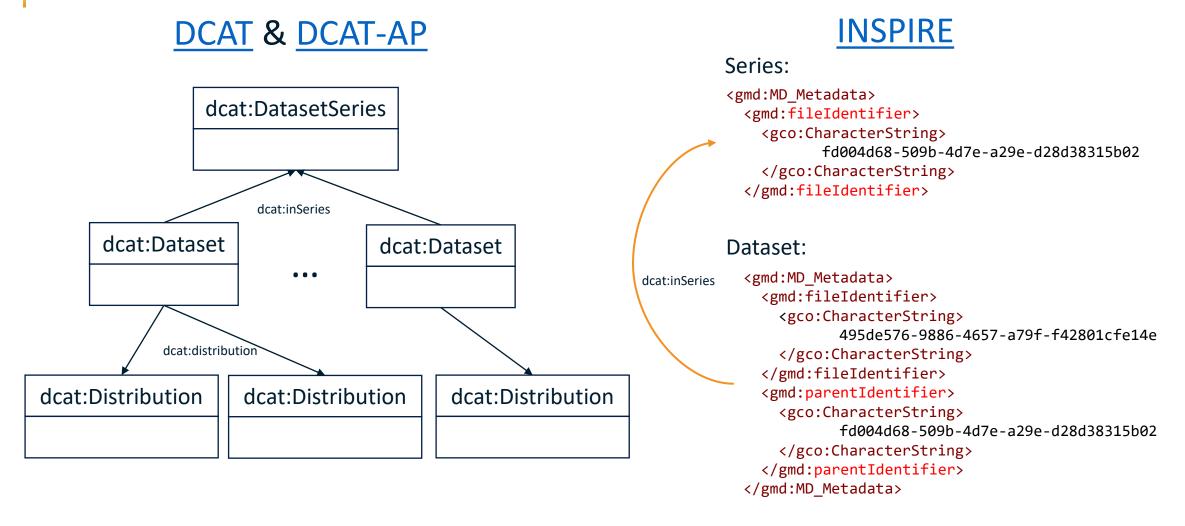
The same metadata:

...metadata for spatial data sets and spatial data set series...

Difference is in the ScopeCode tag:



DCAT-AP & INSPIRE - dataset series (#79)



Mapping INSPIRE data set series to dcat:DatasetSeries will be done according to the ScopeCode

Clarify meaning of DataService.language (#106)

Description

In GeoDCAT-AP 2.0.0, the usage note of *DataService.language* refers to the **whole instance of the class** on which it is used.

Current wording:

This property refers to a language supported by the Data Service.

Actual meaning?

the language of the parameters of the service and of the data structures (XML tags, CSV column headers, JSON key names, etc.) returned by that service.

Proposition

The language of the structure that can be returned by querying the endpointURL.

the language of the data is covered by *Dataset.language*.

- is DataService.language a duplicate?
- is it used for language of data in DataServices with no corresponding Datasets?
 - Is this frequent?

Related discussion on DataService.format in DCAT-AP 3.0 resulted in:

	<u>Media</u>		The structure that can be
<u>format</u>	Type or	0*	returned by querying the
	Extent		endpointURL.

Clarification of character encoding definition (#88)

Description

In GeoDCAT-AP 2.0.0, the usage note of *character encoding* refers to the **whole instance of the class** on which it is used.

Current wording for Catalogue record:

This property SHOULD be used to specify the character encoding of the Catalogue Record

Actual meaning for Catalogue record:

the textual metadata properties used on the Dataset linked using *foaf:primaryTopic*

Current wording for Distribution:

This property SHOULD be used to specify the character encoding of the Distribution

Actual meaning for Distribution:

the textual content of the downloadable file linked using dcat:downloadURL or findable using dcat:accessURL, or in the output of the data service linked using dcat:accessService

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the textual metadata properties used on the Dataset linked using *foaf:primaryTopic*

Current wording for Distribution:

This property SHOULD be used to specify the character encoding of the Distribution

Actual meaning for Distribution:

the textual content of the downloadable file linked using dcat:downloadURL or findable using dcat:accessURL, or in the output of the data service linked using dcat:accessService

Proposition

A character encoding used in the textual metadata describing titles, descriptions, etc. of the Catalogued Resource.

A character encoding used in the downloadable file or output of the data service represented by the Distribution.



Ambiguous mapping of dct:type on Data Service (issue #77)

Description

In GeoDCAT-AP 2.0.0 dct:type on Data Service is used in three different contexts.

- 1. <u>service category</u> with "Classification of spatial data services" code list
- 2. service type with "Spatial data service types" code list
- 3. type with "Resource types" code list. (this one also appears in Dataset)

Motivation

- Correct assignment of usage notes, labels and required code lists rather difficult, as well as validation
- Not in line with guidelines of the SEMIC Style Guide
 - Reuse of a property with terminological adaptations or
 - Reuse of a property with semantic adaptations.
- Even more problematic in a cross-profile environment incompatible requirements can be easily made

+service category	dct:type	skos:Concept	In GeoDCAT-AP, this property SHOULD take as value one of the URIs of the "Classification of spatial data services" code list operated by the INSPIRE Registry [INSPIRE-SDSC].	01
+service type	dct:type	skos:Concept	In GeoDCAT-AP, this property SHOULD take as value one of the URIs of the "Spatial data service types" code list operated by the INSPIRE Registry [INSPIRE-SDST].	01
+type	dct:type	skos:Concept	In GeoDCAT-AP, this property SHOULD take as value one of the URIs of the "Resource types" code list operated by the INSPIRE Registry [INSPIRE-RT] - namely the one corresponding to "Spatial data service".	01

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- 2. service type with "Spatial data service types" code list
- 3. type with "Resource types" code list. (this one also appears in Dataset)

Proposition

Introduce subproperties of dct:type

- geodcat-ap:serviceCategory for "Classification of spatial data services" code list
- geodcat-ap:serviceType for "Spatial data service types" code list
- geodcat-ap:resourceType for "Resource types" code list with the domain of dcat:Resource to accommodate both for Datasets and Data Services

+service category	dct:type	skos:Concept	In GeoDCAT-AP, this property SHOULD take as value one of the URIs of the "Classification of spatial data services" code list operated by the INSPIRE Registry [INSPIRE-SDSC].	01
+service type	dct:type	skos:Concept	In GeoDCAT-AP, this property SHOULD take as value one of the URIs of the "Spatial data service types" code list operated by the INSPIRE Registry [INSPIRE-SDST].	01
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Profile specific sub-property of dct:subject (issue #78)

Description

The generic property dct:subject is used for specific code list "Topic categories in accordance with EN ISO 19115" (see <u>B.6.8.1 Topic category and keyword in datasets and dataset series</u>)

Motivation

• Same as before (style-guide)

§ B.6.8.1 Topic category and keyword in datasets and dataset series

As far as dataset metadata are concerned, in both [VOCAB-DCAT-2] and [DCAT-AP-20200608], a distinction is made only between free keywords and keywords from controlled vocabularies, associated with a URI. For the former, dcat:keyword is used, whereas for the latter dcat:theme (which is a sub-property of dct:subject). Since the INSPIRE Registry operates URI registers for topic categories and INSPIRE spatial data themes, and in order to keep the distinction existing in INSPIRE between topic categories and keywords, the mapping is as follows:

Topic category is mapped to dct:subject, and expressed by the corresponding URIs minted for the ISO code list in the INSPIRE Registry – reference register:

http://inspire.ec.europa.eu/metadata-codelist/TopicCategory

- Keywords not associated with a controlled vocabulary will be mapped to dcat:keyword;
- JNSPIRE spatial data themes are mapped to dcat: theme and expressed by the corresponding URI in the JNSPIRE Registry – reference register:

http://inspire.ec.europa.eu/theme

Keywords associated with other controlled vocabularies are mapped to dcat:theme.

Proposition

Introduce subproperty of dct:subject: geodcat-ap:topicCategory for "Topic categories in accordance with EN ISO 19115" code list

Reference system mapped to dct:conformsTo (#94)

Description

The generic property dct:conformsTo is used in a specific context for a Reference system. (Catalogue, Dataset, Distribution, Data Service).

Motivation

Same as before (style-guide)

§ 4.6.3 Optional properties for Catalogue

Property	URI	Range	Usage note	Card.
+conforms to	dct:conformsTo	dct:Standard	This property refers to an implementing rule or other specification.	0n
+reference system	dct:conformsTo	dct:Standard	This property <i>SHOULD</i> be used to specify the reference system used in the Catalogue. Spatial reference systems <i>SHOULD</i> be specified by using the corresponding URIs from the "EPSG coordinate reference systems" register operated by <u>OGC</u> [OGC-EPSG].	

Proposition

- 1) Merge usage notes to conforms to, or
- 2) Introduce subproperty of dct:conformsTo: geodcatap:referenceSystem

Spatial resolution as text mapped to rdfs:comment (#95)

Description

The generic property rdfs:comment is used in a specific context for Spatial resolution as text.

Motivation

Same as before (style-guide)

+spatial
resolution as rdfs:comment rdfs:Literal
text

§ 4.11.4 Deprecated properties for Data Service

This property *MAY* be used to express spatial resolution as free-text, when it cannot be specified via dqv:hasQualityMeasurement and dcat:spatialResolutionInMeters.

0..n

Property	URI	Replaced by	Deprecated in	
+spatial resolution	rdfs:comment	<pre>dcat:spatialResolutionInMeters dqv:hasQualityMeasurement</pre>	GeoDCAT-AP 2.0.0	
Property rdfs:comment MAY still be used when spatial resolution is specified as free-text.				

Proposition

Introduce property geodcatap: spatialResolutionAsText and attach the usage notes there.

Consequently, deprecate usage of rdfs:comment for spatial resolution completely.

Poll on intended GeoDCAT-AP usage

SLIDO

Q1: How do you use GeoDCAT-AP? (multiple choice)

- We implement GeoDCAT-AP ourselves.
- 2. We will definitely implement GeoDCAT-AP ourselves.
- 3. We rely on the Commission to implement GeoDCAT-AP
 - e.g. for potential INSPIRE Geoportal => data.europa.eu harvesting

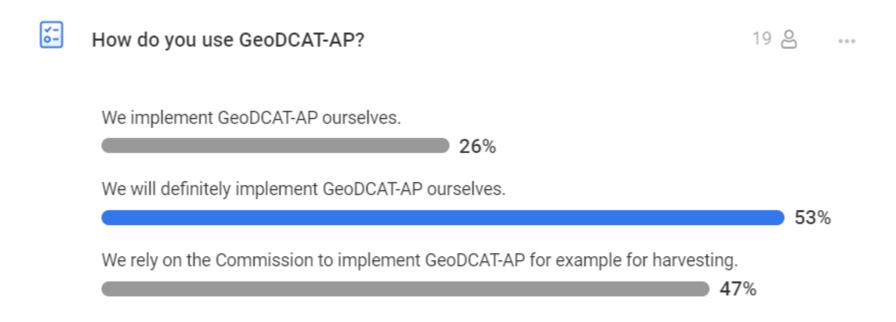
Q2: If you implement GeoDCAT-AP, how?

- 1. We use the provided XSLT transformation from CSW.
- 2. We use an adjusted version of the XSLT from CSW.
- 3. We use GeoDCAT-AP natively, as RDF.
- 4. We implement an ad-hoc transformation.

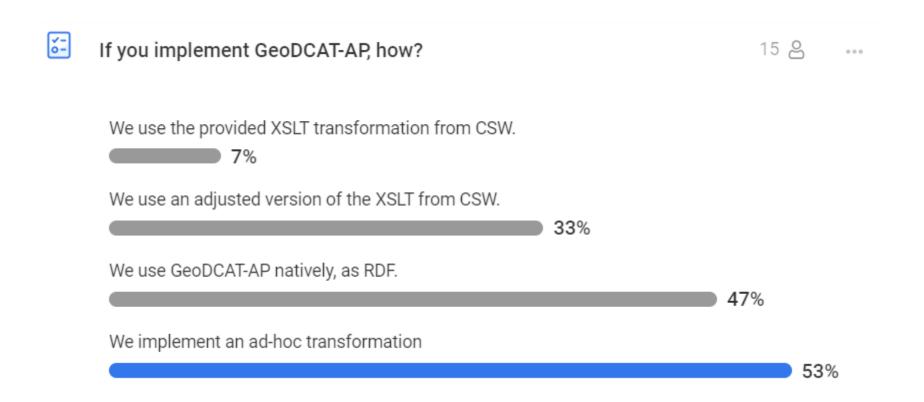




Slido Results – Question 1



Slido Results – Question 2



DCAT-AP 3.0 alignment

Removal of inverse properties (#90)

Description

DCAT 3 has policy on usage of inverse properties: *inverse properties* may be used only in addition to the primary ones.

DCAT-AP 3.0 adopted the approach. GeoDCAT-AP 2.0.0 includes the following inverse properties:

- dct:isVersionOf
 - to be replaced with dcat:isVersionOf from DCAT-AP 3.0
- 2. foaf:isPrimaryTopicOf used in several examples.
 - may be confusing and encourage usage of just the inverse property

§ 7. Use of inverse properties

The properties described in <u>6. Vocabulary specification</u> do not include inverses intentionally, with the purpose of ensuring interoperability also in systems not making use of OWL reasoning.

However, recognizing that inverses are needed for some use cases, DCAT supports them, but with the requirement that they MAY be used only in addition to those described in <u>6. Vocabulary specification</u>, and that they MUST NOT be used to replace them.

The following table lists the inverse properties supported in DCAT.

Property	Inverse
dcat:prev	dcat:next
dcat:previousVersion	dcat:nextVersion
<pre>dcat:distribution</pre>	dcat:isDistributionOf
dcterms:hasPart	dcterms:isPartOf
dcat:resource	dcat:inCatalog
dcterms:replaces	dcterms:isReplacedBy
dcterms:isReferencedBy	dcterms:references
dcat:hasVersion	dcat:isVersionOf
dcat:inSeries	dcat:seriesMember
<pre>foaf:primaryTopic</pre>	<pre>foaf:isPrimaryTopicOf</pre>
prov:wasGeneratedBy	<pre>prov:generated</pre>

Proposition

Follow the approach of DCAT-AP 3.0 and remove inverse properties from GeoDCAT-AP. Specifically:

- 1. deprecate dct:isVersionOf in favor of the new dcat:hasVersion (dct:hasVersion replacement), and
- 2. change examples to use the primary foaf:primaryTopic

adms: Identifier alignment (#92)

Description

Differences in adms: Identifier usage between GeoDCAT-AP and DCAT-AP 3.0:

- 1. skos:notation is mandatory in DCAT-AP 3.0, but optional in GeoDCAT-AP 2.0.0
- 2. the range of skos:notation in GeoDCAT-AP is defined as

rdfs:Literal typed with the URI of one of the members of the **DataCite Resource Identifier Scheme** [DataCite-RIS]

Unclear:

- 1. Why the range rdfs:Literal was narrowed down to only DataCite Resource Identifier Scheme?
- 2. Conflict with usage note on other identifier:

This property refers to a secondary identifier of the Dataset, such as MAST/ADS [MAST-ADS], [DataCite], [DOI], [EZID] or [W3ID].

Proposition

Align with DCAT-AP 3.0, i.e.

- make skos:notation mandatory, and
- 2. lift the range restriction on DataCite

Alignment of accessRights usage on Dataset and Data Service (#84) – meaning of MUST in usage of controlled vocabularies

Description

In DCAT-AP 3.0, the <u>EU Vocabularies Access rights NAL</u> MUST be used with dct:accessRights.

In GeoDCAT-AP, also the <u>INSPIRE Limitations on Public Access</u> vocabulary can be used, and also a blank node with a textual label is allowed.

This situation is similar to other cases (dcat:theme, ...)

```
dct:accessRights [ a dct:RightsStatement ;
    rdfs:label """
        public access limited according to Article 13(1)(b)
    of the INSPIRE Directive
        """@en ] ] .
```

Proposition

Discuss the meaning of MUST on controlled vocabularies to be used with DCAT-AP. Either

- 1. This is OK, but one of the values of dct:accessRights MUST be from the EU Vocabularies Access rights NAL, or
- 2. Values other than the ones from the EU Vocabularies Access rights NAL are forbidden. Then
 - 1. A new property has to be defined in DCAT-AP for usage with the EU Vocabularies Access rights NAL
 - 2. A new property has to be defined in GeoDCAT-AP for usage with the INSPIRE Limitations on Public Access
- 3. 1:1 mapping will be devised

Additional alignment with DCAT-AP 3.0

- Using dcat:landingPage also for services (#9)
- Maintenance frequency code list (#56)
- Add dcat:DatasetSeries (#71)
- Add properties for dcat:DatasetSeries (#72)
- Agent.Type definition alignment (#85)
- Distribution availability vocabulary update (#86)
- CatalogueRecord.changetype definition difference (#87)
- Checksum usage alignment (#89)
- Distribution byte size range change (#91)
- 10. Temporal literals (#93)
- 11. Split current usage notes into definitions and usage notes as in DCAT-AP (#105)



To be voted on (()) or discussed in GitHub and resolved before the next webinar



Change rdfs:label to dct:description for representation of potenitally long texts (#108)

Description

rdfs:label is used for potentially long texts where dct:description might be a better fit.

In addition, those places are instances of Dublin Core classes, so a Dublin Core property might be

a better fit.

The use of rdfs:label comes from a deprecated Dublin Core Usage Guideline.

```
[] a dct:ProvenanceStatement;
rdfs:label """

The raster data sets have been created out of the Noise Spatial Database,
which in turn contains all versions delivered by the relevant countries
(EU and EFTA) to Reportnet (CDR). The data from Reportnet is automatically
incorporated into the database, with the exception of those data sets which
require a manual review (due to problems with naming conventions or
Coordinate Reference System). The data set covers any submission by the
countries until 01/01/2019.
"""@en .
```

Proposition

Change the following usages of rdfs:label to dct:description:

- 1. Rights statement text
- 2. Provenance statement text
- 3. License text (if not removed in #113)

Improve notes on using embedded objects vs. references (#111)

Description

Properties listed for supporting classes like *Standard* are probably meant to be used when an IRI of the instance of the class cannot be determined. When such an IRI is known, there should be no need to use the descriptive properties.

Proposition

Add explicit note saying that the properties for supporting classes are to be used mainly when the IRI of the class instance is unknown.

§ 4.26.1 Recommended properties for Standard

Property	URI	Range	Usage note	Card.
+title	dct:title	rdfs:Literal	This property contains a name given to the Standard. This property can be repeated for parallel language versions of the name - see § 9. Accessibility and Multilingual Aspects.	0n
+version	owl:versionInfo	rdfs:Literal	This property contains a version number or other version designation of the Standard.	01

Meaning of recommended properties on Standards, etc. (#101, #109)

Description

GeoDCAT-AP defines recommended and optional properties for supporting classes. However, recommended properties seem not to be used even in GeoDCAT-AP examples.

```
<http://www.opengis.net/def/crs/OGC/1.3/CRS84> a dct:Standard;
dct:identifier "urn:ogc:def:crs:OGC:1.3:CRS84"^^xsd:anyURI;
dct:title "CRS84"@en;
dct:type <http://inspire.ec.europa.eu/glossary/SpatialReferenceSystem>;
skos:inScheme <http://www.opengis.net/def/crs/OGC>;
skos:prefLabel "CRS84"@en.
```

Questions

What is the meaning of recommended here?

- 1. Should the properties be used with all standards mentioned in GeoDCAT-AP?
- 2. Should they be used only for standards for which there are no URIs?
- 3. Is there a registry of standards in which the standards are documented using the recommended properties?

§ 4.26.1 Recommended properties for Standard

Property	URI	Range	Usage note	Card.
+description	dct:description	rdfs:Literal	This property contains a free-text account of the Standard. This property can be repeated for parallel language versions of the description - see § 9. Accessibility and Multilingual Aspects.	0n
+identifier	dct:identifier	rdfs:Literal	This property contains the main identifier for the Standard, e.g. the URI or other unique identifier in the context of the Catalogue, or of a reference register (e.g., the ISO, OGC, W3C catalogues of their standards, the OGC "EPSG coordinate reference systems" register [OGC-EPSG]).	0n
+reference register	skos:inScheme	skos:ConceptScheme	This property <i>MAY</i> be used to specify the reference register to which the Standard belongs.	01
+release date	dct:issued	rdfs:Literal typed as xsd:date Or xsd:dateTime	This property contains the date of formal issuance (e.g., publication) of the Standard.	01
+title	dct:title	rdfs:Literal	This property contains a name given to the Standard. This property can be repeated for parallel language versions of the name - see § 9. Accessibility and Multilingual Aspects.	0n

```
[] a dcat:DataService;
     dct:conformsTo
<http://www.opengeospatial.org/standards/wms> .
```

Proposition

Do not differentiate optional, recommended and mandatory properties for supporting classes.

Additional issues

1. Relation of various Agent classes used throughout the specification (#112)

To be voted on () or discussed on GitHub and resolved before the next webinar

Proposed resolution of minor issues

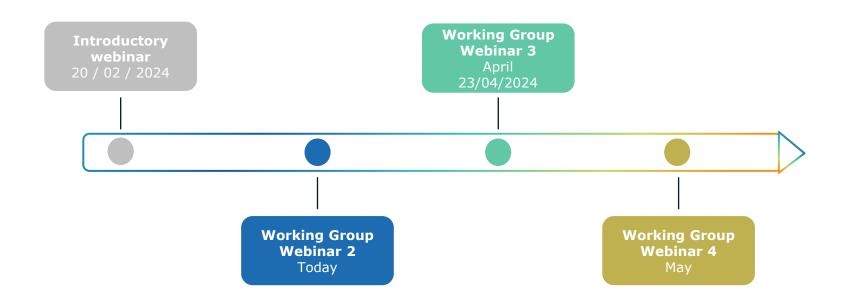
Minor/editorial issues

- 1. Clarify meaning of multiple spatial / geographic coverages on a Data Service (#96)
- 2. Clarify the usage note of Distribution.representation technique (#97)
- Remove note from the Kind class (#98)
- 4. Limit the range of vcard:hasEmail (#99)
- 5. Multiple character encodings for Catalogue Record (#103)
- 6. Geographic name optional, yet 1..n (#104)
- 7. Remove example for Media Type as it is confusing (#110)

To be voted on () or discussed on GitHub and resolved before the next webinar



GeoDCAT-AP Timeline



GeoDCAT-AP 3.0.0: revision plan

Revision on-going in https://github.com/SEMICeu/GeoDCAT-AP/issues

Working Group Webinar 2 - Concerning generic organisation & findability (12/03/2024)

- Datasets, Distributions and their relationships
- Categories (alignment with DCAT-AP 3.0): keywords, categories, themes

Working Group Webinar 3 – specific geo-aspects (23/04/2024)

- Geospatial coverage & resolution
- Coordinate reference systems & spatial representation type

Working Group Webinar 4 – relationship with INSPIRE

GeoDCAT-AP related tools such as XSLT

We are interested in which issues you are facing and we encourage you to post them as issues on the <u>GeoDCAT-AP</u> <u>GitHub repository</u>.

Next steps



Please provide your additional feedback on GitHub.

https://github.com/SEMICeu/GeoDCAT-AP/issues

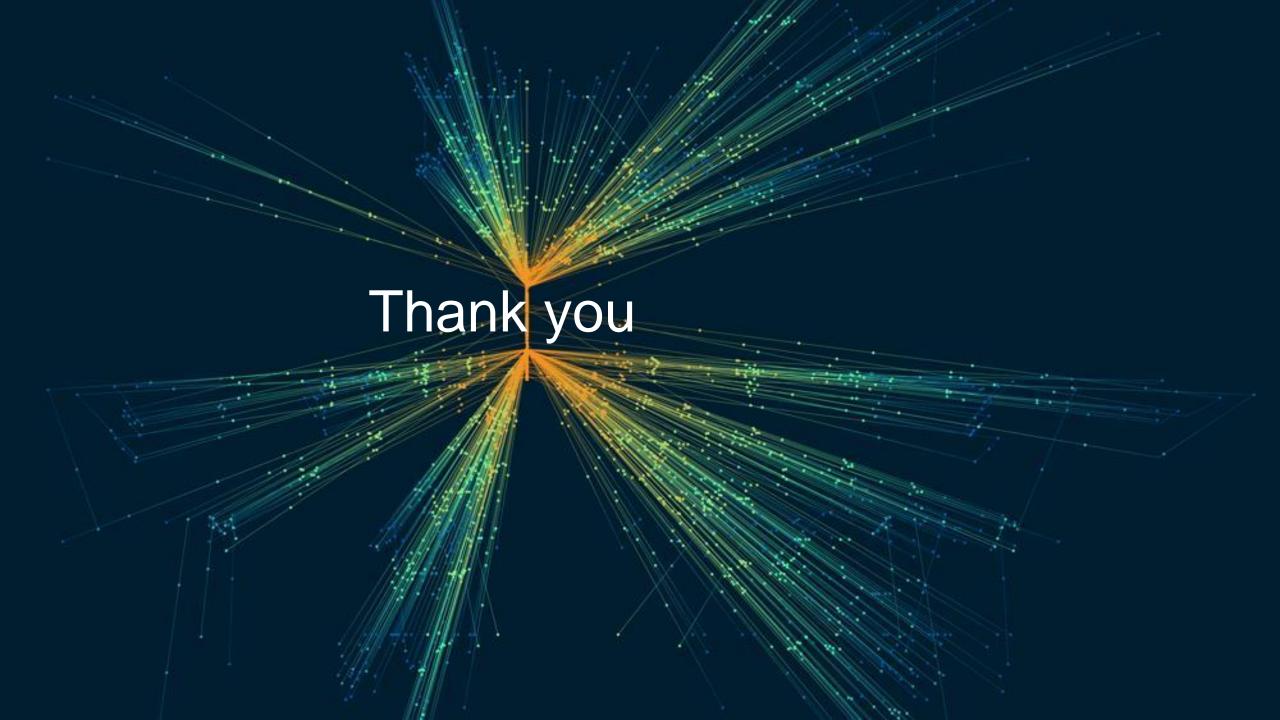


A new editor's draft will be created at

https://semiceu.github.io/GeoDCAT-AP/drafts/latest/



GeoDCAT-AP mapping to HVD will be done as a separate document





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Stay in touch



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https://joinup.ec.europa.eu/collection/interoperable-europe/interoperable-europe