Management system

A system for management of Data in 3 Levels

By Lars Storgaard and Jan Hjelmager
Agenda

• Requirements
• Metadata Ecosystem
• Management system
• Architecture
• Customization
• Publication
• To be done
Requirements

• We need to have a management system for the classification and metadata of our data products.

• From ISO 19157:

<table>
<thead>
<tr>
<th>Requirement 5:</th>
<th><a href="https://standards.isotc211.org/19157/-1/1/req/Metadata/DataQuality">https://standards.isotc211.org/19157/-1/1/req/Metadata/DataQuality</a></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Data quality shall be reported as metadata in compliance with Clause 8, Clause 11 and Annex C of this standard, and in compliance with ISO 19115-1:2014.</td>
</tr>
</tbody>
</table>

• We choose to document DQ in metadata because DQ is an important part when the user is evaluating a data set for a specific use case.
Danmarks Adresseregister

Danmarks Adresseregister (DAR) er det autoritative Grunddataregister for adresser og vejnavne. Formålet er at stille rmaterialiserede adresser og vejnavne til rådighed for myndigheder, virksomheder og borgere. Offentlige registre som CPR, CVR og BBR er forpligtet til udelukkende at anvende autoritative adresser fra DAR. Adresser og vejnavne fastsættes af de kommunale adressestyrelser i DAR.

Discover data

Download

Oracle

Datis database skerne i Databanken PROD.
GEOLBRREAD har select.

This dataset is published in the database
*DAR_A@exasldc1-
scan.prod.sitsad.dk:1521/GEOBANK.prod.sitsad.dk* in
table "Oracle"
Danmarks Adresserregister (DAR) (beta-test)

Danmarks Adresserregister (DAR) er et autoritative grunddatabaser for adresser og vejnavne. Formålet er at stifte nytænkende adresser og vejnavne til rådighed for myndigheder, virksomheder og borgere. Offentlige register som DAR, EDR og BDR er forpligtet til uddeltakelse af et autoritativt register for DARP, adresser og vejnavne faxfæste af de kommunale adresserens tydeligheder - DAR.

Der er registreret ca. 3.9 millioner adresser i DAR og ca. 111.000 vejnavne. Adresser og vejnavne udsendes undtagen ved anmodning fra deres ansvarlige anerkendt private person eller forvirret virksomhed. 

En adresse er en sammentrængt boretæsk, som udgør og berører en bestemt udskiftning til et elvedraget areal, en foring, en del af en foring, et teknisk anlæg eller lign. Den sammenføres benævning, som en adresse udgør, består af vejnavn, husnummer, en eventuel etagebetegnelse og en eventuel dørbetegnelse, at eventuelt benævnt bynavn samt det postnummer med tilhørende navn på postnummeren, som adresse er beliggende. Alle adressers adressetegnelse er etfladeg på landskabet.

Vejnavne er repræsenteret med et geometri, og er beskrevet som et samlet fællesbenævn, udsendeg og af kommunen og for der es fastsat et vejnavn. Vejnavne er særdeles inden for en radius af 15 km samt inden for et postnummer. Dette sker at om- eller analysere vejnavne ikke forudlagt.

Download og links

- [https://confluence.sdf.dk/pages/viewpage.action?pageId=171381322](https://confluence.sdf.dk/pages/viewpage.action?pageId=171381322)
- [https://dewdocs.darforfyningen.dk/dsk/ap](https://dewdocs.darforfyningen.dk/dsk/ap)
- [https://confluence.sdf.dk/pages/viewpage.action?pageId=100091323](https://confluence.sdf.dk/pages/viewpage.action?pageId=100091323)

Om denne ressource

- Emnetagning: DAR, EDR, BDR
- Nævn: DAR, Dataportalen, Grunddata
- FORM:
  - [https://form.onlines.dk/ogperenr/sg/54/54_vls/10.25](https://form.onlines.dk/ogperenr/sg/54/54_vls/10.25)
- Ressource type: Deltoet
- Språk: Dansk
- Klassifikation: [Yrke, analyseflag]

Ressourcebegæring:
- [https://stilfordele.dk/sejdeling/foranvedt/deres-danmarksadresseregister-da](https://stilfordele.dk/sejdeling/foranvedt/deres-danmarksadresseregister-da)
- Beskrivelse: Tid: Dato: 2018-02-19 (Udgivelsesdato) Ovelseremmelse: Ja
### DK INSPIRE Addresses

**Resource Title**: DK INSPIRE Addresses

**Resource Abstract**

It is generally assumed that addresses form up to 80% of the digital solutions used by a modern society. Access to accurate and up-to-date information on Denmark's addresses is therefore of great value to Danish authorities, to businesses and to citizens. To ensure that the entire community has access to the same information about Denmark's addresses, all address data is registered in one place, namely in the Danish Register of Addresses. Since it is the municipalities that determine road names and addresses, it is also the municipalities that register the associated data. The rules also ensure that data is standardized, of fairly uniform quality and that they can be accessed anywhere and without payment. In connection with the "address program", which was completed in 2018, the state and municipalities have decided to improve the quality and timeliness of address. In connection with the address program's data washing project, the municipalities have improved data, so that address data now lives up to the Address Act. This means, among other things, that all addresses have an access point and that all road names have a road name location. Personal data – for example, about who lives at the address - is not included in the data contained in the address register. Such information is recorded elsewhere, e.g in the CPR, and is protected by law.

**Lineage**

The municipalities and SOFE have done a great job together to ensure that DAR was "born" with high quality and timely data. Many new addresses were added, as was a comprehensive "data wash" of the addresses that already existed. In order to ensure that our joint major work is not lost and that the high data quality in DAR is maintained, SOFE continuously measures the quality of DAR data and will communicate about this at denmarkadresse.dk. The information should help to bring greater clarity on data quality in general and give the municipalities a good working tool to maintain data quality in.

**Reporting Tags**

- **Priority Dataset**
  - National

- **Spatial Scope**
  - National

**Conditions Applying To Access And Use**

No conditions to access and use.

**Limitations On Public Access**

No limitations on public access.

**Geographic Bounding Box**

Not specified.
Internal Spatial

Data Warehouse [Oracle]

Maintainer Evaluator

DMZ

Maintainer Evaluator

National Spatial Data

National Data Catalogue

<ISO 19115-3>

<ISO 19139>

FME

<n/a>

Date for last update of metadata

Date for newest object in data

EPSG code for reference system

Bounding box

Data Product Shop

<ISO 19139>

EU Data Catalogue

<ISO 19139>

<csw xmlns="http://www.opengis.net/csw/2.0.2">
</csw>

RDF DCAT endpoints

<ISO 19139/xml>

<JSON-LD>

INSPcite GEOPORICAL

Enhancing access to European spatial data

Data Product Shop

Invalid character or characters in XML.
Internal Spatial Data Catalogue [GeoNetwork] [ISO 19115-3]

National Spatial Data Catalogue [GeoNetwork] [ISO 19139]

Data Product Shop [PIMCore] [n/a]

Data Warehouse [Oracle]

DMZ

Maintainer Evaluator

FME [xml]

csw [ISO 19139/xml]

National Data Catalogue [CKAN] [DCAT-AP-DK]

csw [ISO 19139/xml]

RDF DCAT endpoints [RDF/XML] [JSON-LD]

EU Data Catalogue [“Home made”] [DCAT-AP]

INSPIRE Geoportal [GeoNetwork] [ISO 19139]

INSPIRE Geoportal [ISO 19139]
“GeoNetwork is a catalog application to manage spatially referenced resources. It provides powerful metadata editing and search functions as well as an interactive web map viewer. It is currently used in numerous Spatial Data Infrastructure initiatives across the world.”

- Immediate search access to local and distributed geospatial catalogues
- Uploading and downloading of data, graphics, documents, pdf files and any other content type
- An interactive Web Map Viewer to combine Web Map Services from distributed servers around the world
- Online editing of metadata with a powerful template system
- Scheduled harvesting and synchronization of metadata between distributed catalogs
- Support for OGC-CSW 2.0.2 ISO Profile, OAI-PMH, SRU protocols
- Fine-grained access control with group and user management
- Multi-lingual user interface
http://10.33.142.207:8080/srv/dan/csw?
service=CSW
&version=2.0.2
&request=GetRecordById
&outputschema=http://www.isotc211.org/2005/gmd
&elementsetname=full
&id=93c6f13f-d997-47c3-a1d2-a93f06d0982e
&resulttype=results
&constraintlanguage=FILTER
&constraint_language_version=1.1.0
&typenames=gmd:MD_Metadata
&constraint=<ogc:Filter
xmlns:csw="http://www.opengis.net/cat/csw/2.0.2"
xmlns:ogc="http://www.opengis.net/ogc"></ogc:Filter>

<gmd:MD_Metadata>
http://10.33.142.207:8080/srv/dan/csw?
service=CSW
&version=2.0.2
&request=GetRecordById
&outputschema=http://standards.iso.org/iso/19115/-3/mdb/2.0
&elementsetname=full
&id=93c6f13f-d997-47c3-a1d2-a93f06d0982e
&resulttype=results
&constraintlanguage=FILTER
&constraint_language_version=1.1.0
&typenames=gmd:MD_Metadata
&constraint=<ogc:Filter
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xmlns:ogc="http://www.opengis.net/ogc">
</ogc:Filter>

<mdb:MD_Metadata>
We have data sets and data products

- A complete M-data set
- More than one M-data set
- A subset of a M-data set
- Subset of more than one M-data set

External use
- Data product for distribution
  - .gml
  - .json
  - .gpkg

Internal use
- Data set for management
  - Database schemas (ddl)
- Tables in Data Warehouse

Feature types
- [Oracle]
- Tables in Data Warehouse
Metadata collected from "Data in 3 levels" and existing metadata in the Geodata catalogue

<table>
<thead>
<tr>
<th>Classification Level</th>
<th>Basis</th>
<th>Descriptive</th>
<th>Excerptary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data product name</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;Danmarks adresser og vejnavne&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><a href="https://datastyrelsen.dk/data/d729">https://datastyrelsen.dk/data/d729</a></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Danmarks Adressregister (DAR)</td>
<td>är det automatiska Grundlägganderegister för adresser och vejnavne. Formålmet är att ställa rättsliga adresser och vejnavne till bildighet för myndigheter, viktsomrar och borgare. Offentliga register som CPR, CVR och BBR är koppliga till utelämnande att avseende automatiska adresser från DAR.adress och vejnavne fastsätts av de kommunala adressregisterna i DAR.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Metadata identifier</th>
<th>UUID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistent</td>
<td></td>
</tr>
</tbody>
</table>
### Customization of GeoNetworks User Interface

#### Description

To ensure that the entire community has access to the same information about Denmark's addresses, all address data is registered in one place, namely in the Danish Register of Addresses. Since it is the municipalities that determine most names and addresses, it is also the municipalities that register the registered data.

#### Data for Reusability

**Publication** 19. 09. 2023

Angr. den data produktet først på grund af tænkeligt for anvendes.

#### Online services

**Service (caption)***: Adresser

**Title (caption):*** Demonstration Adresseregister

**Description of the product and data access:**

**Title (caption):*** Adresser

**Description of the product and data access:**

**Download as XML:** Download the XML according to ISO 19139 (OpenGeospatial standard)

**Download as SDFs:** Download the SDFs according to ISO 19139 (OpenGeospatial standard)

**Download as GML:** Download the GML according to ISO 19139 (OpenGeospatial standard)
Lineage and data quality

The municipalities and SDi have done a great job together to ensure that DAR was "born" with high quality and timely data. Many new addresses were added, as was a comprehensive "data wash" of the addresses that already existed.

In order to ensure that our joint major work is not lost and that the high data quality is maintained, SDi continuously measures the quality of DAR data and will communicate about this at denmarkadresse.dk.

The information should help to bring greater clarity on data quality in general and give the municipalities a good working tool to maintain data quality in DAR.

The menu items show lists that contain information about errors in address data. For example, there may be lists of access points that are outside the associated building.

The lists can be extracted for each municipality, and a list will also be provided in connection with the lists on how the municipalities can use the lists to make the necessary corrections in DAR.

/mdb:MD_Metadata/mdb:resourceLineage/mrl:LI_Lineage/mrl:statement
Figure 2 — Overview of the components of data quality [ISO 19157-1]

http://standards.iso.org/iso/19115/-3/mdb/2.0
Data classification
Data product specification

Declaration published to Data Product Shop
TBD – we are on right track but…

- Maturity – not all data products have a data product specification
- Not all data products have made an evaluation of DQ
- Not all DQ-elements included in management system
- But we have made a framework and system ready