DCAT-AP Guideline
Service-based data access in DCAT-AP

DCAT-AP Workshop

Organized in the context of the ISA Action 2.1 (ISA2 Programme) on semantic interoperability
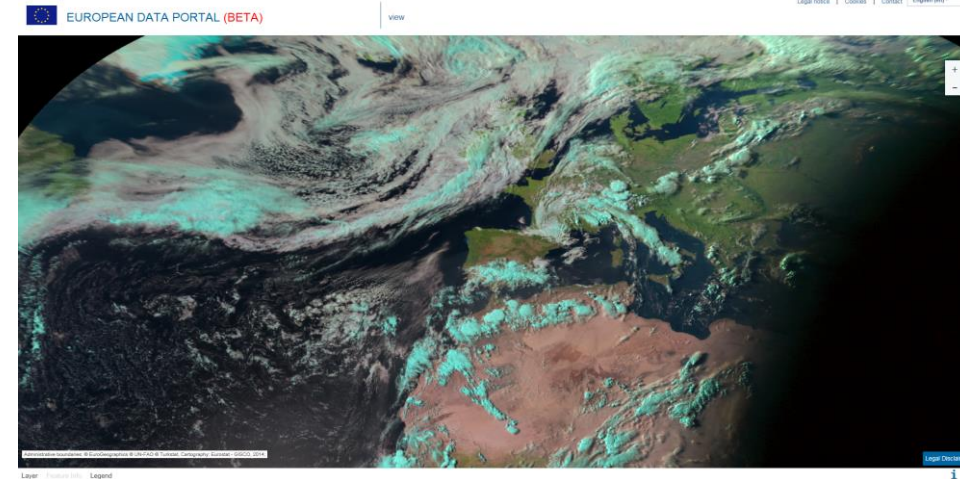
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Uwe Voges (con terra GmbH)

u.voges@conterra.de

con·terra

European Commission

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Introduction

- Datasets often not provided as fix downloadable items

- Instead: provided via standardized service interfaces which provide dynamic access dependent of client requirements

  > Not every param-combination representable as single item

- Usable by appropriate clients

  > Access via HTTP protocols (e.g. HTTP/GET/KVP or SOAP)

  > Parameterized requests - not fix URLs(!)

    > bbox, format, crs, size, function… -> Values tbd by Client

  > Endpoint (URL) often points to service description

- Reason: size of data often huge (>10 GB for single ESA Sentinel 2 Image), efficient data storage needed, complex pre-processing required,…

EUMETSAT High Rate SEVIRI Level 1.5 – Meteosat Second Generation (MSG) - served as OGC Web Map Service (Esri ArcGIS)

Client: European Data Portal - OGC WMS Client (based on con terra map.apps)

Request (sample):
http://solutions.conterra.de/arcgis/services/BIDS2016/BIDS2016_SEVIRI_09082015_17_00_00/ImageServer/WMSServer?service=WMS&version=1.3.0&request=GetMap&CRS=CRS:84&bbox=-30.21,21.92,-10.05,42.406235&width=1200&height=710&layers=0&styles=default&format=image/png32

Lack of describing service based access in (Geo)DCAT-AP

- For the INSPIRE notion of service, DCAT-AP foresee a single class - dcat:Catalog - which only matches the notion of 'discovery service' in INSPIRE.

- Other services (as 'discovery service') in GeoDCAT-AP will be denoted by using the INSPIRE resource type code list and by using dct:type

  > More precisely, by assigning the URI: http://inspire.ec.europa.eu/metadata-codelist/ResourceType/service

  > Additionally, the spatial data service type can be specified by using dct:type with the corresponding INSPIRE code list item

    > E.g.: http://inspire.ec.europa.eu/codelist/SpatialDataServiceType/view

- For Distribution no specific service based access is defined, just a URL (accessURL)

Current situation in the European Data Portal (EDP)

- In EDP currently also services are mapped to dcat:Dataset denoted with dct:type as "service"

  > Done because of current limitations in (Geo)DCAT-AP and in EDP client

  > dcat:Distribution/dcat:accessURL includes link to GetCapabilities operation of the OGC service

  > Example:

```
<dct:type rdf:resource="http://inspire.ec.europa.eu/metadata-codelist/ResourceType/services"/>
 <dct:type rdf:resource="http://inspire.ec.europa.eu/metadata-codelist/SpatialDataServiceType/view"/>
 <dcat:distribution>
    <dcat:Distribution>
       <dct:title lang="en">view</dct:title>
 <dcat:accessURL rdf:resource="http://apps2.bvl.bund.de/stareg_visual_web/localeSwitch.do?language=de&amp;page=/data.do"/>
       <dct:format rdf:parseType="Resource">
         <rdfs:label>WMS</rdfs:label>
       </dct:format>
    </dcat:Distribution>
  </dcat:distribution>
  <dct:hasPart rdf:resource="38ff5ce8-ad98-40bb-ad9e-aa713726fc33"/>
```

Proposal: Service-based access in DCAT-AP and GeoDCAT-AP

- As service based access is a distribution channel

- dcat:Distribution is the appropriate class to describe service based access

- Simple accessURL not sufficient, to cover service based use cases

- Instead:

  > URL-template including parameters (described by name, type, constraints,…)

  > URL points either to service or to a service-description(!)

  > Different protocol bindings to be considered: HTTP/GET/KVP, HTTP/POST/XML, SOAP,…

  > Format + Compression(!)

  > ServiceType: e.g. download, order, view,…

  > Service Standard: e.g. OGC WMS 1.3.0

  > …