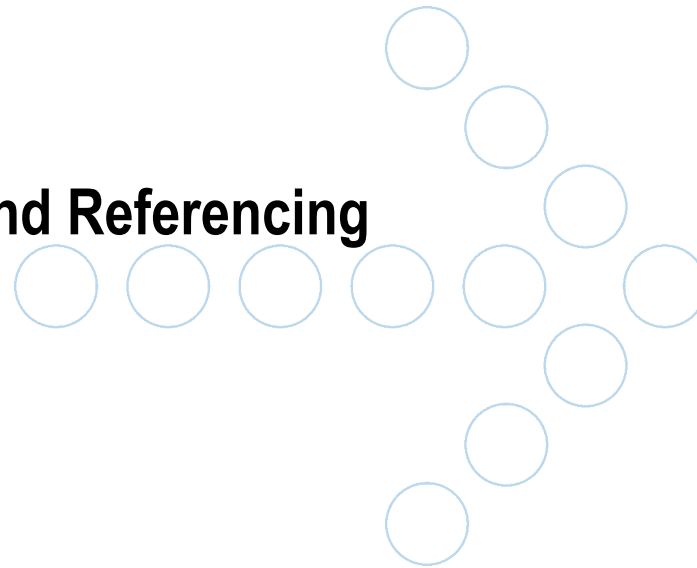


URL based Identification and Referencing



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Background

- TN-A dataset consists of 27 feature Types
- Each feature has various identifiers in the GML encoding
- There are various associations between these features
- In GML such associations are encoded via xlink
- The xlink:href attribute should provide a resolvable URI to the feature being referenced
- Thus, the xlink:href must somehow include the identifier of the feature

Question: what URI should we provide?

What URI should we provide?

WFS Request URI:

```
https://sdigeo-free.austrocontrol.at/geoserver/tn-a/wfs?service=WFS&version=2.0.0&request=GetFeature&typeName=tn-a:FeatureType&featureId=AT.0012.6bed1778-d6bf-11e8-9f8b-f2801f1b9fd1.tn-a:FeatureType.42&outputFormat=gml32&srsName=http://www.opengis.net/def/crs/EPSG/0/4258
```

Apart from being unwieldy, it is a bit long!

Wouldn't it be far nicer to do something like:

<https://inspire.austrocontrol.at/AT.0012.UUID/tn-a.FeatureType.42>

URL Scheme Construction

Base:

<https://inspire.austrocontrol.at>

Dataset Metadata:

<https://inspire.austrocontrol.at/AT.0012.UUID>

Featuretype Dataset:

<https://inspire.austrocontrol.at/AT.0012.UUID/tn.FeatureType> bzw.

<https://inspire.austrocontrol.at/AT.0012.UUID/tn-a.FeatureType>

Single Feature:

<https://inspire.austrocontrol.at/AT.0012.UUID/tn.FeatureType.PK> bzw.

<https://inspire.austrocontrol.at/AT.0012.UUID/tn-a.FeatureType.PK>

URL Re-writing

Source:

<https://inspire.austrocontrol.at>

re-written URL:

landing page (inspire.html)

Dataset Metadata:

<https://inspire.austrocontrol.at/AT.0012.UUID>

https://sdimd-free.austrocontrol.at/geonetwork/srv/eng/csw-inspire?SERVICE=CSW&VERSION=2.0.2&REQUEST=GetRecordById&id=UUID&resulttype=results&outputSchema=http://www.isotc211.org/2005/gmd&typenames=gmd:MD_Metadata&constraint=%3CFilter%20xmlns=%22http://www.opengis.net/ogc%22%20xmlns:gml=%22http://www.opengis.net/gml%22/%3E&constraintlanguage=FILTER&constraint_language_version=1.1.0

Featuretype Dataset (WFS, getFeature, typeNamees):

<https://inspire.austrocontrol.at/AT.0012.UUID/tn-a.FeatureType>

<https://sdigeo-free.austrocontrol.at/geoserver/tn-a/wfs?service=WFS&version=2.0.0&request=GetFeature&typeName=tn-a:FeatureType&outputFormat=gml32&srsName=http://www.opengis.net/def/crs/EPSG/0/4258>

single Feature (WFS, getFeature, typeNamees, gml:id):

<https://inspire.austrocontrol.at/AT.0012.UUID/tn-a.FeatureType.PK>

<https://sdigeo-free.austrocontrol.at/geoserver/tn-a/wfs?service=WFS&version=2.0.0&request=GetFeature&typeName=tn-a:FeatureType&featureId=AT.0012.6bed1778-d6bf-11e8-9f8b-f2801f1b9fd1.tn-a:FeatureType.PK&outputFormat=gml32&srsName=http://www.opengis.net/def/crs/EPSG/0/4258>

INSPIRE/GML Identifier

- gml:id → cannot start with a number....
- gml:identifier
 - codespace: → URI
 - id: → string
- net:inspireId
 - namespace: → URI, ideally related with the metadata URL
 - localId: → string
 - version: → string, ideally a timestamp

Possibilities INSPIRE AT

possibility 1 – HTTP-Namespace

<https://data.inspire.gv.at/Geodatenstelle/Ressourcenbezeichner/Datenthema.FeatureType>

Example with complete URL: <https://data.inspire.gv.at/0002/37d564f9-5d63-4760-aae6-29d3f98ee1b4/ad.Address/6428709.1/20170407>

possibility 2 – coded Namespace

[Land](#).[Geodatenstelle](#).[Ressourcenbezeichner](#).[Datenthema](#).[FeatureType](#)

Example:

namespace: AT.0002.37d564f9-5d63-4760-aae6-29d3f98ee1b4.ad.Address

localID: 6428709.1 (Adresscode aus Adressregister)

version: 20170407

INSPIRE/GML Identifier – ACG usage

- gml:id = AT.<ProviderID>.<MD_UUID>.<featureType>.<ACG_id>
- gml:identifier
 - <codespace> = <ACG_metadata_URL>
 - <identifier>
= <ACG_metadata_URL>/<featureNS>.<featureType>.<ACG_id>
- gml:identifier (Alternative)
 - <codespace> = http://inspire.jrc.ec.europa.eu/ids
 - <identifier> = <Resolvable URI>
- inspireId
 - <namespace> = <ACG_metadata_URL>
 - <localId> = <featureNS>.<featureType>.<ACG_id>
 - <version> = <ACG_Version>

<ACG_metadata_URL>:

https://inspire.austrocontrol.at/AT.<ProviderID>.<MD_UUID>

INSPIRE/GML Identifier at ACG - background

ACG has a solid infrastructure including CSW

→ configure URL rewriting within ACG infrastructure

→ incorporate metadata with ACG URLs to provide base URI

→ utilize these URIs in the URI Scheme

INSPIRE/GML Identifier at ACG - background

What is a dataset? Options:

1. Each TN/TN-A featureType is a dataset or
2. Only 2 datasets, TN and TN-A

Option 2 makes more sense due to the interlinkages

- Id's must be unique within the dataset
- namespace and feature type added to localId

Example RunwayArea

```
<wfs:member>
  <tn-a:RunwayArea gml:id="AT.0012.6bed1778-d6bf-11e8-9f8b-f2801f1b9fd1.tn-a.RunwayArea.1">
    <gml:metaDataProperty xlink:href="https://inspire.austrocontrol.at/AT.0012.6bed1778-d6bf-11e8-9f8b-f2801f1b9fd1"/>
    <gml:identifier codeSpace="http://inspire.jrc.ec.europa.eu/ids">
      https://inspire.austrocontrol.at/AT.0012.6bed1778-d6bf-11e8-9f8b-f2801f1b9fd1/tn-a.RunwayArea.1
    </gml:identifier>
    <net:beginLifespanVersion>2017-11-10T00:00:00Z</net:beginLifespanVersion>
    <net:inspireId>
      <base:Identifier>
        <base:localId>tn-a.RunwayArea.1</base:localId>
        <base:namespace>https://inspire.austrocontrol.at/AT.0012.6bed1778-d6bf-11e8-9f8b-f2801f1b9fd1/</base:namespace>
        <base:versionId>2017-11-10</base:versionId>
      </base:Identifier>
    </net:inspireId>
    ...
  </tn-a:RunwayArea>
</wfs:member>
```

Thank you for your attention!

<https://datacove.eu/>

<https://inspire.austrocontrol.at>

<https://www.austrocontrol.at>