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European Address Infrastructure

Euradin WFS pilot service

Web Feature Service for Address information

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co-funded by the Community programme eContent*plus*

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Content

- Overview
- Specification of local address service
- Configuration of the Norwegian example
- Client application for testing of the pilot service

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Overview

- A view service for addresses based on INSPIRE spesifications
- WP7 in EURADIN
- Will show feasibility of INSPIRE data model
- Until now a limitied pilot
- Will evolve to a pan European address service

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Pilot service
Specification of service

- The pilot service is a plain Web Feature Service.
- The pilot service supports the WFS 1.1 specification and deliver GML according the GML 3.1.1 specification.
- Supports Filter Encoding.
- The service has to be:
  - extended with more functionality and support of all the Inspire requirements
  - upgraded to support newer version of standards

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Pilot service Specification of data/content

- The focus has been on the Inspire dataspesification.
- The pilot service supports the Inspire Dataspecification on Addresses draft ver.2.
- GML response delivered by the service validates against an informative GML 3.1.1 application schema.

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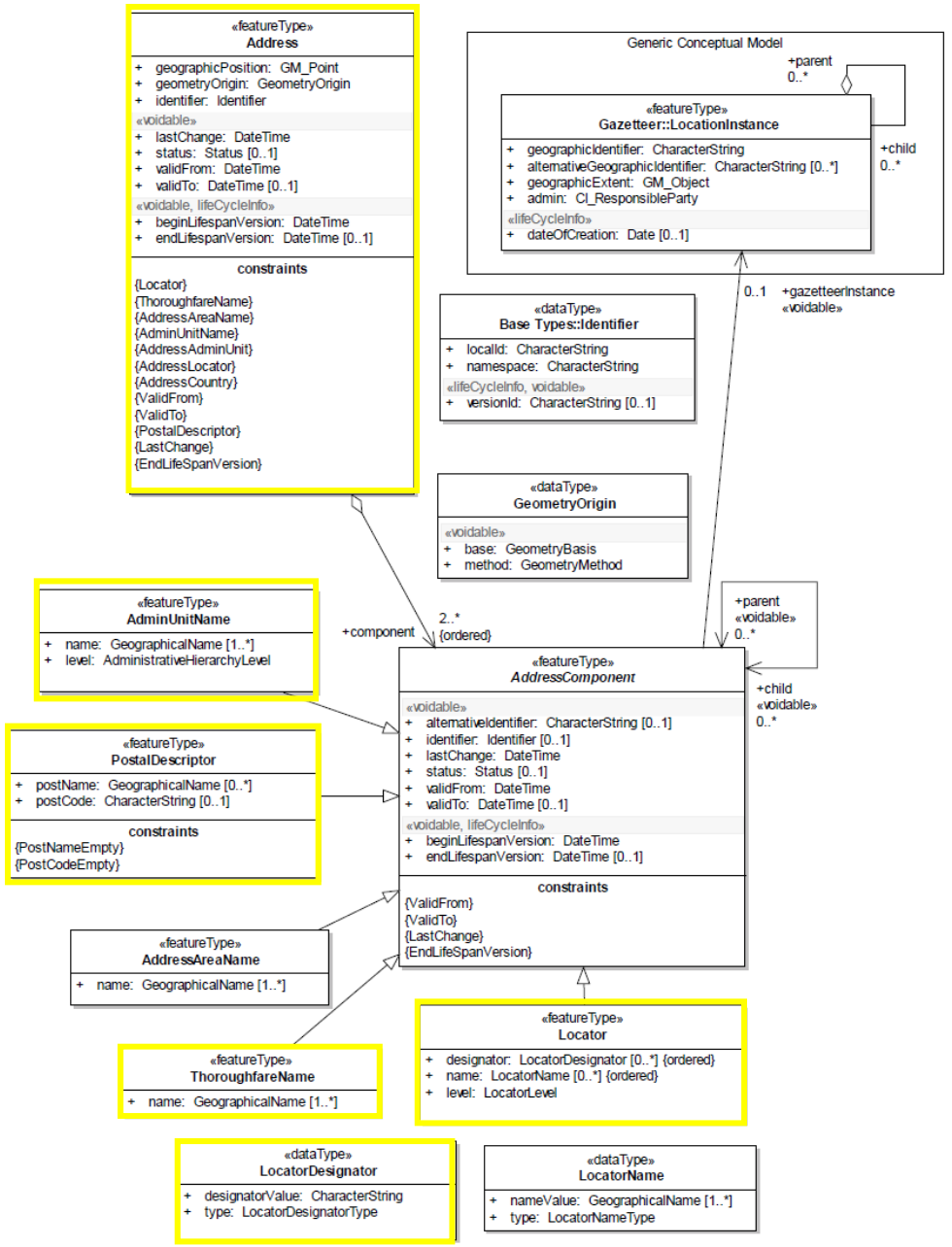
Data model according to draft INSPIRE specification version 2

Yellow boxes shows what is implemented by the pilot service

Implemented Featuretypes



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Future issues and considerations

- The service has to be developed and improved to follow D3.9 Draft Implementing Rules for Download Services and the Draft Technical Guidance for INSPIRE Download Services.
- The service has to be upgraded to support the latest WFS (ISO/DIS 19142) and GML 3.2.1 (ISO 19136).
- Implementations based on other software solutions should be performed.
- Additional service types must be implemented to support user requirements that is not supported by WFS.

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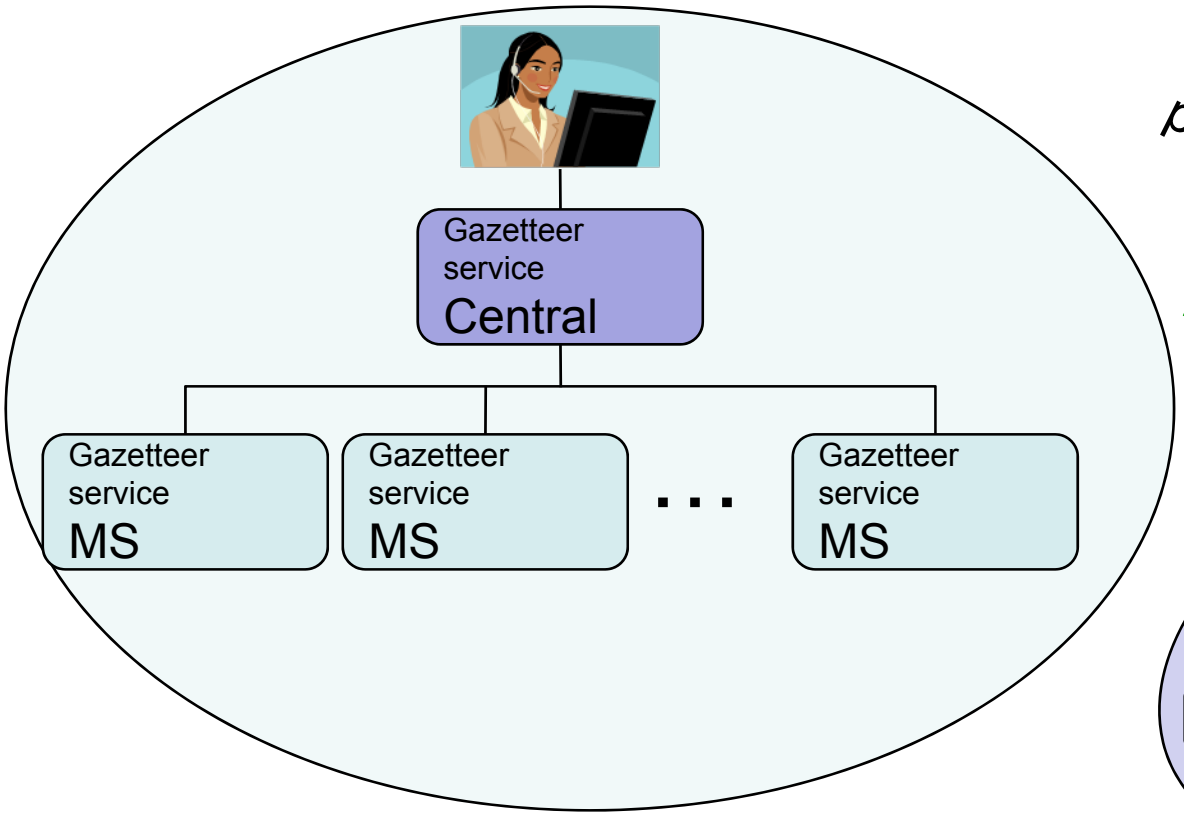
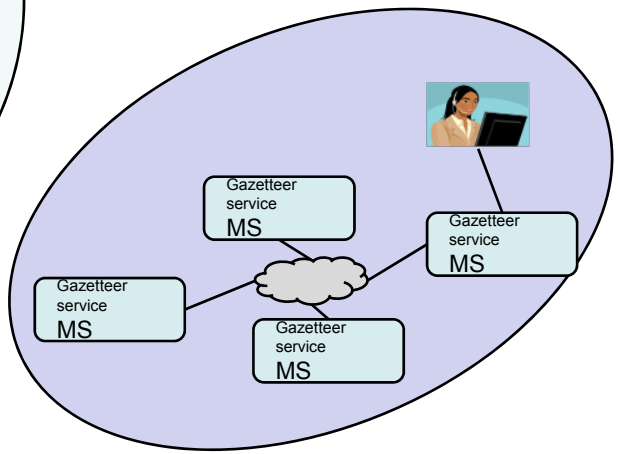
Architecture

Centralised model



… moving later to a p2p model …



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WFS pilot

- An example of a local WFS for Addresses is made avaliabe by NorNMCA.
- Content is a subset of the official address register.
- Mainly built on open/free software components.

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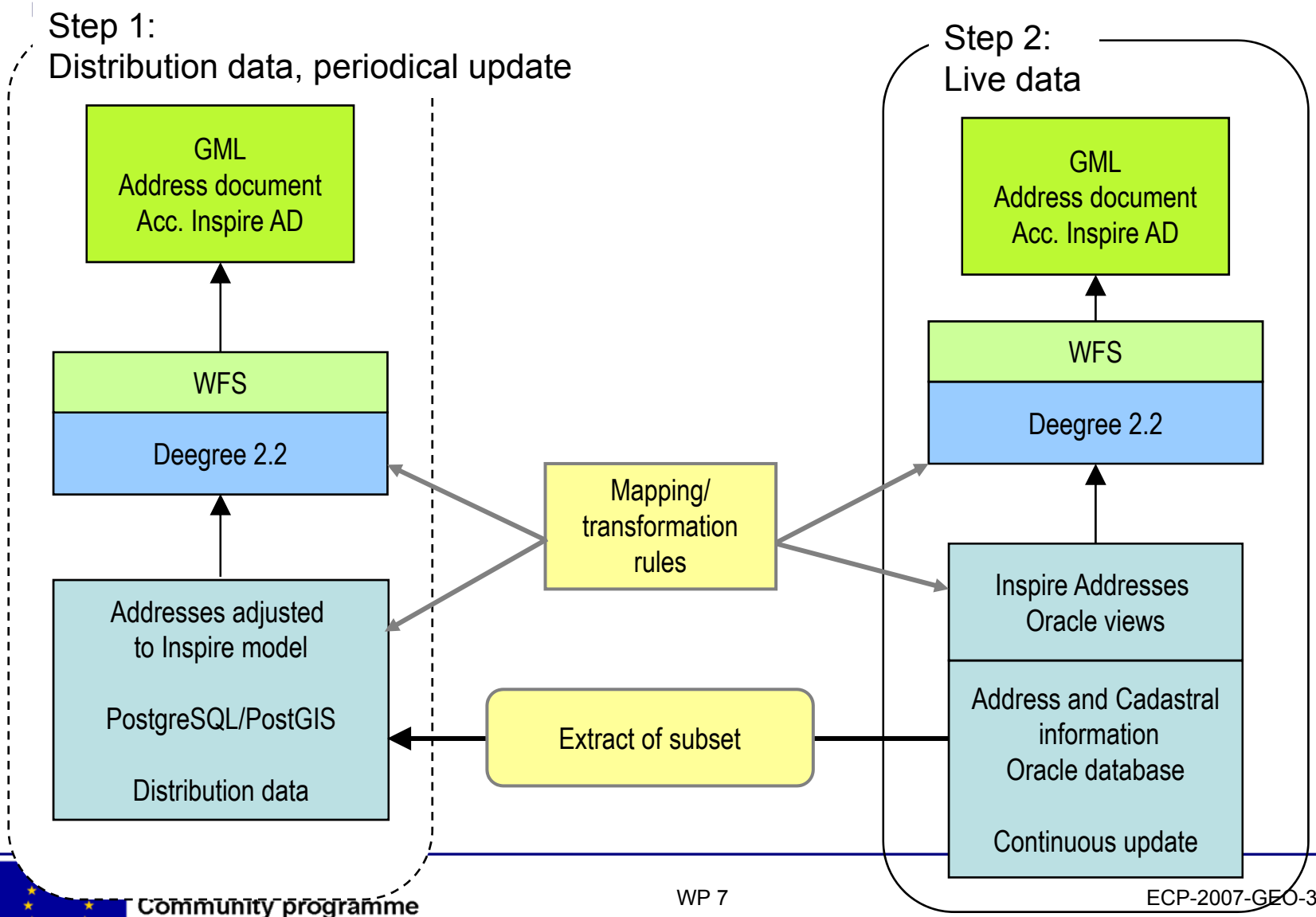
WFS Pilot
Software components

- Oracle - the national address register (part of the Norwegian cadastral system).
- Postgresql/gis - a subset of addresses.
- Deegree 2.2 - WFS server.

Pilot WFS - Norwegian example
Implementation plan in 2 steps



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WFS pilot
Setup and configuration (1)

- Creation of a PostgreSQL databse according a Inspire Address like databse schema. Psql script.
- Load and transformation of address information from official address register. Psql script.

WFS pilot
Setup and configuration (2)

- Configuration of Deegree to support the Inspire Address GML application schema, as far as possible.
  - Add service metadata by editing the wfs_configuration.xml file
  - Configure the Address feature types and the mapping to the database tables by editing the Address GML application schema.

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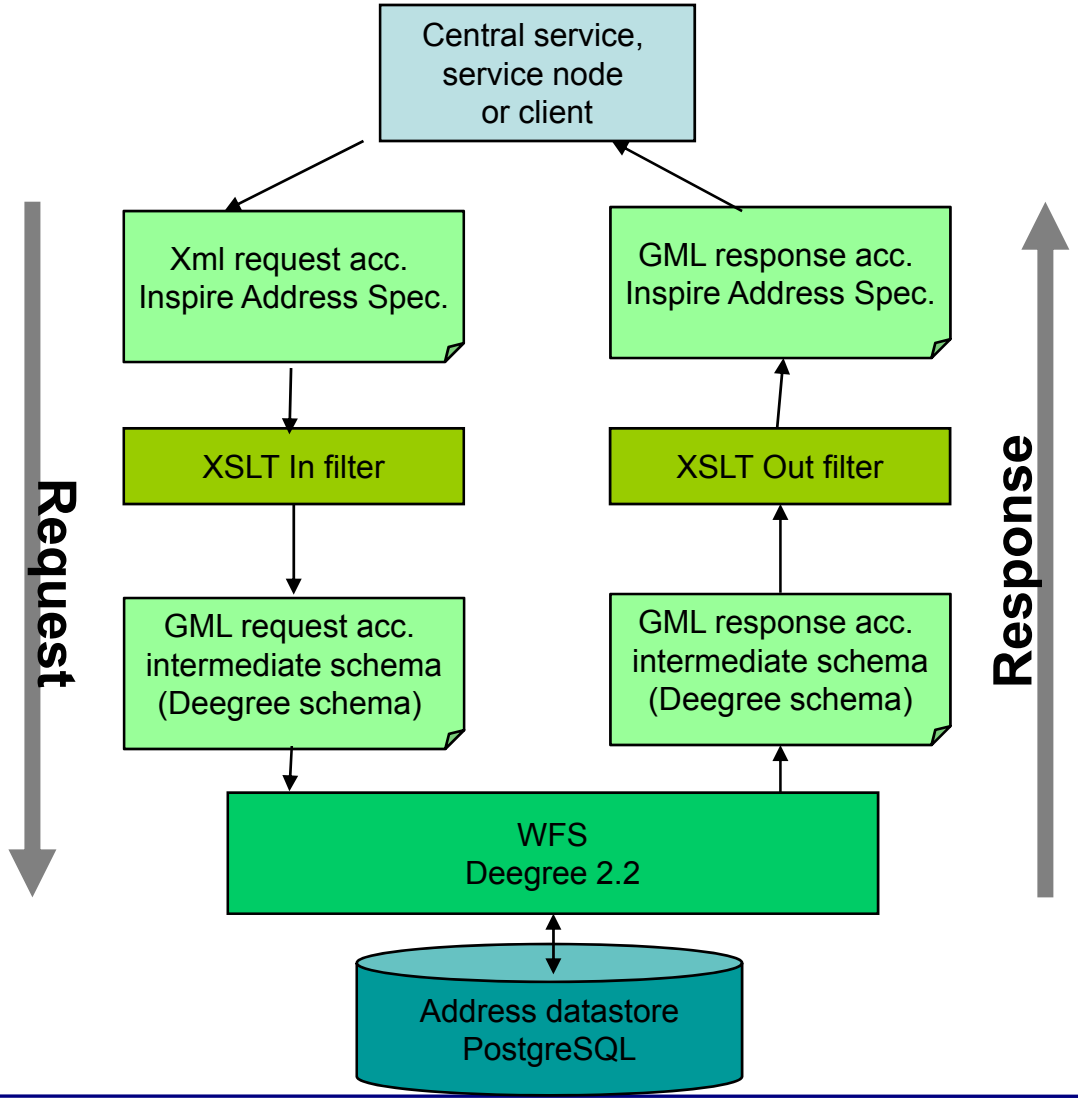
WFS pilot
Setup and configuration (3)

- Create input and output filters to make the service fully compliant to the Inspire Address GML schema. These filters are XSLT scripts installed on the Deegree WFS server.
- Configure Deegree to deliver the original Inspire Address GML schema as response of the DescribeFeatureType request

Euradin Locale Address WFS pilot

Service architecture



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Findings

- Existing software not cabable of handling complex GML schemas and GML documents (e.g. INSPIRE schemas)
- Workarounds must be made
- This applies to both middleware and clients

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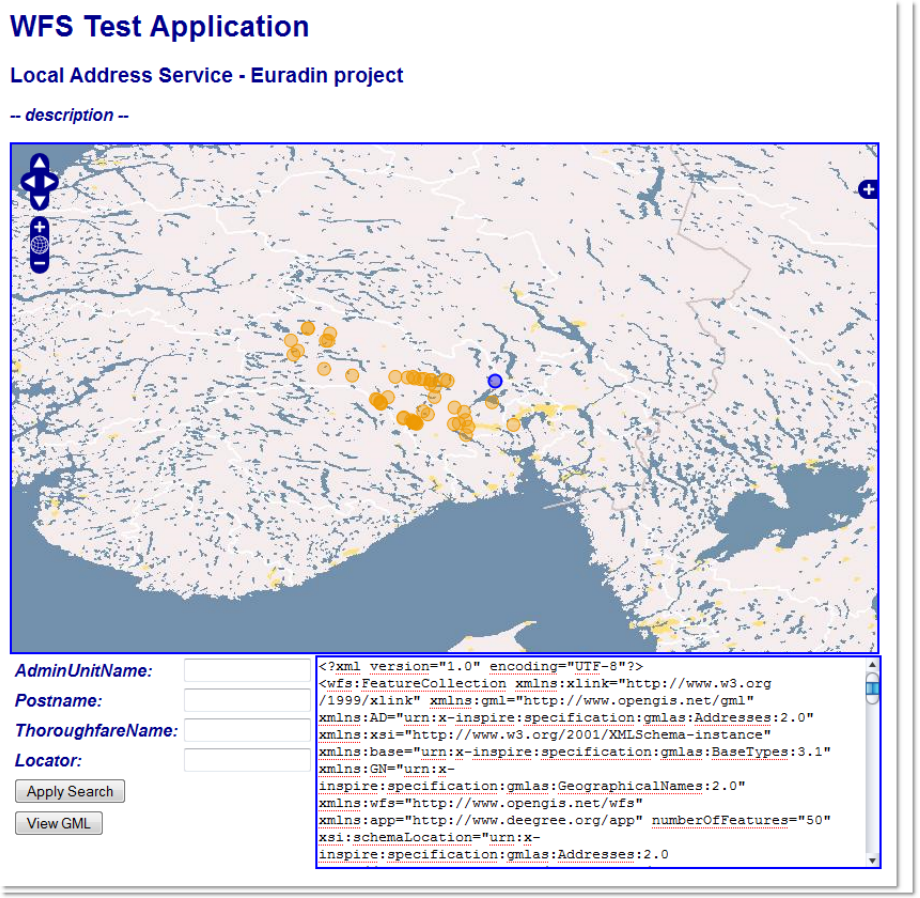
Pilot
http://euradin.statkart.no

Three ’clients’:

- One for test purposes
- Two with a map interface



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```
<wfs:GetFeature xmlns:wfs="http://www.opengis.net/wfs" xmlns:gml="http://www.opengis.net/gml"
   xmlns:ogc="http://www.opengis.net/ogc"
   xmlns:AD="urn:x-inspire:specification:gmlas:Addresses:2.0"
   xmlns:GN="urn:x-inspire:specification:gmlas:GeographicalNames:2.0"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xsi:schemaLocation="http://www.opengis.net/wfs http://schemas.opengis.net/wfs/1.1.0/wfs.xsd"
   outputFormat="text/xml; subtype=gml/3.1.1" maxFeatures="10" version="1.1.0" service="WFS">
   <wfs:Query typeName="AD:Address" srsName="EPSG:4258">
      <ogc:Filter>
         <ogc:And>
            <ogc:PropertyIsEqualTo>

<ogc:PropertyName>AD:component/AD:ThoroughfareName/AD:name/GN:GeographicalName/GN:spelling/GN:SpellingOfName/GN:text</ogc:PropertyName>
               <ogc:Literal>KARTVERKSVEIEN</ogc:Literal>
            </ogc:PropertyIsEqualTo>
            <ogc:PropertyIsEqualTo>
               <ogc:PropertyName>AD:component/AD:Locator/AD:designator/AD:LocatorDesignator/AD:designatorValue</ogc:PropertyName>
               <ogc:Literal>21</ogc:Literal>
            </ogc:PropertyIsEqualTo>
         </ogc:And>
      </ogc:Filter>
   </wfs:Query>
</wfs:GetFeature>
```