

# Open Data: Lost Without GI

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imaGIne Conference

# Open data

- Significant change for public & private sectors, academics and journalists
- Driven by promises of
  - Transparency
  - Efficiency
  - Economic growth

# The Web

- Open data made possible through the Web
- The Web works by consensus, not magic
- Global, interactive, multimedia platform
- Free

# Open data examples

road-injuries.info - Mozilla Firefox  
http://www.road-injuries.info/map.html

Map Satellite Hybrid

2D 3D Road Aerial Bird's eye Labels

Was bedeuten die Lautstärken?

Source	dB(A)
Club (Ohr an der Box)	100
Kreissäge (aus 1m Abstand)	90
Autobahn (10m vom Rand)	80

de Nederlandse overheid staan in het open data register.

overheid

in dataportaal van  
se overheid vindt  
over openbare  
data en het landelijk  
open Data met  
verwijzen naar open data  
bij overheidsorganisaties.

**Uitgelichte datasets**

- > Rijksbegroting 2012
- > Voertuiggegevens uit het Kentekenregister
- > Nederlandse wetgeving

Waiting for ecn.dev.virtualearth.net...

# Maps on the Web

- Open Street Map, Google Maps – easy, especially with the GeoLocation API
- Heavy lifting done server side to create tiles
- GeoJSON offers a developer-friendly way of encoding GI
- SVG and HTML5 Canvas can draw maps (eg SVG Tiling & Layering Module)

# A little bit of GML

```
<gml:featureMember>
  <ogr:world fid="F0">
    <ogr:geometryProperty>
      <gml:Polygon>
        <gml:outerBoundaryIs>
          <gml:LinearRing>
            <gml:coordinates>... coord list ...</gml:coordinates>
          </gml:LinearRing>
        </gml:outerBoundaryIs>
      </gml:Polygon>
    </ogr:geometryProperty>
    <ogr:NAME>Afghanistan</ogr:NAME>
    <ogr:GMI_CNTRY>AFG</ogr:GMI_CNTRY>
    <ogr:REGION>Asia</ogr:REGION>
  </ogr:world>
</gml:featureMember>
```

# A little bit of RDF

```
<http://sws.geonames.org/1149361/> gn:name "Afghanistan" ;  
  ogr:gmi_cntry "AFG" ;  
  ogr:region "Asia" ;  
  ex:geometryGML "{GML literal}" .
```

# One Little URI

`http://sws.geonames.org/1149361/`

- **‘Afghanistan’ in well over 100 languages**
- **Similar no. of Wikipedia articles (multiple languages)**
- **Centroid lat/long**
- **List of neighbouring features**
- **1662 related triples in data.europeana.eu**



# GeoSPARQL

- OGC standard for querying RDF with GI
- Standard (W3C) SPARQL with added GI back end

# GeoSPARQL example

```
SELECT ?link ?label ?pop
WHERE {
  ?city gn:name "Dublin" .
  ?link gs:nearby(?city 30) .
  ?link gn:name ?label .
  ?link gn:population ?pop
  FILTER ( xsd:int(?pop) < 50000)
}
```

Finds all the cities near Dublin with a population less than 50K

# GeoSPARQL example

## **Error: Server Error**

**The server encountered an error and could not complete your request.**

**If the problem persists, please [report](#) your problem and mention this error message and the query that caused it.**

# Well Designed URIs

```
http://location.data.gov.uk/  
so/ef/SamplePoint/bwmp.eaew/{bwmpId}
```

so = Spatial Object

ef = INSPIRE theme

SamplePoint = feature type

bwmp.eaew = namespace

bwmpId = local ID

Source: Alex Coley's slides <http://kwz.me/01>

# Persistent URIs

- Designed for persistence
- Dedicated hosting
- Re-use existing identifiers (make them de-referenceable)

## Recent case studies/guidance

<http://philarcher.org/diary/2013/uripersistence/>

# W3C Community groups

- Lightweight
- Anyone can join (incl. non-members)
- Need 5 people or more

# Current Community Groups

- **Locations and Addresses** {locadd}
  - Chaired by JRC INSPIRE team
  - Compiling SoA survey
- **Geospatial Semantic Web** {geosemweb}
- **SVG Mapping** {svgmap}

All at <http://www.w3.org/community/{id}>

# Missing?

- Point of Interest? (Community group?)
- Less reliance on pre-computed, cached tiles and layers? (OGC/W3C working together?)
- More help/info (ePSIplatform events?)
- Your idea?

Thanks