

WEB CARTOGRAPHY

Using Open Source Software

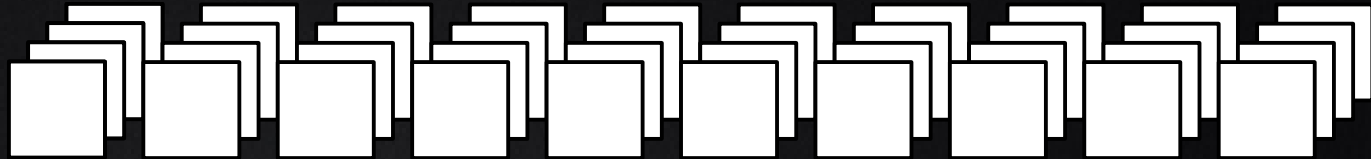
Edward Mac Gillavry
25 May 2012



ONLINE MAPPING

CLASSIC VALUE CHAIN

- Application



- Service



- Platform



- Data



WEB MAP = ART IMITATES LIVE



<http://www.flickr.com/photos/zachklein/3609217246>

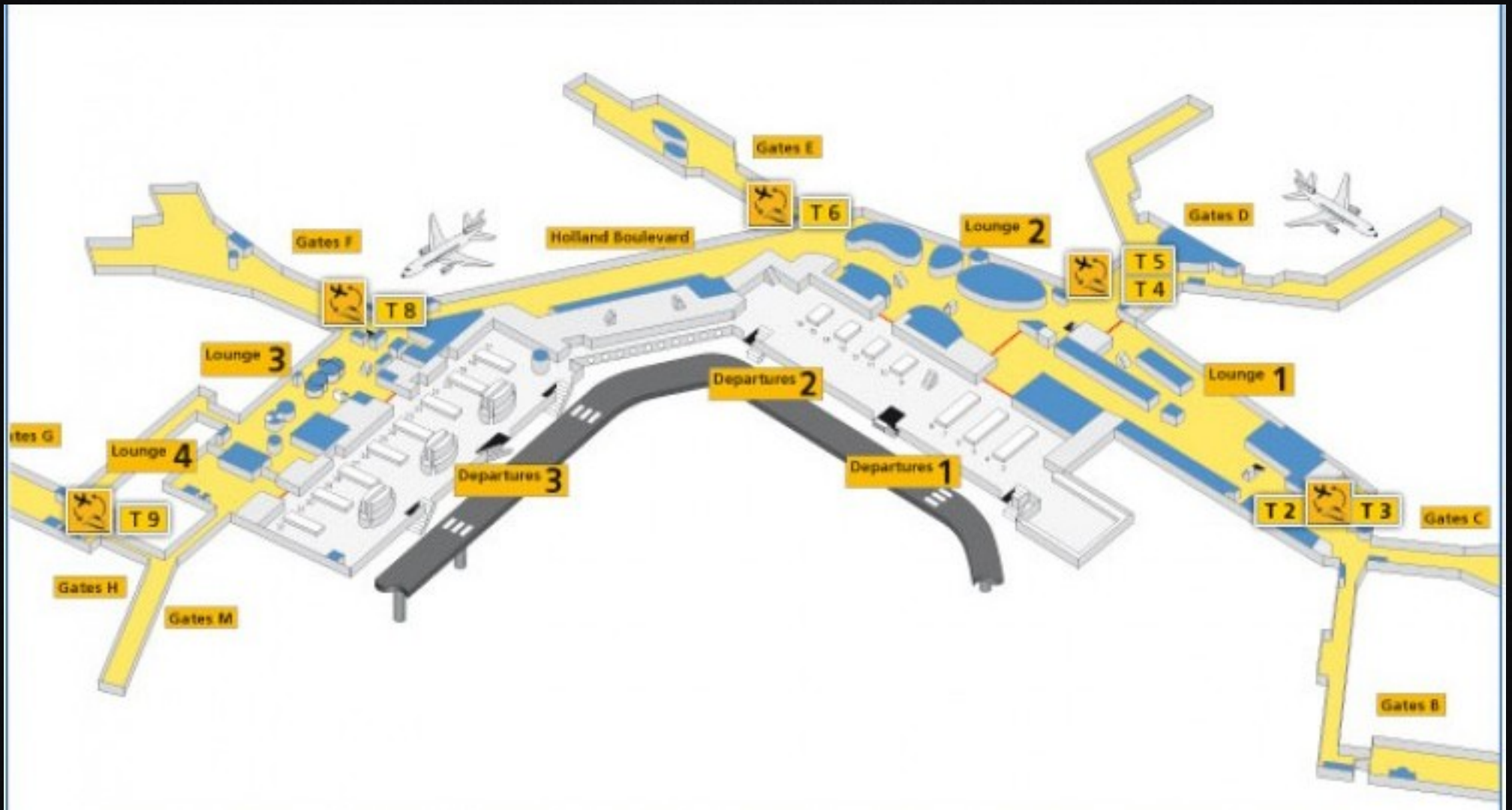
WEB MAPS = RED DOT FEVER





**WEB CARTOGRAPHY USING
OPEN SOURCE SOFTWARE**

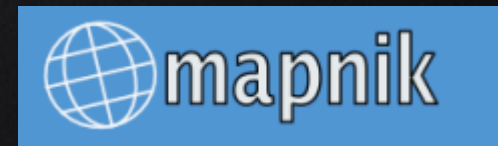
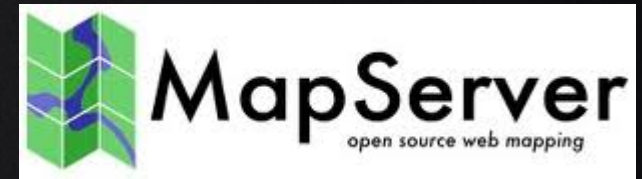
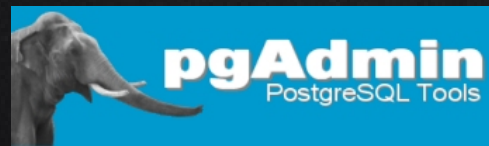
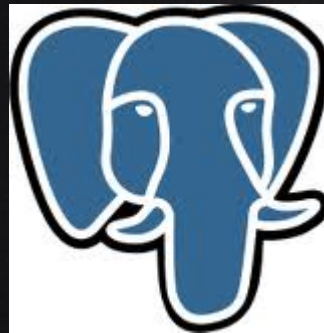
MAPPING AND THE TERMINAL



MAPPING AND THE TERMINAL



OUR OPEN SOURCE TOOLBOX



MAP FILES, SLDs, MapnikXML

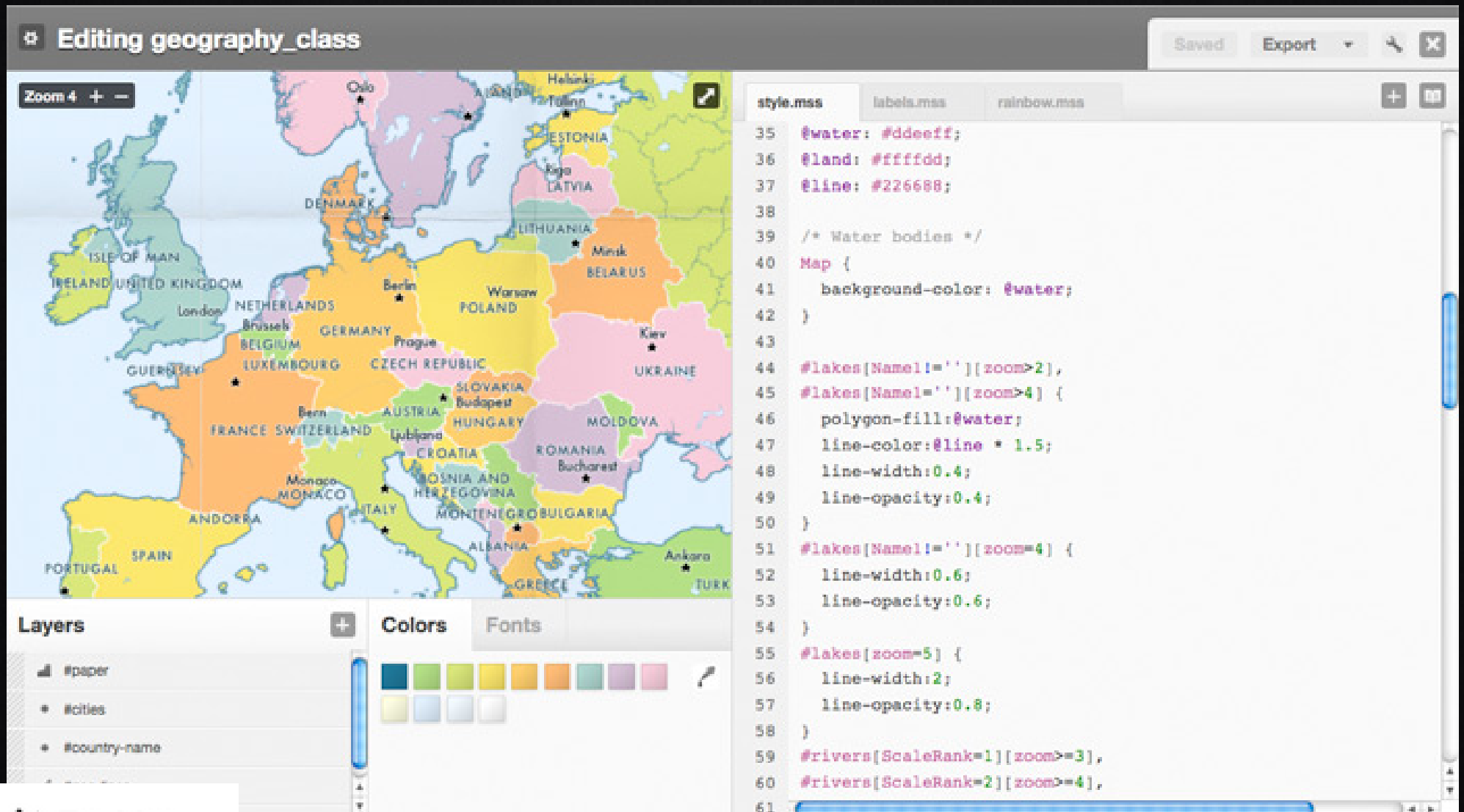
```
<?xml version="1.0" encoding="ISO-8859-1"?>
<StyledLayerDescriptor version="1.0.0"
  xsi:schemaLocation="http://www.opengis.net/sld StyledLayerDescriptor.xsd"
  xmlns="http://www.opengis.net/sld"
  xmlns:ogc="http://www.opengis.net/ogc"
  xmlns:xlink="http://www.w3.org/1999/xlink"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <NamedLayer>
    <Name>osm_line</Name>
    <UserStyle>
      <Title>A boring default style</Title>
      <Abstract>A sample style that just prints out a green line</Abstract>
      <FeatureTypeStyle>
        <Rule>
          <MinScaleDenominator>0</MinScaleDenominator>
          <MaxScaleDenominator>48000</MaxScaleDenominator>
          <Name>osm_line</Name>
          <Title>Start- en landingsbanen</Title>
          <Abstract>Visualisatie van start- en landingsbanen</Abstract>
          <ogc:Filter>
            <ogc:PropertyIsEqualTo>
              <ogc:PropertyName>aeroway</ogc:PropertyName>
              <ogc:Literal>runway</ogc:Literal>
            </ogc:PropertyIsEqualTo>
          </ogc:Filter>
          <LineSymbolizer>
            <Stroke>
              <CssParameter name="stroke">#ffffff</CssParameter>
              <CssParameter name="stroke-width">8</CssParameter>
              <CssParameter name="stroke-linecap">round</CssParameter>
              <CssParameter name="stroke-linejoin">miter</CssParameter>
            </Stroke>
          </LineSymbolizer>
        </Rule>
      </FeatureTypeStyle>
    </FeatureTypeStyle>
  </Rule>
  <MinScaleDenominator>0</MinScaleDenominator>
  <MaxScaleDenominator>48000</MaxScaleDenominator>
  <Name>osm_line</Name>
  <Title>Taxibanen</Title>
  <Abstract>Visualisatie van taxibanen</Abstract>
  <ogc:Filter>
    <ogc:PropertyIsEqualTo>
      <ogc:PropertyName>aeroway</ogc:PropertyName>
      <ogc:Literal>taxiway</ogc:Literal>
    </ogc:PropertyIsEqualTo>
  </ogc:Filter>
  <LineSymbolizer>
    <Stroke>
      <CssParameter name="stroke">#ffffff</CssParameter>
```

DESIGNERS V. TERMINALS

- Desktop GIS
 - QuantumGIS: export to Map file/SLD plugin
 - OpenJUMP: export to SLDs
 - ESRI ArcGIS: GeoCat Bridge plugin

- CSS-like
 - GeoServer CSS plugin
 - Cascadenik
 - Carto

TILEMILL: A CARTO EDITOR



The screenshot displays the TileMill web interface. On the left, a map of Europe is shown with various countries colored in a rainbow-like palette. The map is titled "Editing geography_class" and has a zoom level of 4. Below the map are panels for "Layers" (listing #paper, #cities, #country-name), "Colors" (a color palette), and "Fonts". On the right, a code editor shows the style.mss file with the following content:

```
style.mss
35 @water: #ddeeef;
36 @land: #ffffdd;
37 @line: #226688;
38
39 /* Water bodies */
40 Map {
41   background-color: @water;
42 }
43
44 #lakes[Name!=''][zoom>2],
45 #lakes[Name!=''][zoom>4] {
46   polygon-fill:@water;
47   line-color:@line * 1.5;
48   line-width:0.4;
49   line-opacity:0.4;
50 }
51 #lakes[Name!=''][zoom=4] {
52   line-width:0.6;
53   line-opacity:0.6;
54 }
55 #lakes[zoom=5] {
56   line-width:2;
57   line-opacity:0.8;
58 }
59 #rivers[ScaleRank=1][zoom>=3],
60 #rivers[ScaleRank=2][zoom>=4],
61
```

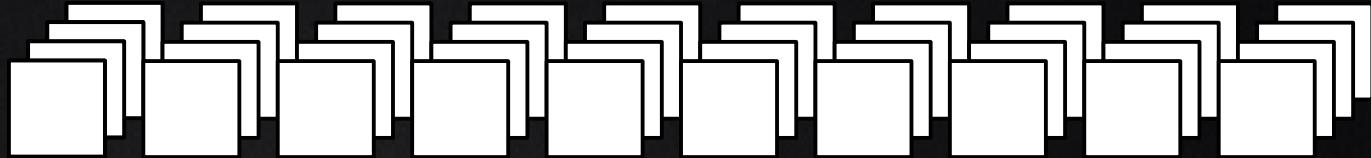


TileMill

Design beautiful maps

NEW VALUE CHAIN

- Application



- Service

YOU!

- Platform



- Data




Made with
Natural Earth

Free vector and raster map data @ naturalearthdata.com



PUBLIC SERVICE ON THE MAP

Zoek op locatie

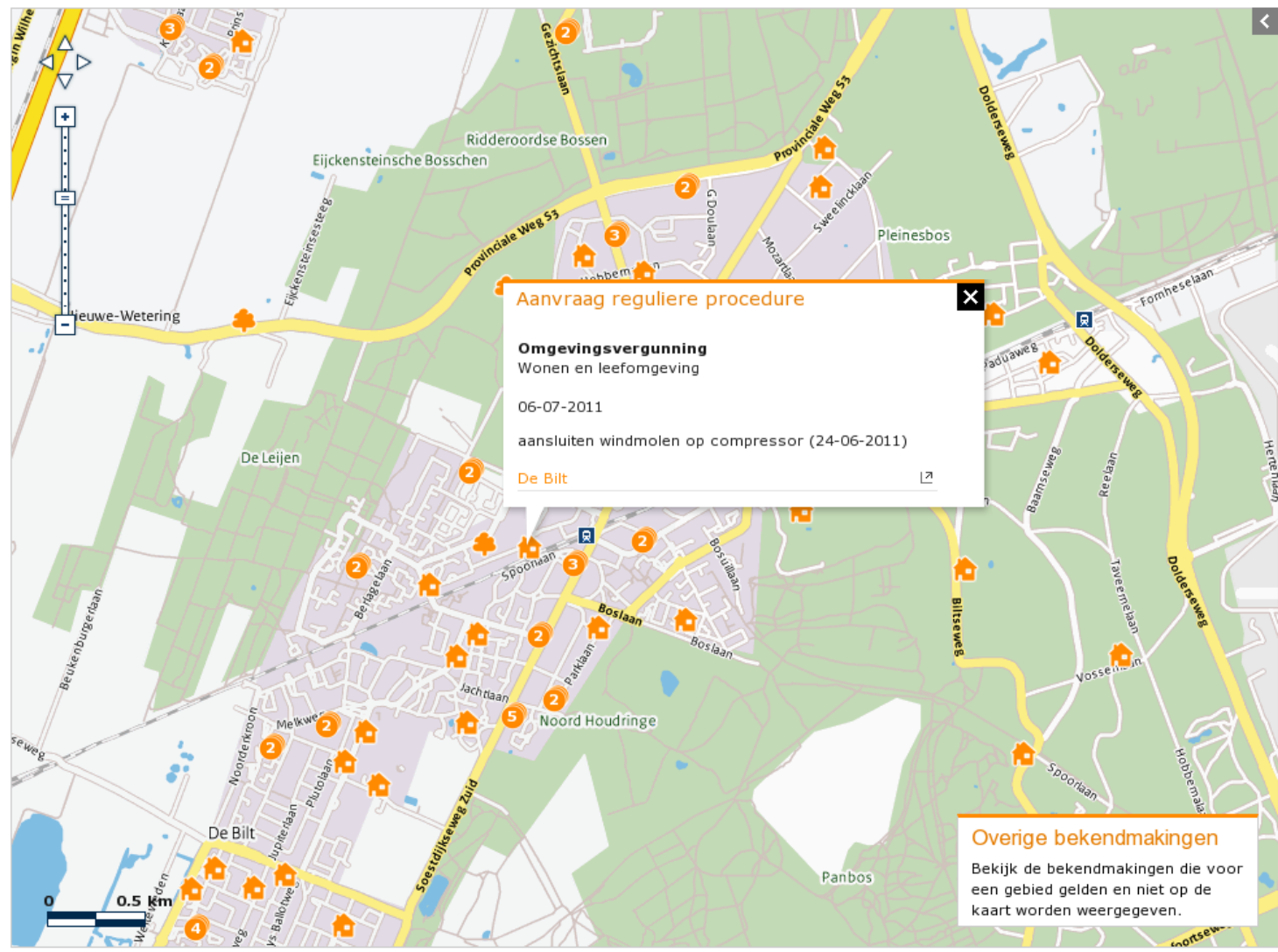


Postcode of plaatsnaam

Zoek locatie >

Onderwerpen

- Consumentenzaken
- Cultuur, sport en vrije tijd
- Familie, jeugd en gezin
- Natuur en milieu
- Overheid en democratie
- Rechtspraak en veiligheid
- Verkeer, voertuigen en wegen
- Wonen en leefomgeving
- Meerdere bekendmakingen



Aanvraag reguliere procedure

Omgevingsvergunning
Wonen en leefomgeving

06-07-2011

aansluiten windmolen op compressor (24-06-2011)

De Bilt

Overige bekendmakingen

Bekijk de bekendmakingen die voor een gebied gelden en niet op de kaart worden weergegeven.

Kaartgegevens: © CBS, Kadaster, OpenStreetMap-auteurs (CC-BY-SA).

DIR. GEN. PUBLIC WORKS

Rijkswaterstaat
Ministerie van Infrastructuur en Milieu

Home Water Wegen Actueel RWS-loket Over ons Kenniscentrum

zoek

Sitemap Uitgebreid zoeken

Home

Andere categorie: Werkzaamheden Selecteer kaart: Geplande werkzaamheden weg

Selecteer hinderklasse: Werk in voorbereiding Van: 12-08-201 Tot: 19-08-201

Zoek locatie: Adressen Griffioenlaan 2 Utrecht Zoek > Link

Postcode, plaatsnaam en/of adres

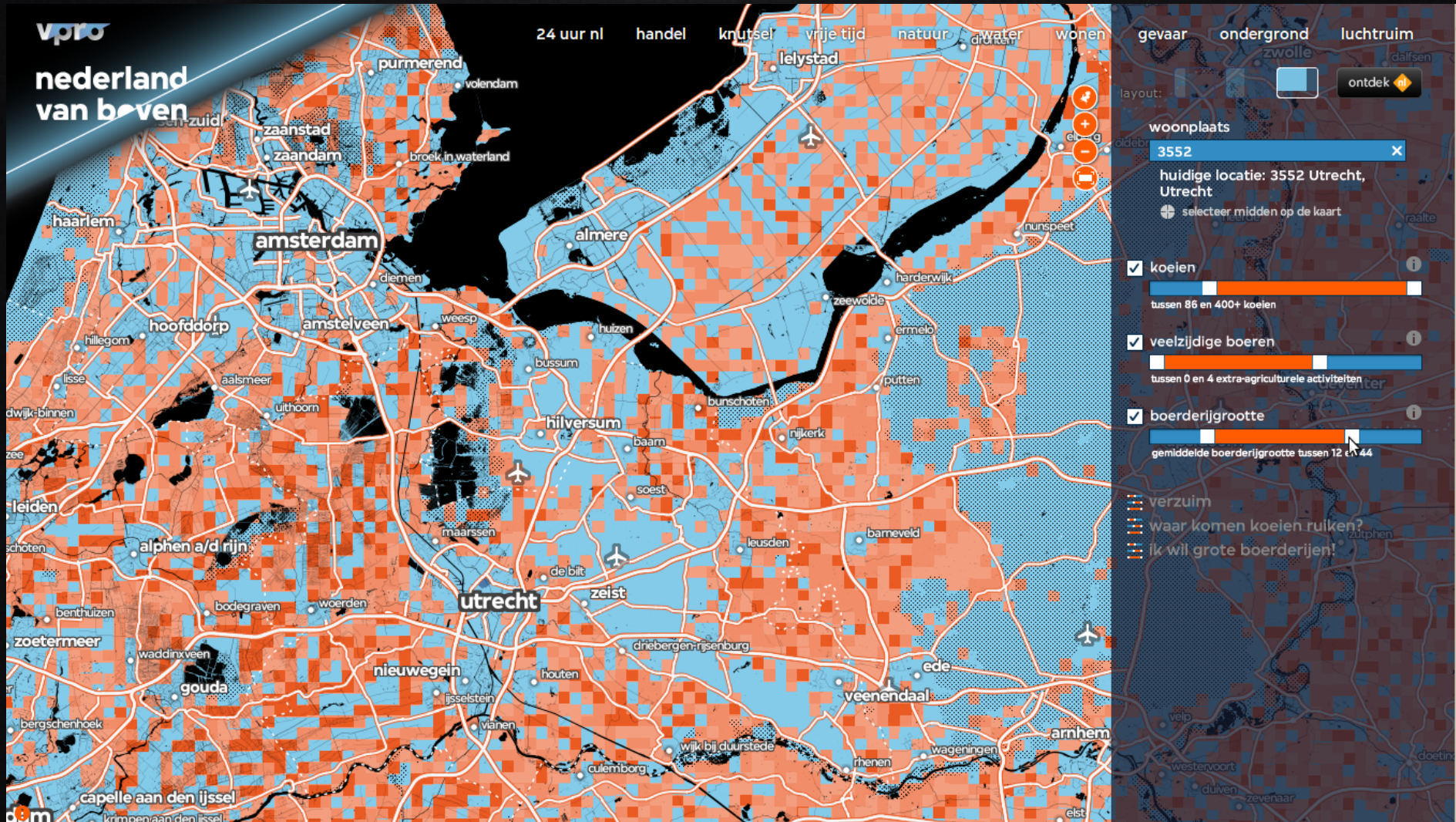
Print Stuur door

Gerelateerde informatie

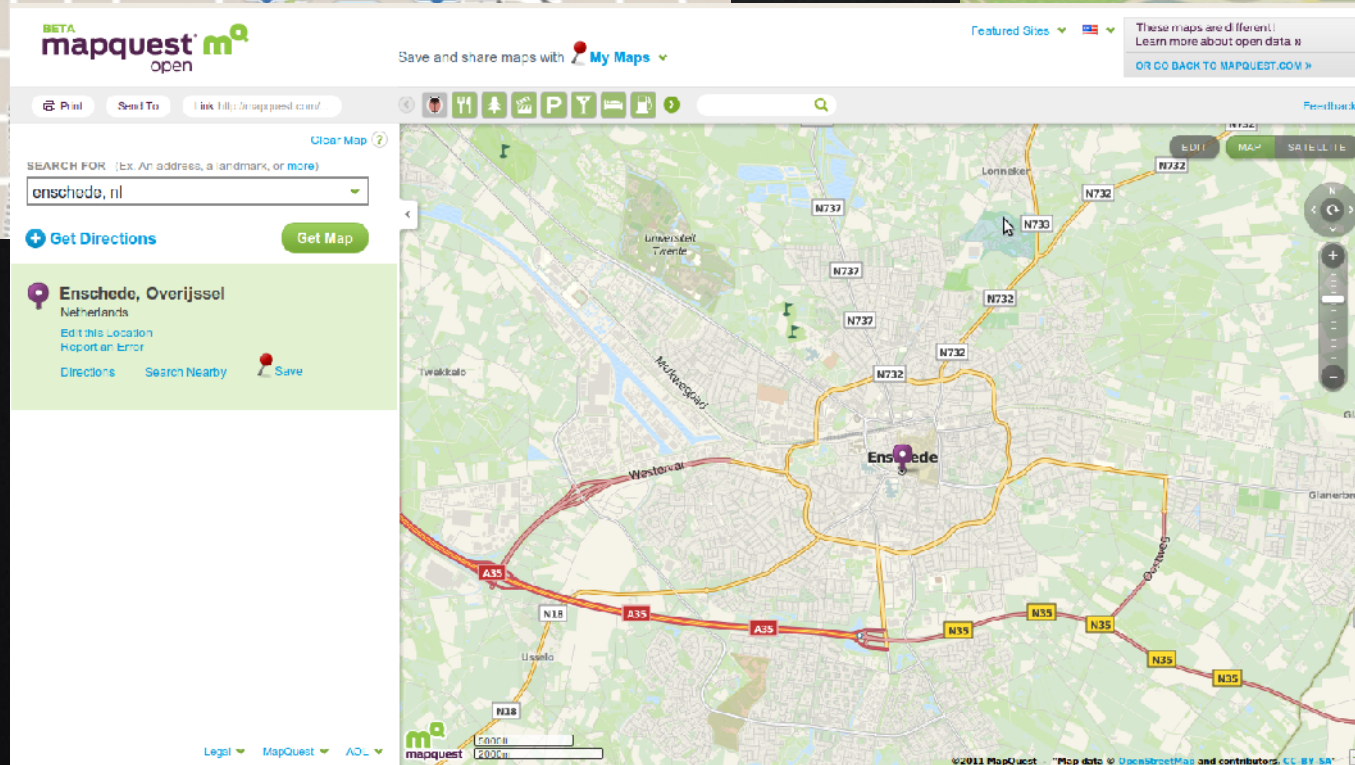
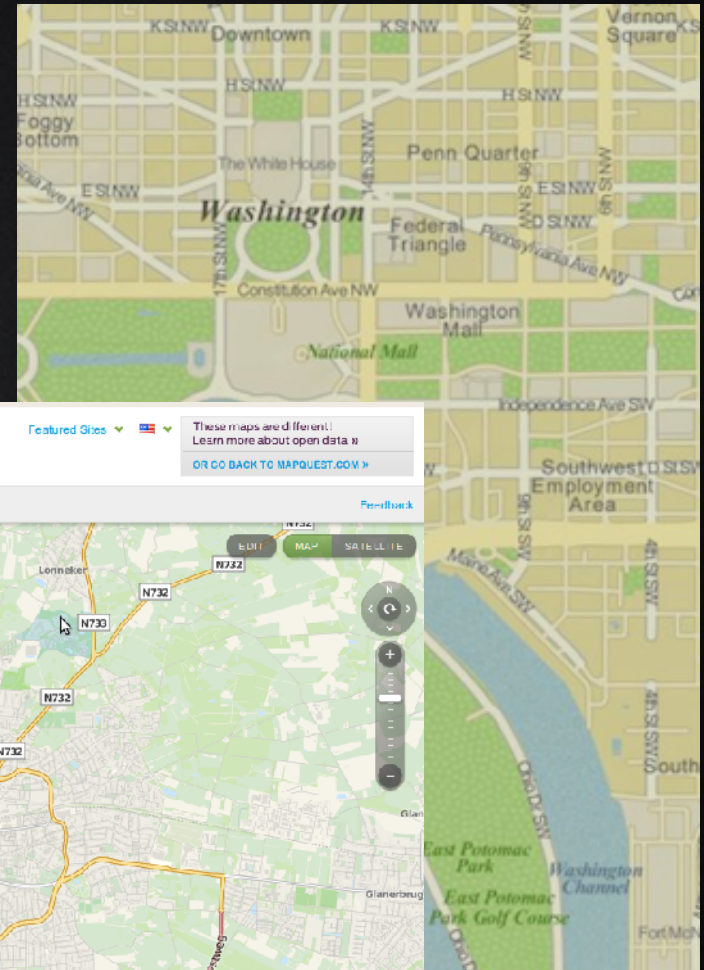
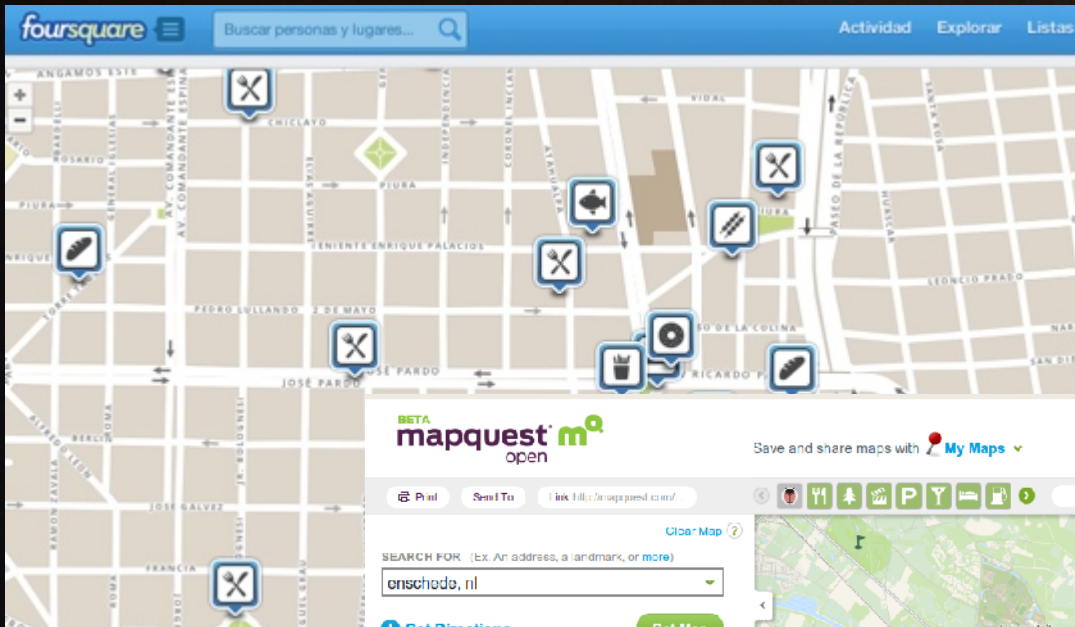
- > Actuele verkeersinformatie
- > Zie van A naar Beter voor hinderinformatie
- > Wegenoverzicht

MapServer
open source web mapping

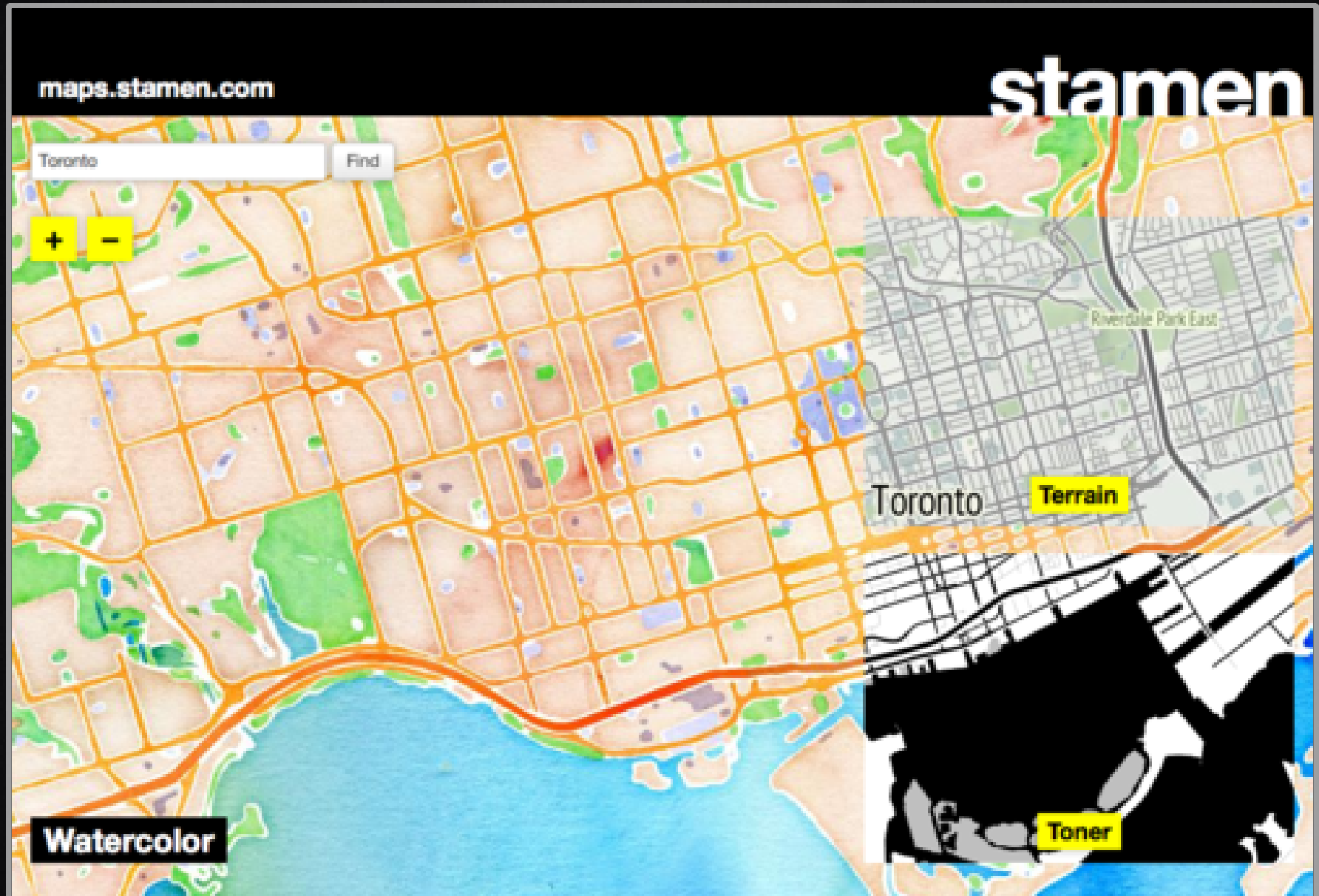
NETHERLANDS FROM ABOVE



SWITCH2OSM



STAMEN



Hey! Check out our new video "GeoCAT: Helping scientist to determine endangered species" [here](#).

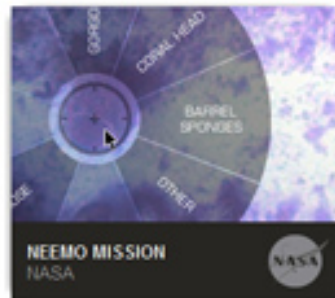


[Work](#) / [CartoSet™](#) / [Clients](#) / [About](#) / [Blog](#)

Working to improve our world, one project at a time.

From data visualization to citizen science, it is all about stories that matter

RECENT WORK



DEVELOPMENT SEED

Development Seed + About



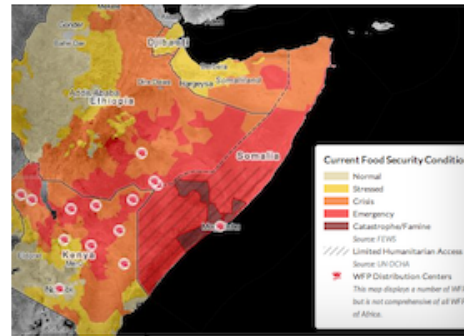
Projects

Team

Blog



Opening Over 2,000 Development Datasets at the World Bank



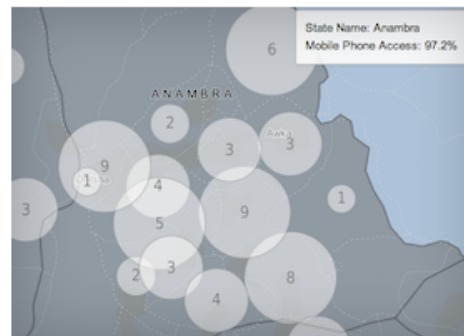
Battling Hunger in the Horn of Africa with the World Food Programme



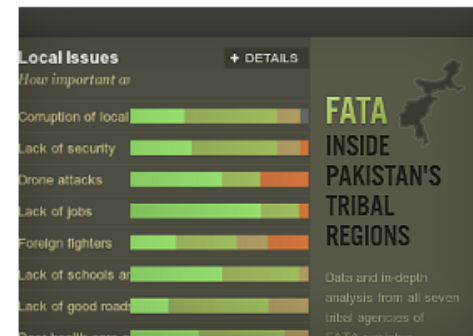
Violence Against Journalists in Afghanistan with Internews



Mapping Afghanistan Election Data with the National Democratic Institute



Subnational Microbanking in Nigeria with the Microfinance Information Exchange



Survey Data from Pakistan's Tribal Regions with the New America Foundation

Tracking the Pakistan Flood Response with Business Civic Leadership Center

Foreign Owned US National Debt Mapping how much we owe and to whom

Supporting Mobile Data Collection with UNICEF

Visualizing the Global Public Health Marke...

Opening Up 140,000 Miles of Road Data 1...

Mapping 14,000 U.S. School Districts

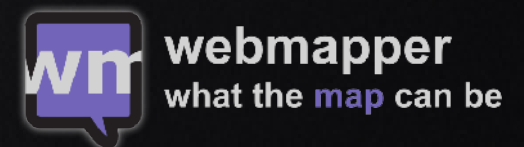
OSGEO.NL

- Dutch language chapter of OSGeo.org
- Promoting Open Source for Geo-ICT
- End users, developers, teachers, ... and you!
- Next event: **OSGeo.nl Day 28th** June in Velp
- More information: www.osgeo.nl

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THANK YOU

www.webmapper.net



WEBMAPPER

- R. Duivenvoorde & E. Mac Gillavry
- Haarlem/Utrecht (2009)
- Geo-applications for the (mobile) Web
- Unique Selling Point: Open Source Software
- OpenGeoGroep