OpenStreetMap integration into Wikimedia projects

A progress report on getting OpenStreetMap integrated into Wikimedia projects

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Who am I?

- A (inactive) MediaWiki developer
- A Wikipedia and OpenStreetMap contributor
- Someone who wants to increase collaboration between these projects

What is OpenStreetMap?

What is OpenStreetMap?

- A “free wiki world map”
- For maps what Wikipedia is for encyclopedias
- Freely licensed
- Community contributed

There's a lot of similarities
between OSM and Wikipedia

OpenStreetMap has community

- OSM has a thriving global community
- You can join it!

OpenStreetMap has conferences

OpenStreetMap has meetups

www.gfoss.it
gfoss.it
OpenStreetMap
stiamo realizzando...
.la mappa libera del mondo
openstreetmap.it

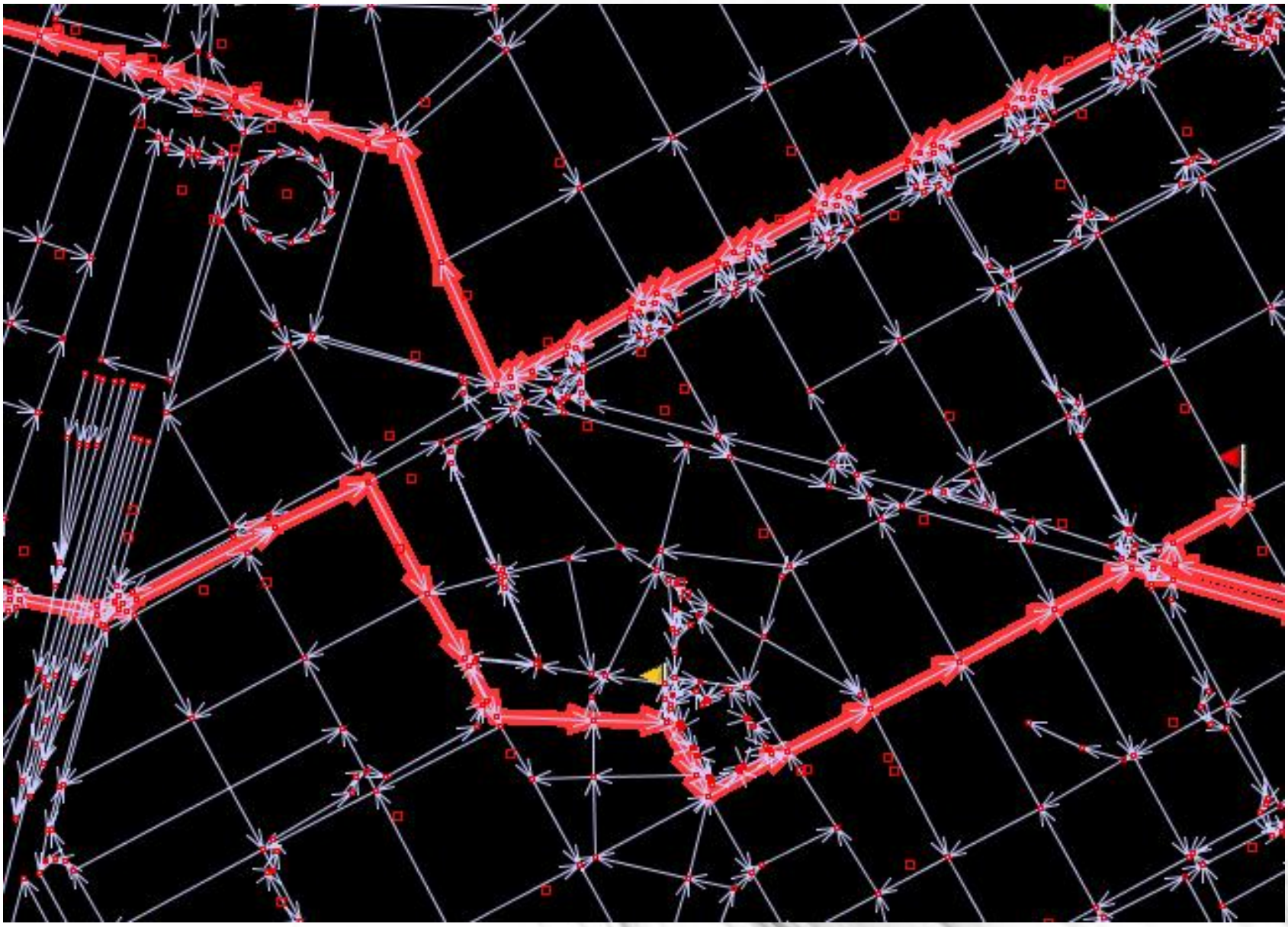
Active contributors

Wikipedia

OpenStreetMap

But most importantly...

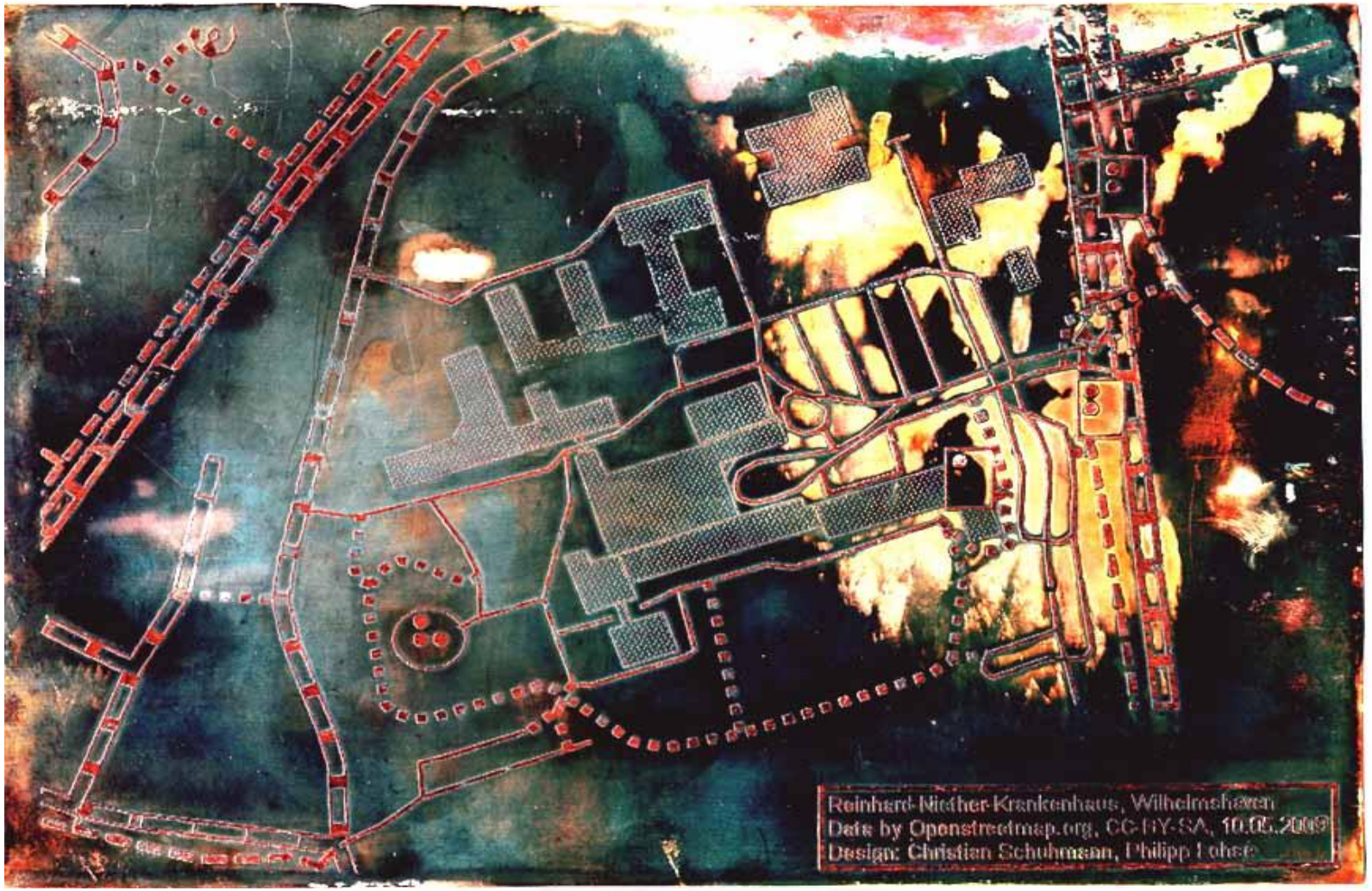
OpenStreetMap has vector data

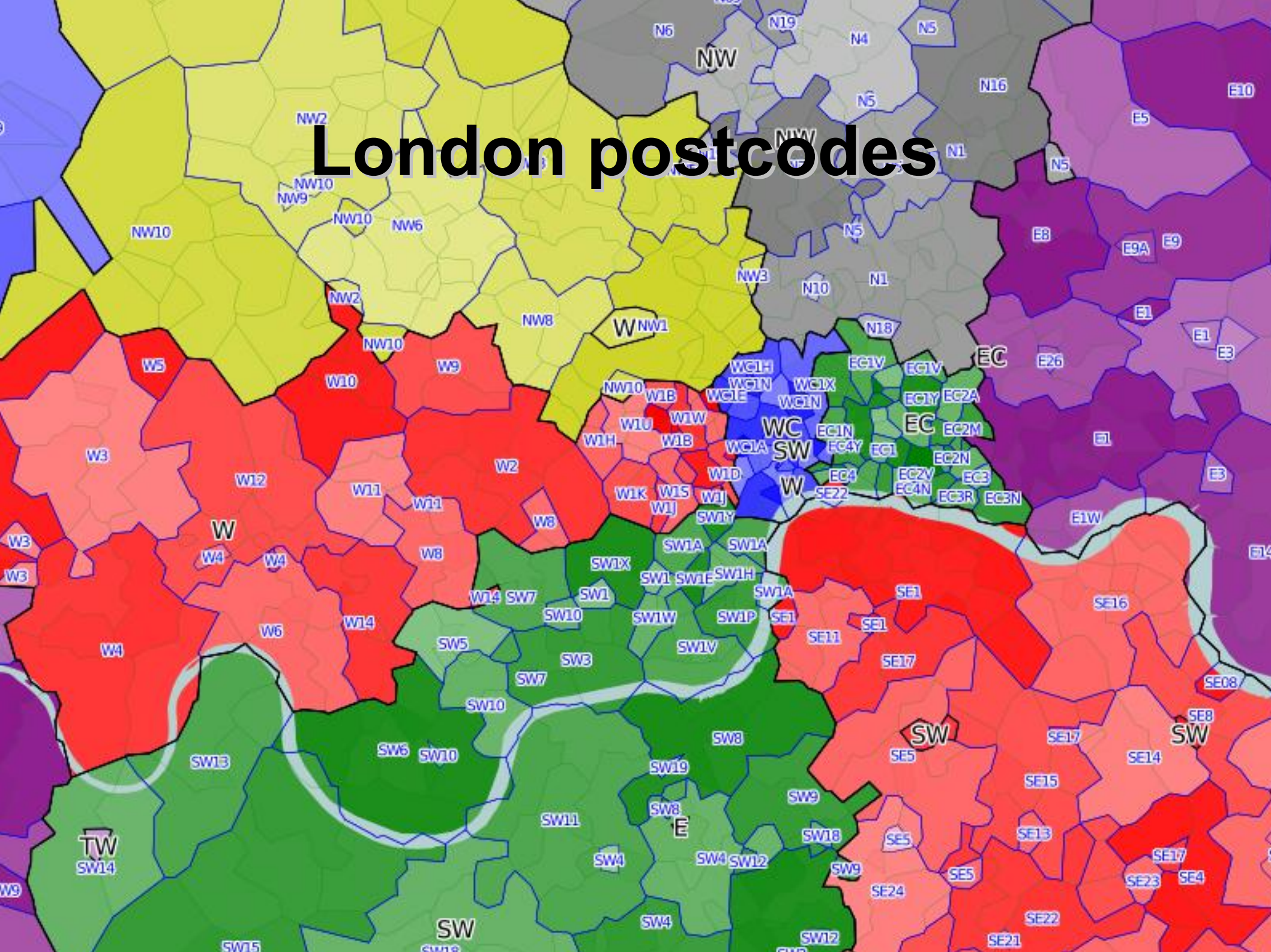


Which gives us all sorts of neat stuff

Gaza tourist map

Tactile maps for the blind




London postcodes
NW
N6
N19
N4
N5
N16
E10
E5
NW2
NW10
NW9
NW6
N1
E8
E9A
E9
NW3
N10
E1
E3
NW8
W
NW1
N18
EC
E26
W5
W10
W9
WC1H
WC1N
WC1X
WC1E
EC1V
EC1Y
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W1B
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WC
EC1N
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EC4Y
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EC4N
EC3R
EC3N
SE22
E1W
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SW1Y
SW1A
SW1X
SW1
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W14
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SW1W
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SE16
W6
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SW3
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SE08
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SE5
SE14
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SW11
SE13
TW
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SE4
SE22
SW15
SE21

Why not use Google Maps?

...or some other big proprietary map?

- It doesn't have any of those things:
  - A free license
  - Community
  - Vector data

So let's do it!

Developer meet-up 2009

- Held in Berlin by Wikimedia Germany
- A bunch of people interested in OSM ↔ WM integration were there
- Plans were made on how to accomplish this

“OpenStreetMap maps will be added to Wikimedia projects”

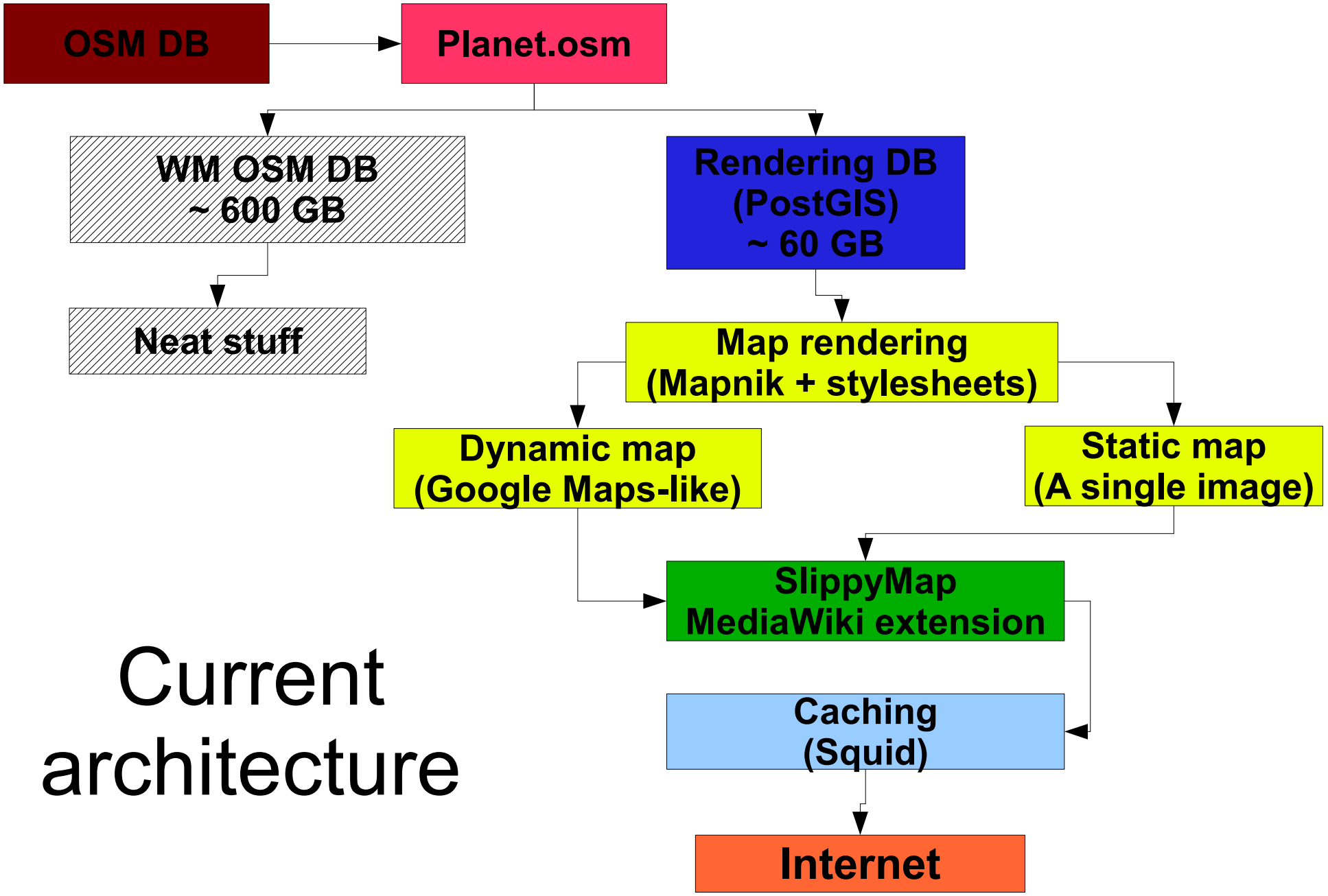
- Wikimedia will set up a database to mirror the OSM data (Planet.osm)
- Wikimedia will set up its own rendering infrastructure for rendering tiles & other maps from the OSM data
- The existing MediaWiki extensions for displaying OSM data in a MediaWiki article will be improved to work acceptably in production on Wikimedia servers

Design goals

- The maps should also work for non-JavaScript enabled browsers
- The tools have to be stable & deployable on Wikimedia servers
- Everything we're generating has to be cachable so we can throw it at the squids

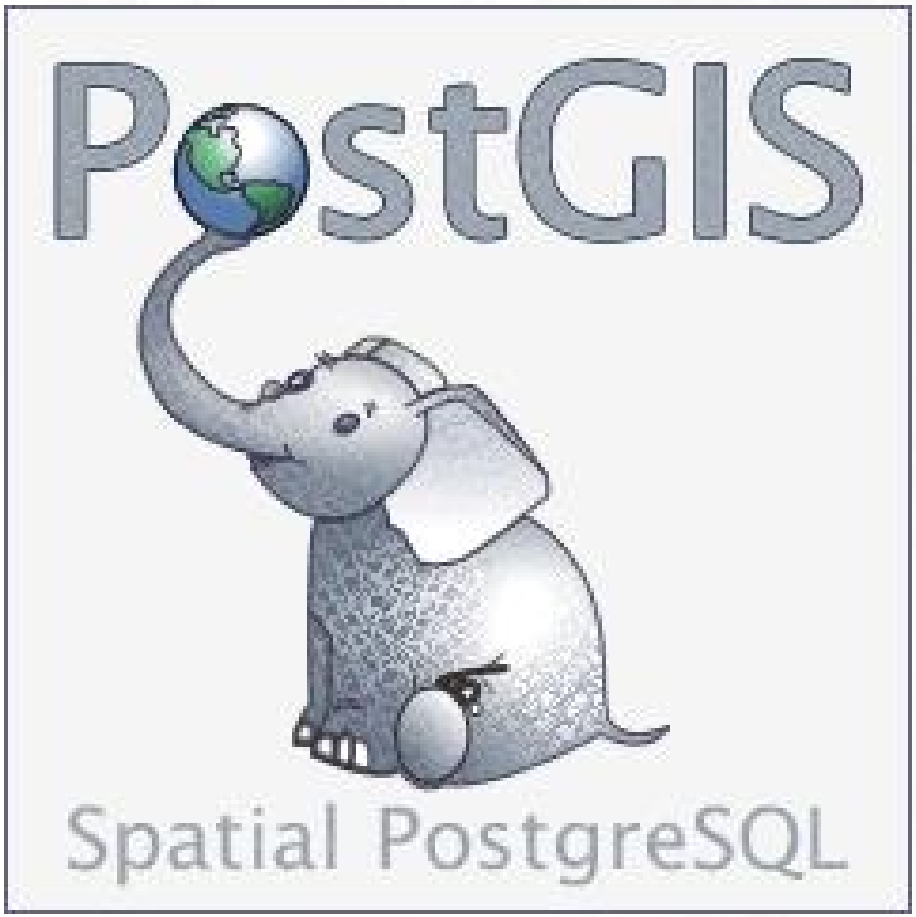
We've done that...

And this is what we have **now**



Current architecture

The (rendering) database



- A PostGIS database with a limited OSM dataset used for rendering
- Around 60 GB
- We'll set up a full OSM database later

Map rendering

- Rendered using mapnik
- Currently using the OpenStreetMap stylesheet
- Rendered in all 279 Wikipedia languages
- We'd like to do more rendering variations

Multilingual rendering

- Done by looking at the local name of objects
- Not nearly all objects have translations
- The OpenStreetMap database needs a big i18n effort

Tags on the Brussels node:

- place = city
- capital = yes
- name:fr = Bruxelles
- name:nl = Brussel

Bruxelles & Brussel

The Extension

- Called “SlippyMap”
- Really basic
- An improved version of the extension that was used on the OSM wiki
- You can use it with a <slippymap> tag:

```
<slippymap
    lat = 64
    lon = -21
    zoom = 12
    width = 400
    height = 300
    mode = osm />
```

The Extension / Dynamic / Static

What comes next?

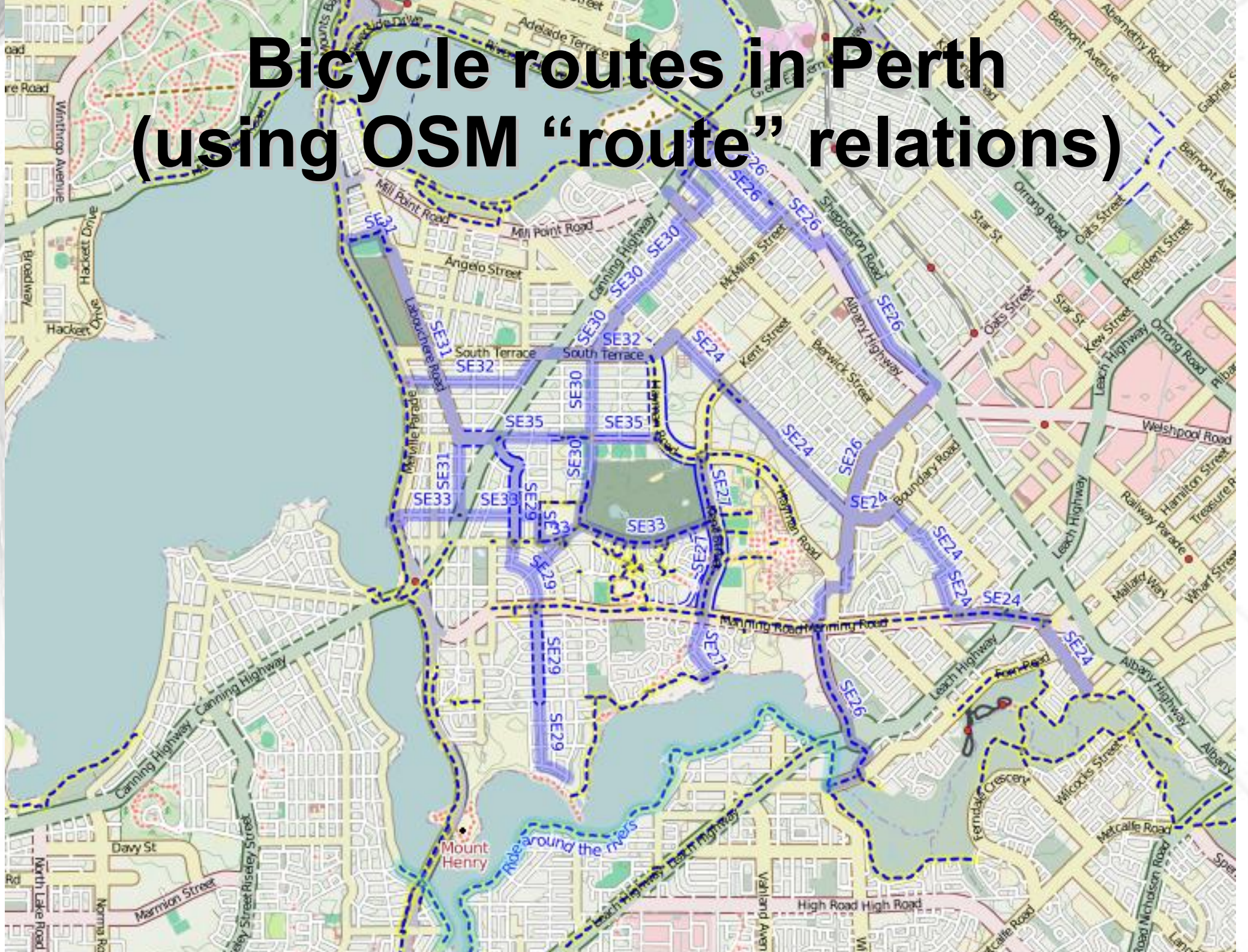
- Getting what we have ready for production
  - Fixing bugs
  - Testing the stack under load
  - Rolling it out on some wiki (German?) for testing
  - Global deployment
  - Adding more exciting features

Want to help?

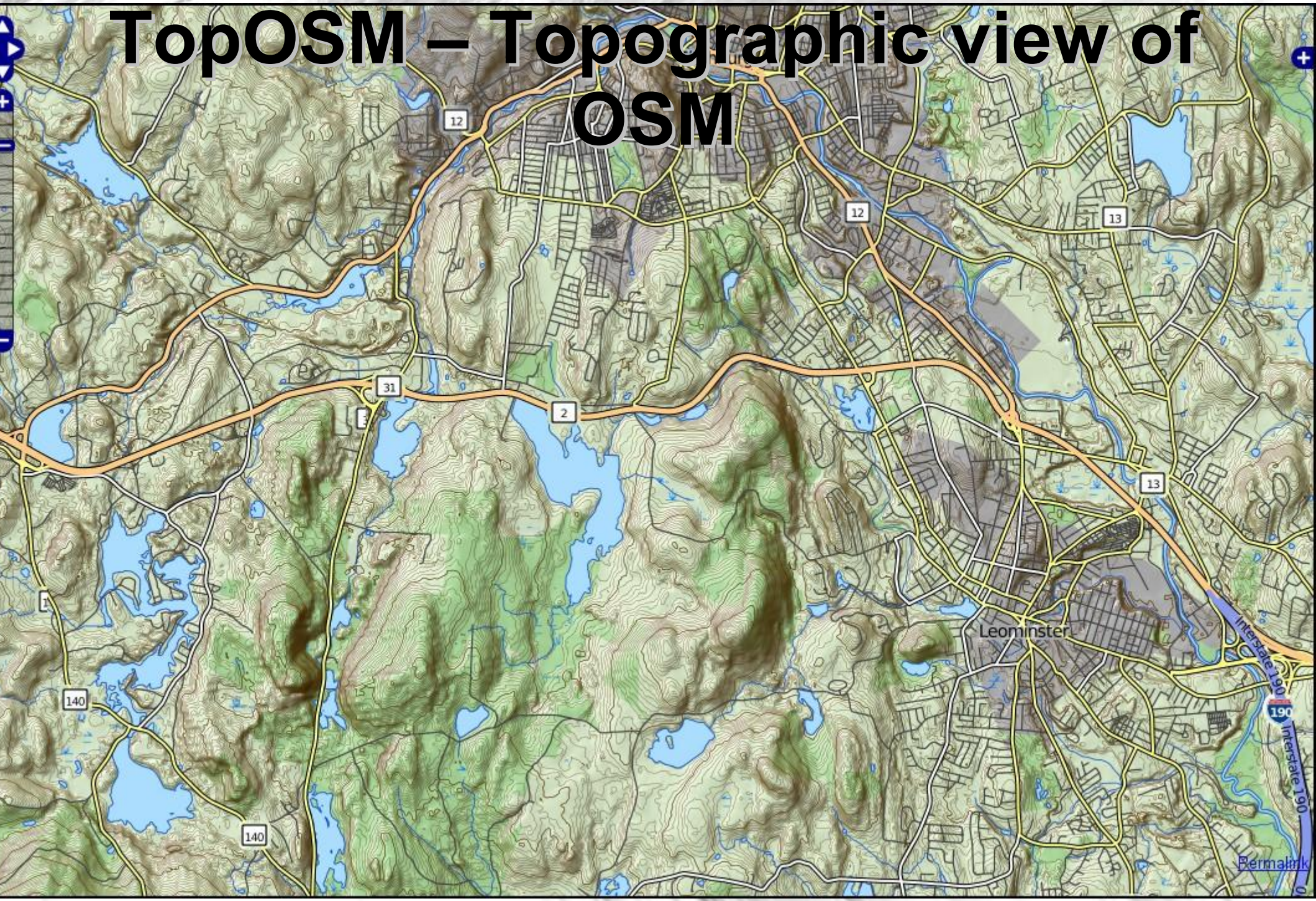
- Finding out what needs doing:
  - A **maps-l** mailing list on lists.wikimedia.org
  - The **Maps** component in MediaZilla
- Programming to be done in C/C++/Python/JavaScript/PHP
- UI testing: http://xrl.us/osmwm
- Other interesting projects

Neat stuff we can (hopefully) do in the future...

Bicycle routes in Perth (using OSM “route” relations)

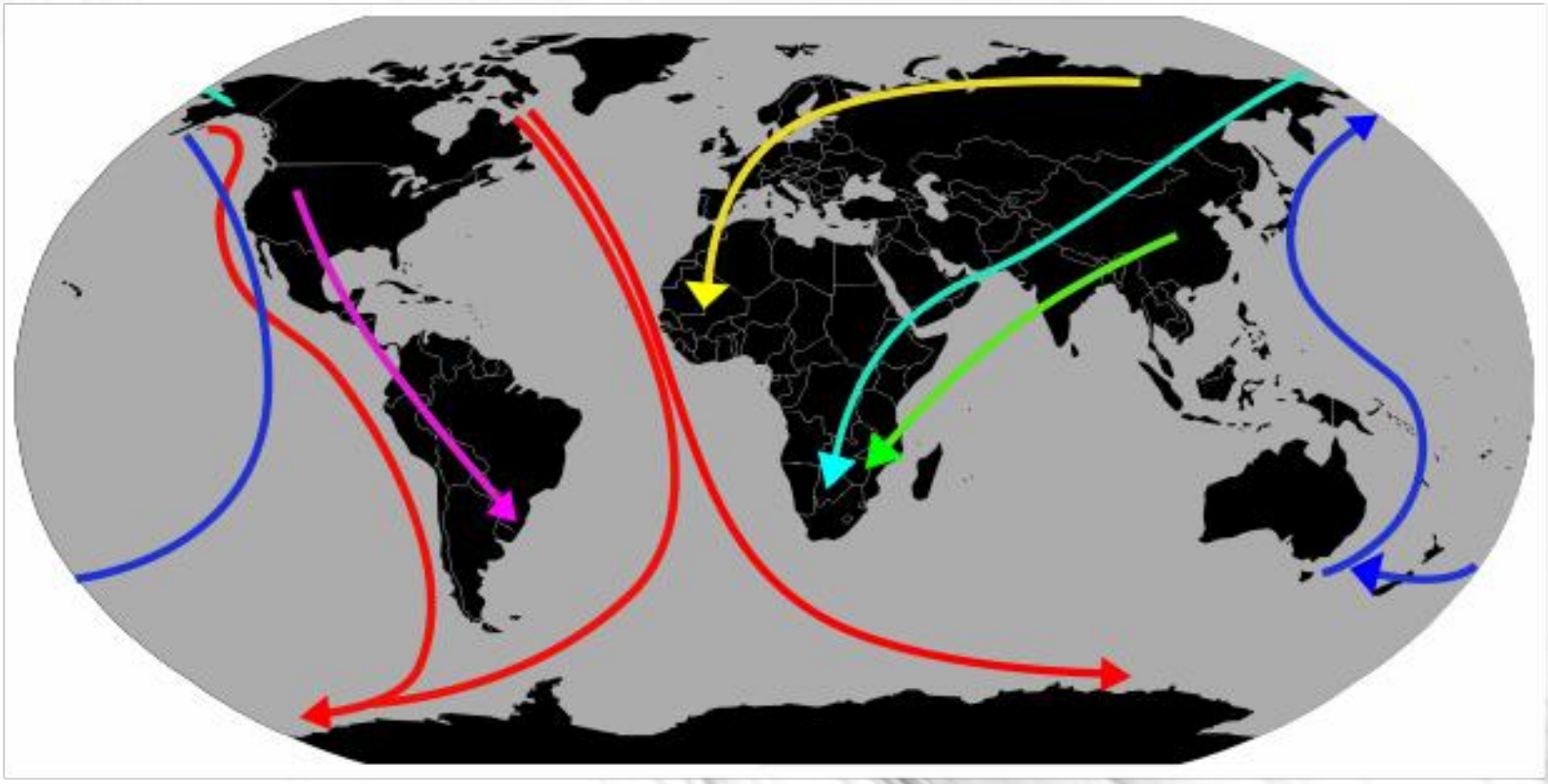


TopOSM – Topographic view of OSM



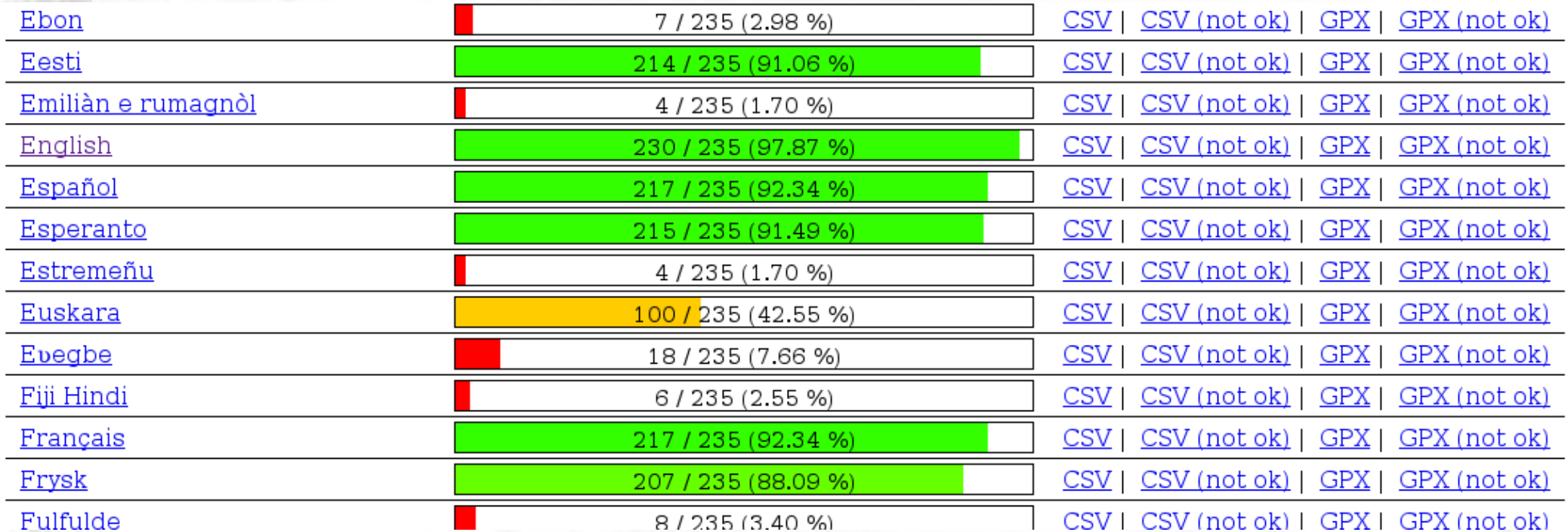
Renderings with OSM data + Other data

Species migrations



Coolserver tools

Multilingular Country-List



http://cassini.toolserver.org/~mazder/multilingual-country-list/

Thanks!

- To Wikimedia for sponsoring me to come here
- To Wikimedia Germany for sponsoring me to their hackathon

Questions?