



SotM-EU 2014

# State of Osmose QA

Error reported at Karlsruhe

On 2014-06-13

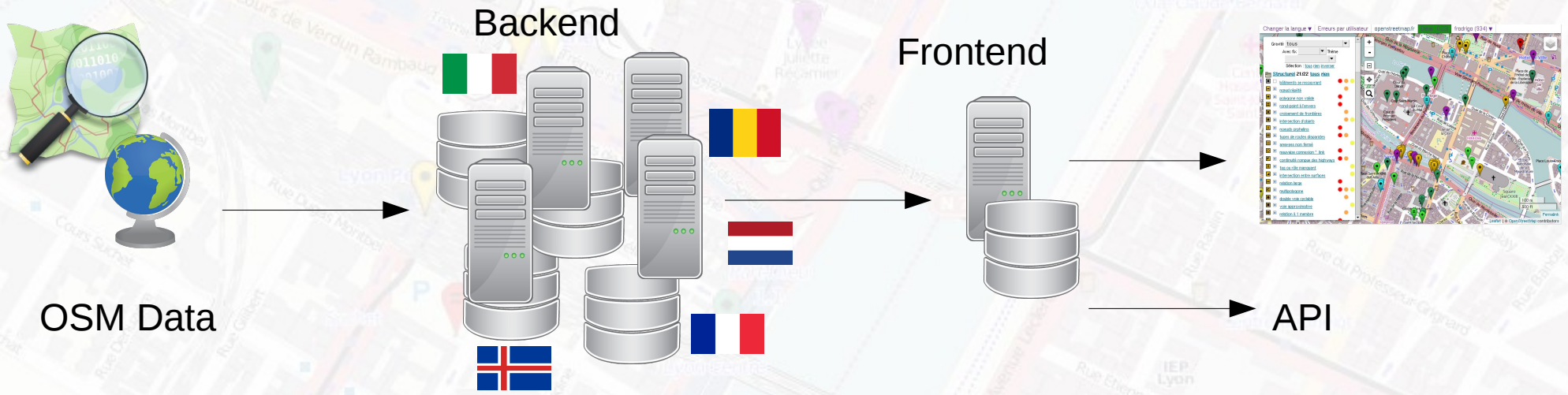
Frédéric Rodrigo <frederic@carte-libre.fr>

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<http://osmose.openstreetmap.fr>

# Osmose QA ?

- 📍 Quality tool
- 📍 Data analysis
- 📍 Errors detection with rules
- 📍 Missing data from OpenData
- 📍 Integration suggestions



Severity 1+2 only ▼

Fixable ▼ Topic

Select: all nothing invert

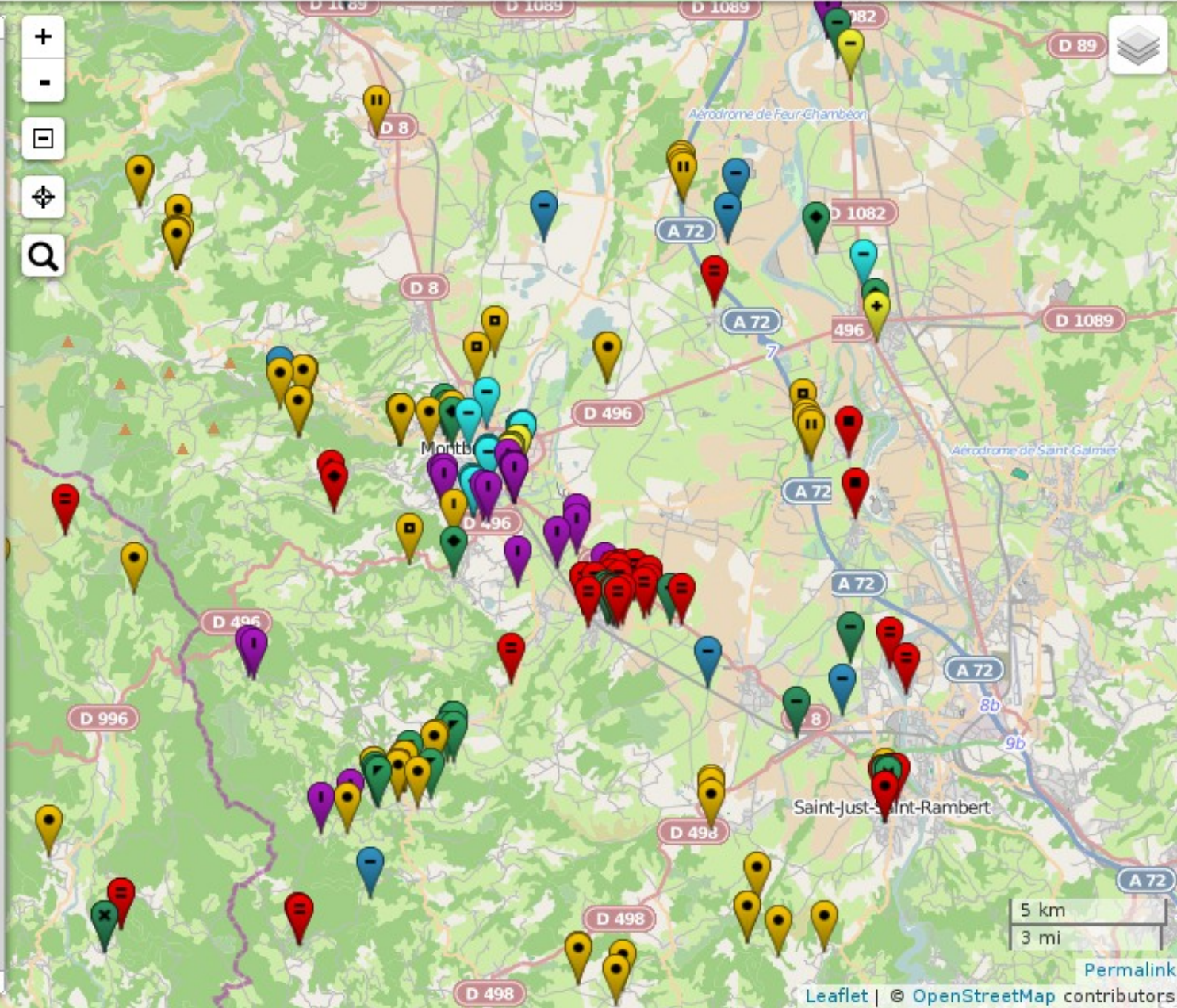
Structure 20/21 all nothing

- overlapping building
- duplicated node
- invalid polygon
- reverse roundabout
- boundary intersect
- objects overlap
- orphan nodes
- sudden highway type change
- bad \*\_link highway
- broken highway continuity
- big relation
- multipolygon
- double cycleway
- 1-member relation
- not-connected highway/cycleway
- waterway
- duplicate geometry

Missing tags 8/8 all nothing

- junction=roundabout
- oneway
- street numbers
- highway

Map navigation controls including zoom in (+), zoom out (-), full screen, pan, and search (magnifying glass) icons.



# Frontend

- 📍 Slippy map of errors
- 📍 Filters
- 📍 Export

1 **Toponymy** ? 5  
Missing capital letter for: ficelle E

2 [way 224128495](#) [rawedit](#) [josm](#) [edit](#)  
~ name = Chemin de [fix-josm](#) [fix-edit](#) 6  
la Ficelle

3 name = Chemin de la ficelle  
highway = track  
Error reported on: 2014-03-18

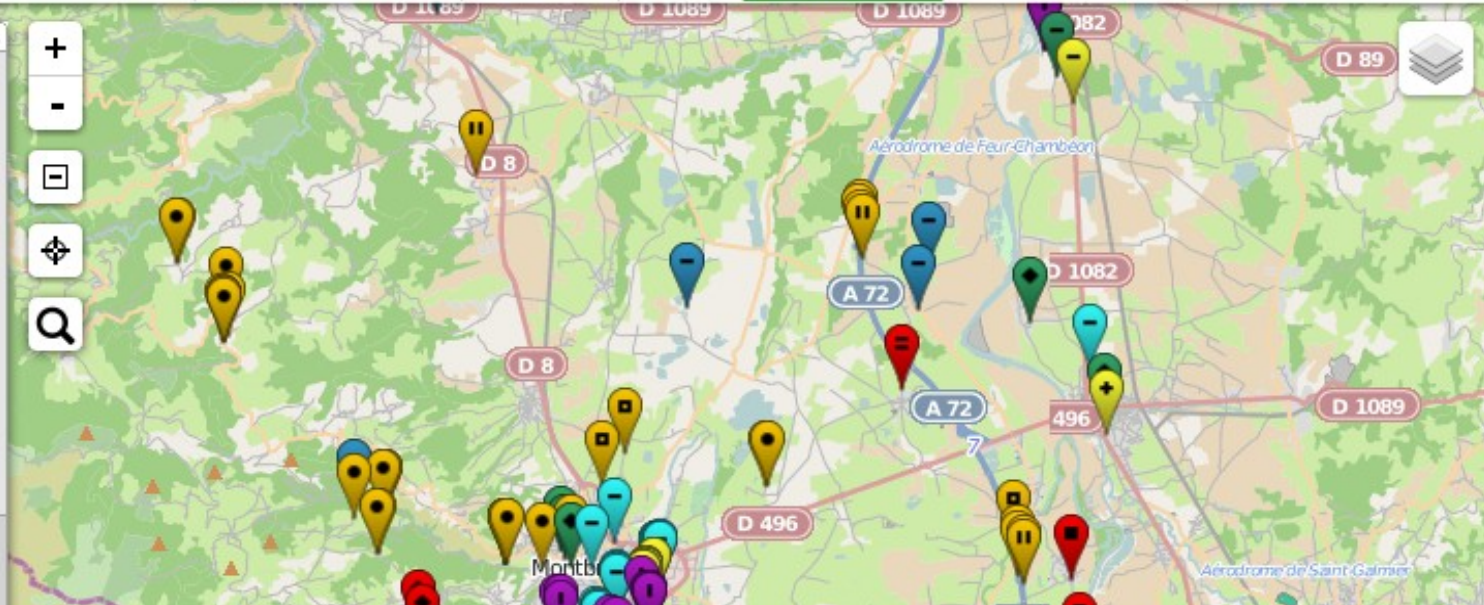
4 [osmlink](#) [potlatch](#) [josm](#) [zone](#)  
change status : [corrected](#) [false positive](#) 7

Change language ▾ Errors by user Relation analyser openstreetmap.fr Statistics Help ▾ Delay: 0.26d frodrigo (963) ▾

Severity **1+2 only** ▾  
Fixable  Topic   
Select: [all](#) [nothing](#) [invert](#)

**Structure 20/21 all nothing**

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# Frontend

- 📍 Available on mobile
- 📍 Tags editor
- 📍 Fixable online

## Tags Editor

[node 2483753162](#)

```
- bench=yes
= shelter=yes
= train=yes
= public_transport=platform
= railway=station
~ name=Bellevue
+ operator=SNCF
+ uic_ref=8772686
+ source=SNCF - 06/2013
+
```

Cancel

Valid

Change language ▼ Errors by user Relation analyser openstreetmap.fr Statistics Help ▼ Delay: 0.26d frodrigo (963) ▼

Severity 1+2 only ▼

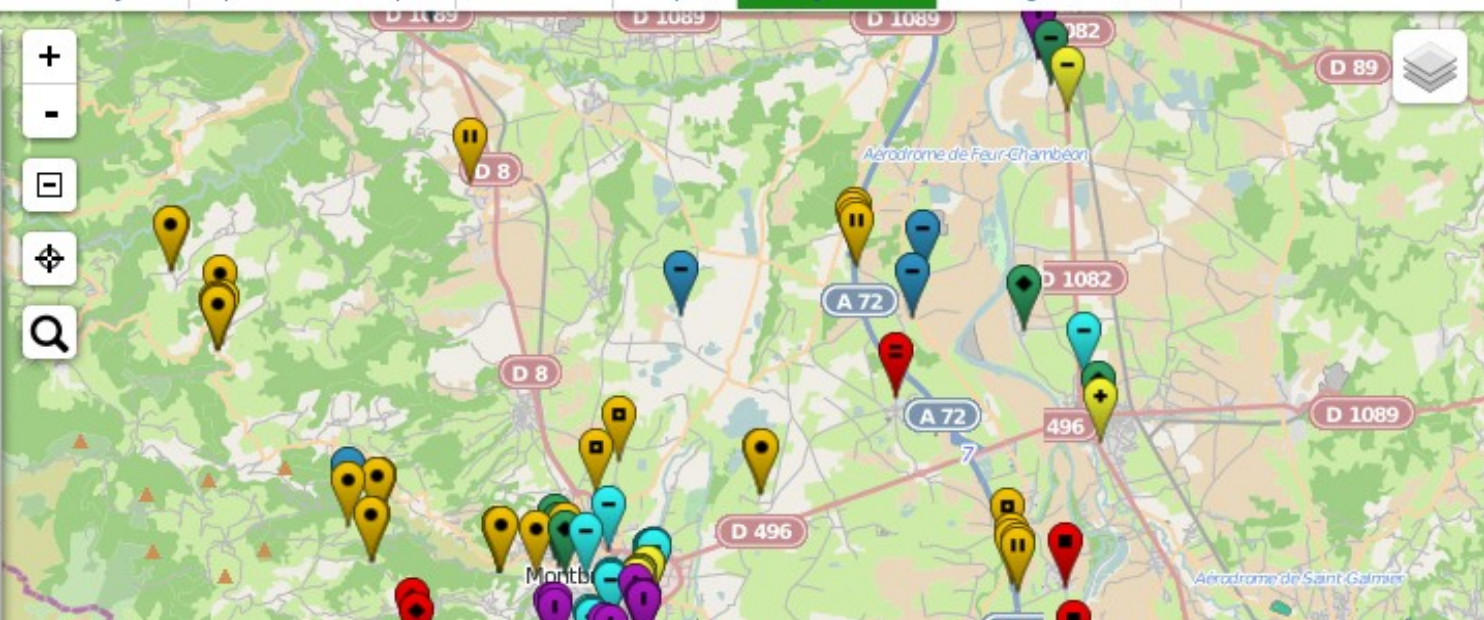
Fixable ▼ Topic

▼

Select: [all](#) [nothing](#) [invert](#)

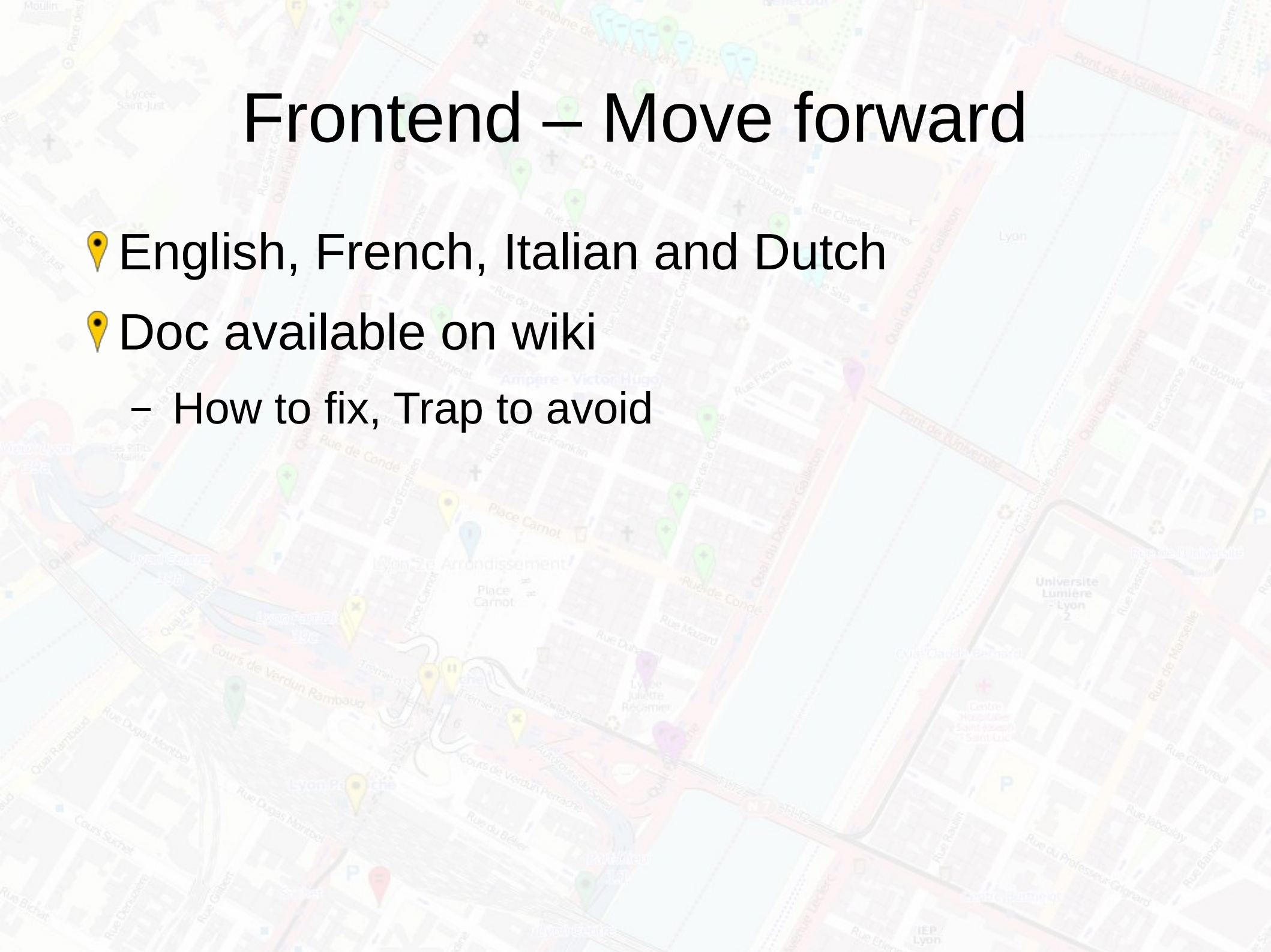
Structure 20/21 [all](#) [nothing](#)

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# Frontend – Move forward

- 📍 English, French, Italian and Dutch
- 📍 Doc available on wiki
  - How to fix, Trap to avoid

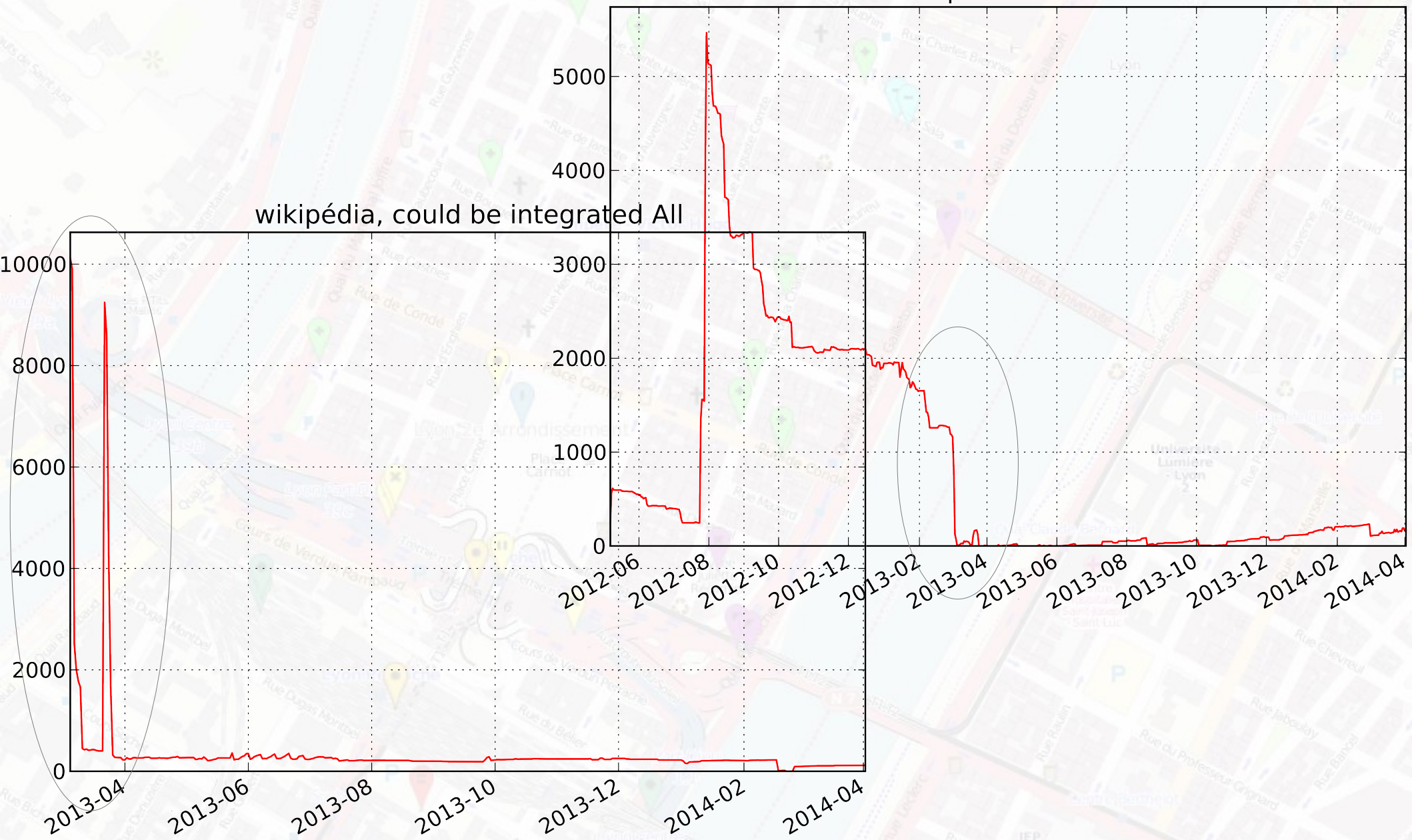




Need your help to conquer the world

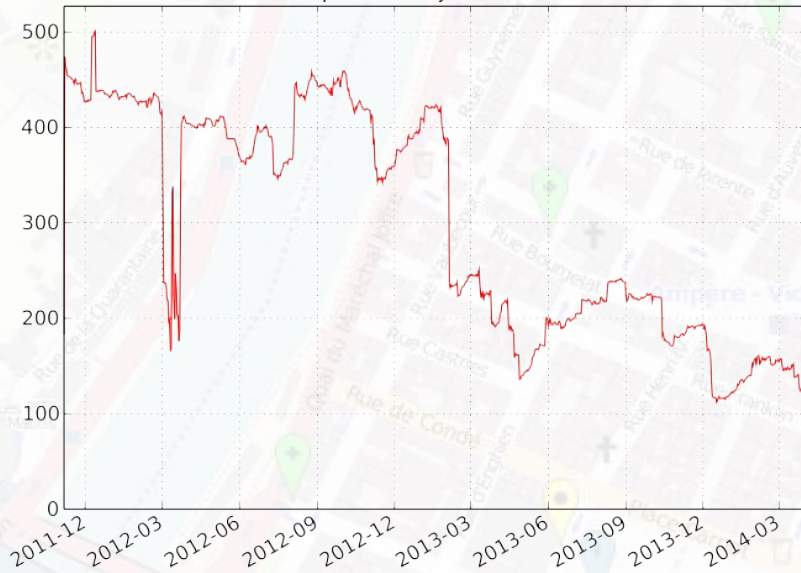
# Wikipedia project of the month

wikipedia france\*

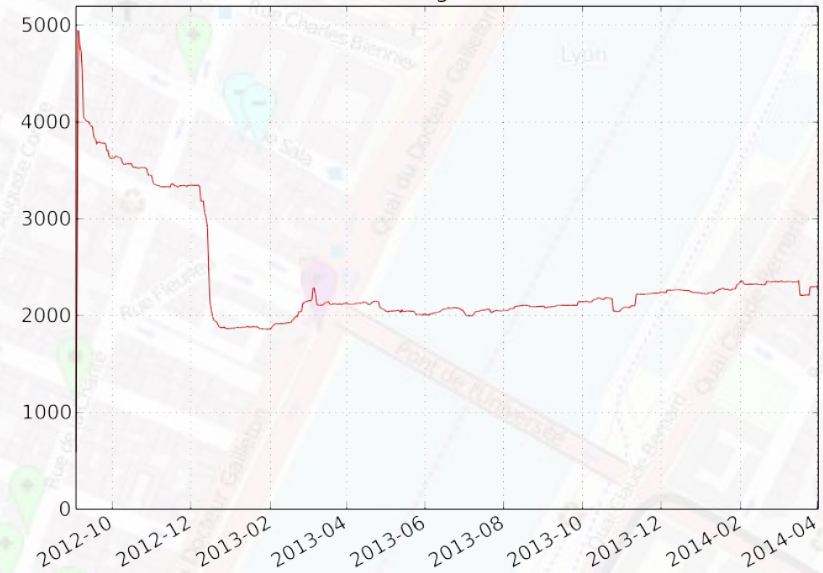


# Positive impact... and no progress

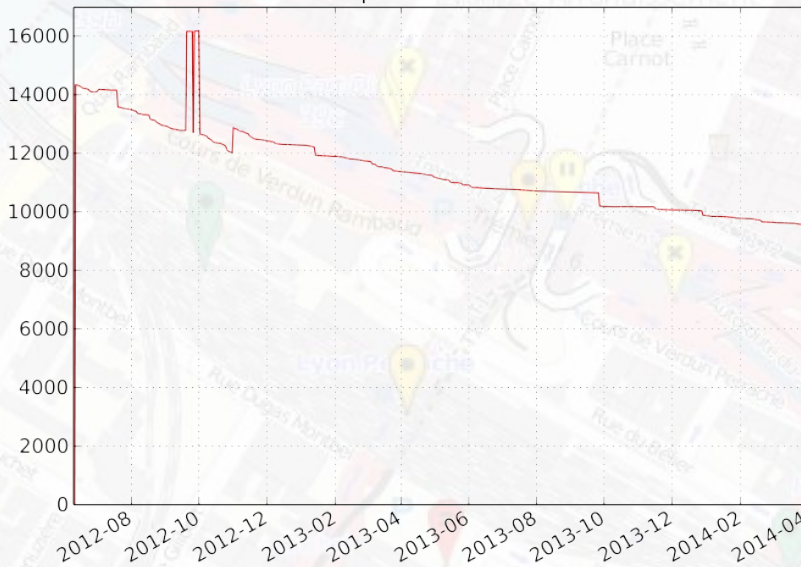
duplicate object france\*



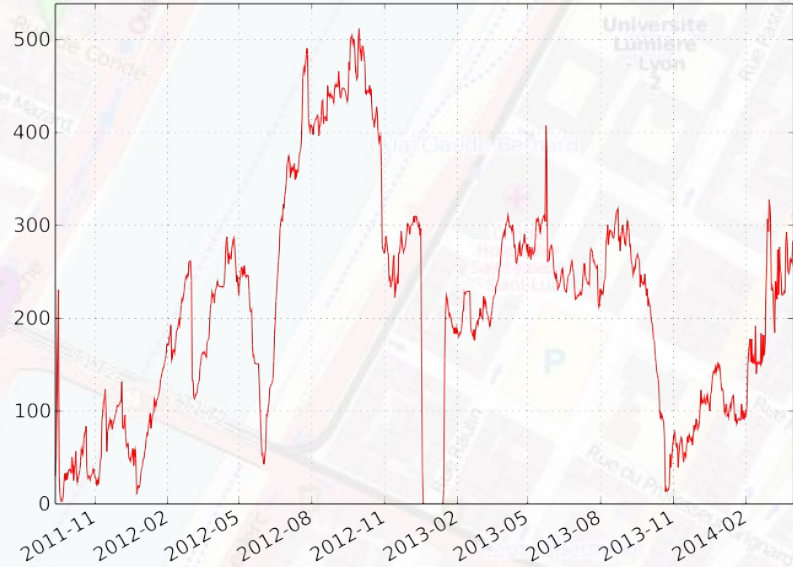
incorrect "designation" france\*



post office All



invalid polygon france\*



# Countries

📍 Support local specificities

- Languages, Country, Projection

📍 Sublevels split on large data countries

📍 HOT supported countries, small extracts, on demand

📍 More ?

→ Need more computation power and storage

→ Aim self support for local community

Iceland, Italy, Netherland, (Romania), who next ?

# How it works ? Engine

## 📍 Backend Analysers

- Rules on one object tags (SAX)
  - Capitals, ref...
- Spatial rules or multi-objects check (Osmosis SQL)
  - Reverse roundabout, unconnected highway...
- OpenData features checking
  - Schools, post offices, bus stops...

## 📍 Jenkins : countries scheduler and load repartitor

## 📍 More than 200 analysis

- More and more on TODO list

# Analyser - SAX

- 📍 Process one object at time
- 📍 Format: number, date, postcode, wikipedia...
- 📍 Naming: abbreviation, too many space, uppercase...
- 📍 Bag tag: ref in name, typo, deprecated...
- 📍 Inconsistency between tags from wiki rules: toll and fee, opposite cycleway without oneway, parking lanes...

# Analyser - Osmosis

- 📍 Osmosis, a lossless schema
- 📍 Multiple objects checked at once
- 📍 Geospatial analysis
- 📍 DB
  - Lot of indices
  - create/drop DB: at each Osmose QA run (lake of disk space)
  - Keep DB: Quebec (diff mode)

# Analyser – Osmosis – Topological

📍 E.g. Roundabout analysers

- Wrong highway level on roundabout
- Missing oneway on link highway
- Roundabout shortcut
- Roundabout crossing

# Analyser – Osmosis - Geospatial

## 📍 Roundabout

- Missing junction=roundabout
- Reverse roundabout

## 📍 Deadend by highway level

- Small gap in highway level continuity

## 📍 Power line

- Isolated tower
- Unconnected powerline
- Missing tag power=tower
- Predictive position of unmapped power=tower

# Analyser - Merge

## 📍 OpenData Integration

- Integration vs Importation
- Help contributor to add external data

## 📍 Row external data set (csv) + Osmosis DB

## 📍 Mapping

- Column to tag
- Complex mapping

## 📍 Analyser code is just configuration

- Easy to add new data set

# Diff mode

- 📍 Speedup by running analyser only on change
- 📍 Sax
- 📍 Osmosis
  - “changed” tables : edited nodes, ways, relations and transitive dependencies
  - Keep DB between runs
- 📍 Not all can be run in diff mode
  - Error based on other OSM data (clustering, connection...)
- 📍 Full run every month to keep safe



# Osmose QA

- 📍 <http://osmose.openstreetmap.fr>
- 📍 <http://wiki.osm.org/Osmose>
- 📍 Sources and how to setup a backend
  - <https://gitorious.org/osmose/backend>
- 📍 Contact [contact@osmose.openstreetmap.fr](mailto:contact@osmose.openstreetmap.fr)
- 📍 Future
  - Work on features request
  - Maproulette connexion
  - More OpenData integration mapping