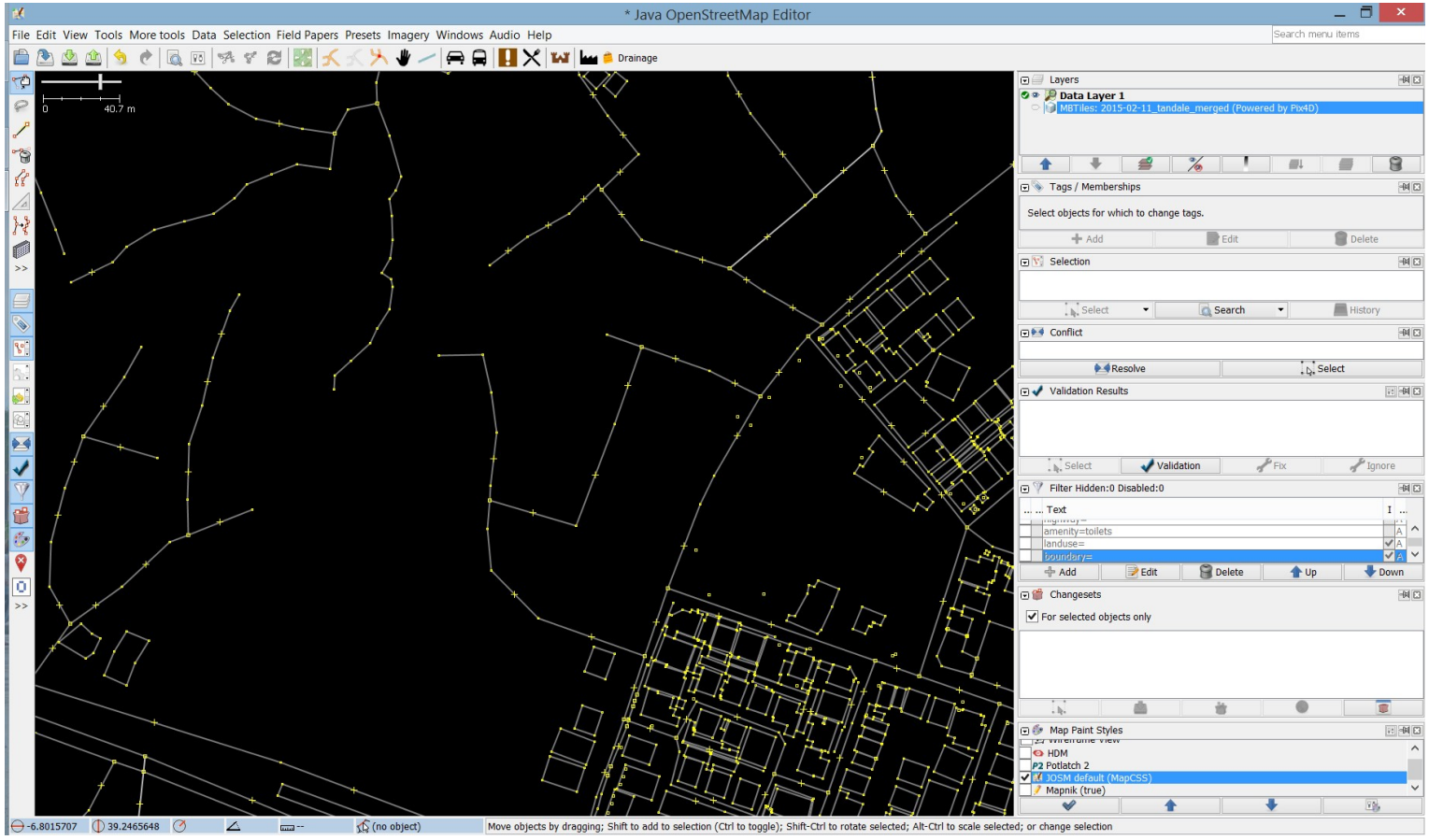
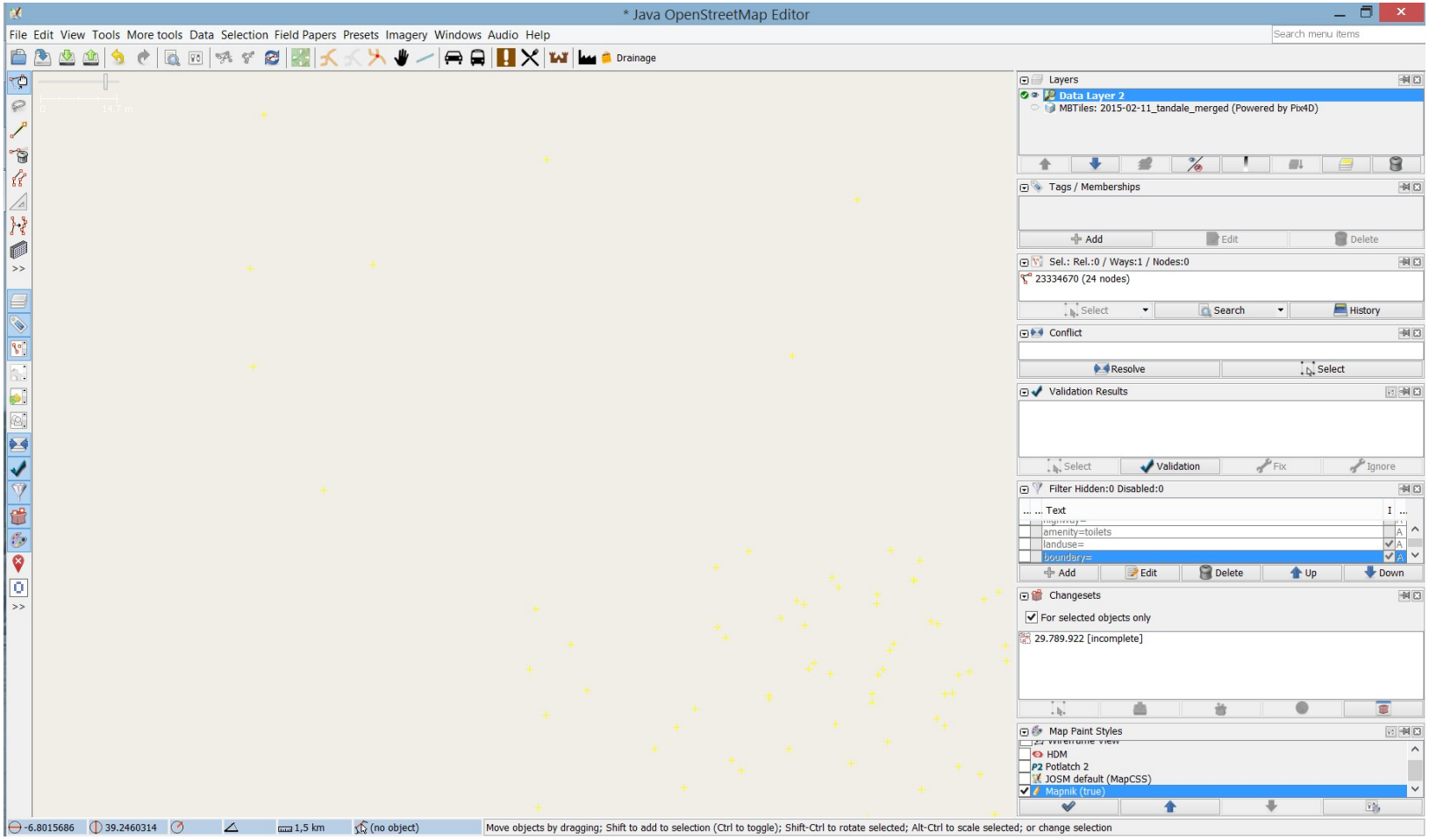
Humanitarian
OpenStreetMap
Team

Data model and tagging

Why tagging?


* Java OpenStreetMap Editor
File Edit View Tools More tools Data Selection Field Papers Presets Imagery Windows Audio Help
Search menu items
Drainage
0
40.7 m
Layers
Data Layer 1
MBTiles: 2015-02-11_tandale_merged (Powered by Pix4D)
Tags / Memberships
Select objects for which to change tags.
Add
Edit
Delete
Selection
Select
Search
History
Conflict
Resolve
Select
Validation Results
Select
Validation
Fix
Ignore
Filter Hidden:0 Disabled:0
... Text
amenity=toilets
landuse=
boundary=
Add
Edit
Delete
Up
Down
Changesets
For selected objects only
Map Paint Styles
HDM
Potlatch 2
JOSM default (MapCSS)
Mapnik (true)
-6.8015707
39.2465648
(no object)
Move objects by dragging; Shift to add to selection (Ctrl to toggle); Shift-Ctrl to rotate selected; Alt-Ctrl to scale selected; or change selection

.. otherwise the map will be like this:



Why tagging?

Is this line… a road? A river? A railroad?

- Add meaning
- Communication and agreement
  - to viewers
  - to other mappers
  - to other computers/APIs
  - to the map renderer!

What is a tag exactly?

"a label attached to someone or something for the purpose of identification, or to give other information."

Categorize, to add information that is useful for:

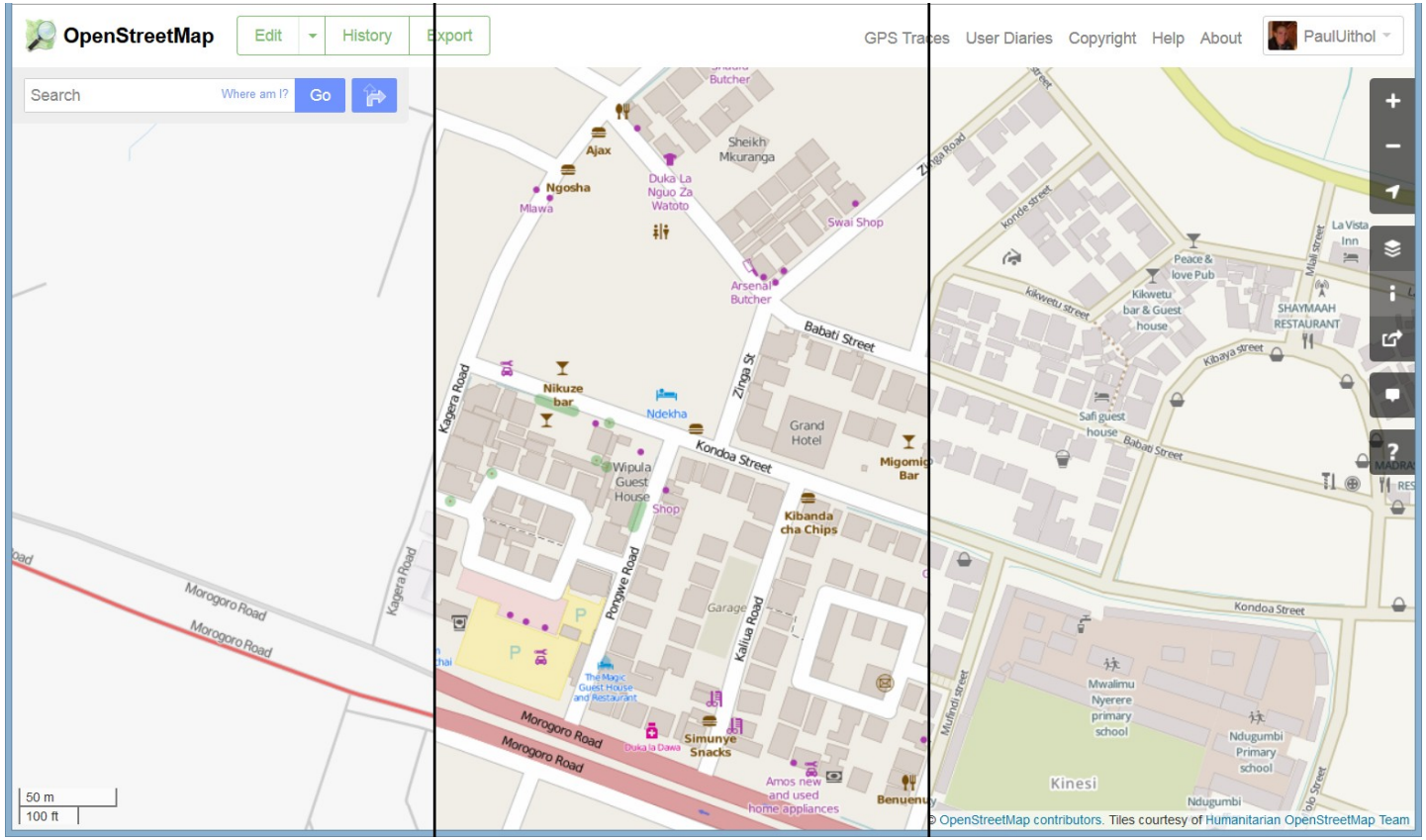
- understanding of the map
- planning
- routing
- querying
- many other use cases!

In OpenStreetMaps:

a **key** *describes a property of a feature, specifying* one or more **values**

Each feature **should** have one or more tags!

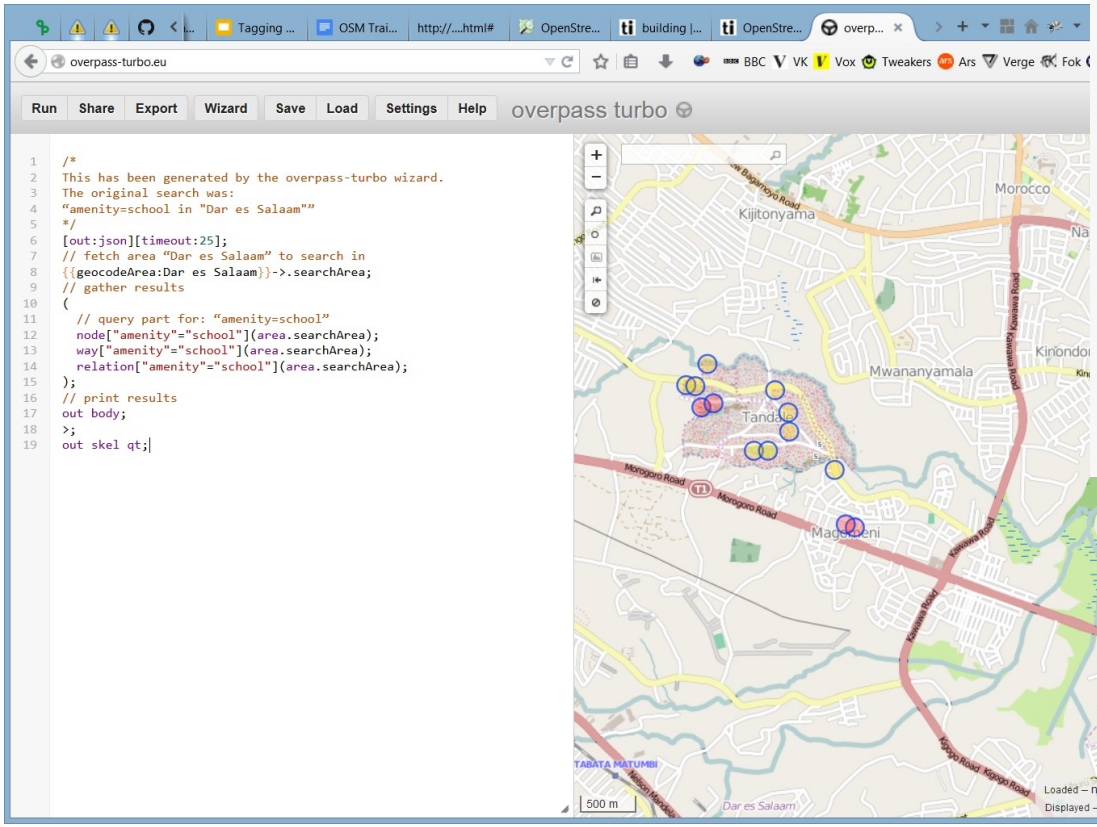
Renderers

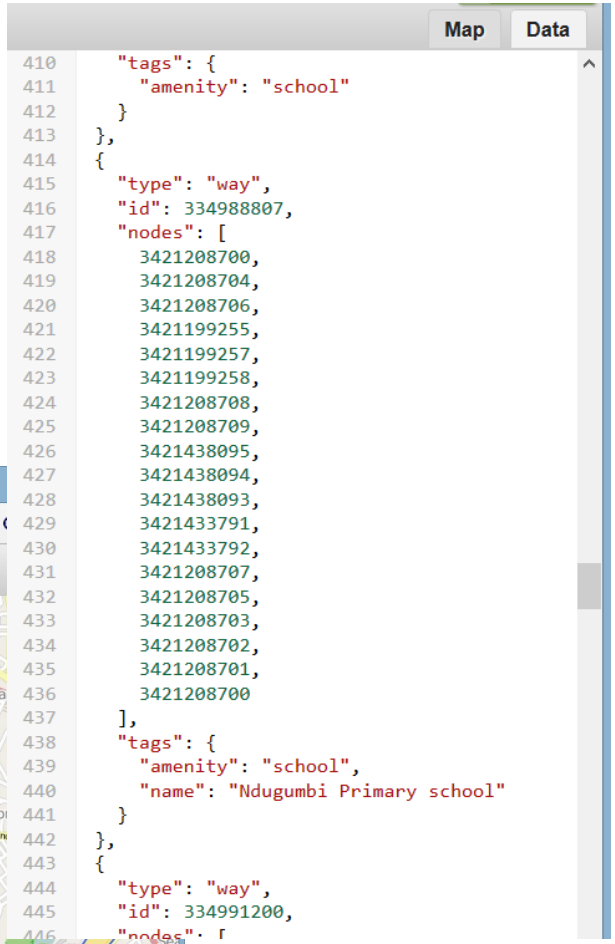

OpenStreetMap
Edit
History
Export
GPS Traces
User Diaries
Copyright
Help
About
PaulUithol
Search
Where am I?
Go
Ajax
Ngosha
Mlawa
Duka La Ngùo Za Watoto
Sheikh Mkuranga
Swai Shop
Arsenal Butcher
Babati Street
Zinga St
Kagera Road
Nikuze bar
Ndekha
Grand Hotel
Migomi Bar
Kondoa Street
Wipula Guest House
Shop
Kibanda cha Chips
Pongwe Road
Kallua Road
Garage
Morogoro Road
Morogoro Road
Morogoro Road
The Magic Guest House and Restaurant
Duka la Dawa
Simunye Snacks
Amos new and used home appliances
Benuenty
Zinga Road
kondo street
Peace & love Pub
Kikwetu bar & Guest house
kikweteu street
La Vista Inn
Mbai street
SHAYMAAH RESTAURANT
Kibaya street
Safi guest house
Babati Street
Kondoa Street
Mwalimu Nyerere primary school
Ndugumbi Primary school
Kinesi
Ndugumbi
Mufindi street
50 m
100 ft
© OpenStreetMap contributors. Tiles courtesy of Humanitarian OpenStreetMap Team

API

http://overpass-api.de/

http://overpass-turbo.eu/





Our data model

- drainage
  - stream, drain, ditch, culvert
- sanitation
  - drinking water, water tank, public toilet
- roads
  - tertiary, unclassified, residential, footway
- buildings
- landuse

http://wiki.openstreetmap.org/wiki/Map_Features

Drainage - stream

Naturally occurring

.. with a little bridge here

Drainage - stream

Required tags:

- waterway=stream

If possible:

- depth=<number> (in meters, no unit; so “depth=1”)
- width=<number> (in meters, no unit; so “width=2”)

Drainage - ditch

Usually artificial

Depression or dug out, earth

Drainage - ditch

Required tags:

- waterway=ditch

If possible:

- depth=<number> (in meters, no unit; so “depth=1”)
- width=<number> (in meters, no unit; so “width=2”)
- covered=yes/no
- blockage=dirt/concrete/rubbish/

Drainage - drain

Artificial

Reinforced, brick or concrete

Drainage - drain

Required tags:

- waterway=drain
- covered=yes/no

If possible:

- diameter=<number> (in meters, no unit; so “diameter=1”)

Drainage - underground drain

Required tags:

- waterway=drain
- covered=yes
- layer=-1

If possible:

- diameter=<number> (in meters, no unit; so “diameter=1”)

Drainage - culvert

Tunnel, usually on a drain or a ditch

Drainage - culvert

Required tags:

- waterway=drain
- tunnel=culvert
- covered=yes
- layer=-1

If possible:

- diameter=<number> (in meters, no unit; so “diameter=1”)

Blockage!

Tag part of the drain or ditch with “blockage=yes” (or concrete, rubbish)

Streets

- highway = primary, secondary, tertiary, unclassified, residential, footway
- name
- surface = asphalt, concrete, unpaved
- smoothness = good, intermediate, bad, very_bad, horrible
- width=<number> (in meters, no unit; so “diameter=1”)
- oneway=yes/no (direction of traffic, NOT lanes!)
- bridge=yes,viaduct (only add if it’s a bridge; also add layer=1)

Buildings

- building (the general type)
  = residential, commercial, apartments, industrial, public, school, utility, construction
  Multiple values: list with semi-colons, so “residential;commercial”
- building:levels (the ground floor counts as 1!)
- building:material
  = brick, cement_block, concrete, glass, loam, metal, plaster, wood
- addr:street=<street name; English suffixes (Street, Road), watch capitalization!>
- addr:housenumber=<address number of the building, ie 25 or 19A>

Buildings (continued)

- amenity (public use)
  = (for example) atm, bank, bar, fuel, clinic, doctor, hospital, mall, market
  police, place_of_worship, public_building, restaurant, school, town_hall,
- office = company, government, insurance, lawyer, political_party, yes
- shop = beverages, car_repair, convenience, greengrocer, kiosk, etc
- tourism = attraction, guest_house, hotel, yes
- religion = muslim, christian, buddhist, ? (only if amenity=place_of_worship!)
- bed_count=<number> (for hospitals, clinics; the amount of patients it can handle)

Open areas

- wetlands/flood prone: “natural=wetland”
- solid waste: “landuse=dump, official=yes/no”
- cemetery: “landuse=cemetery”
- park: “leisure=park”
- playground: “leisure=playground”
- ponds: “natural=water”
- sports pitch: “leisure=pitch, landuse=recreation_ground”

Other

- water source: “amenity=drinking_water”, “man_made=water_well”
- public(!) toilets: “amenity=toilets”
- mobile money: “amenity=money_transfer, operator=<name>”

If in doubt

- http://wiki.openstreetmap.org/wiki/Map_Features
- http://taginfo.openstreetmap.org/
- or ask us!