

OpenStreetMap

What is that and how can I contribute?

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1 What is this?

- Motivation
- History
- Statistics
- Community

2 The data

- Node
- Way
- Relation
- Area
- Multipolygon

3 Contributing to OSM

- Trace aerial imagery
- Go outside

- free¹ project collecting **free accessible** geodata
- open database for geodata
- ODC-ODbL
 - ▶ OpenDataCommons Open Database License
 - ▶ Ersetzt CC BY-SA 2.0 (share alike & attribution)

¹free as in freedom

Motivation

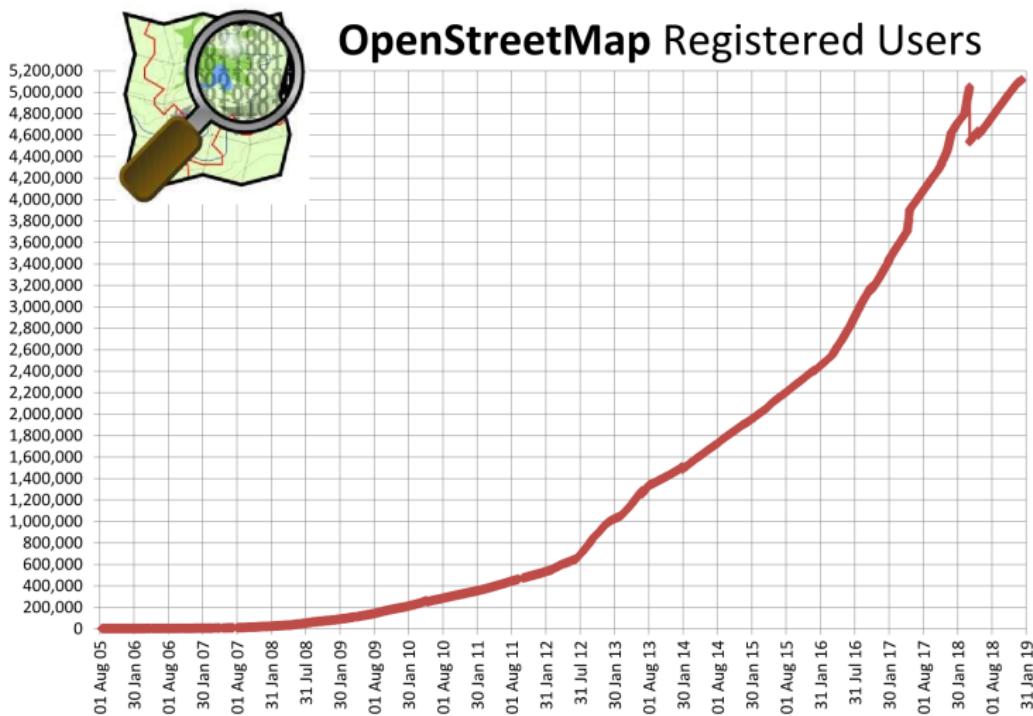
Why has OpenStreetMap been created?

- proprietary maps old and faulty
- focus on cars and traffic
- no access to raw data
 - ▶ error correction not possible
- Google Maps *not directly evil* – but **not free**
- license problems with (nearly) all map service providers

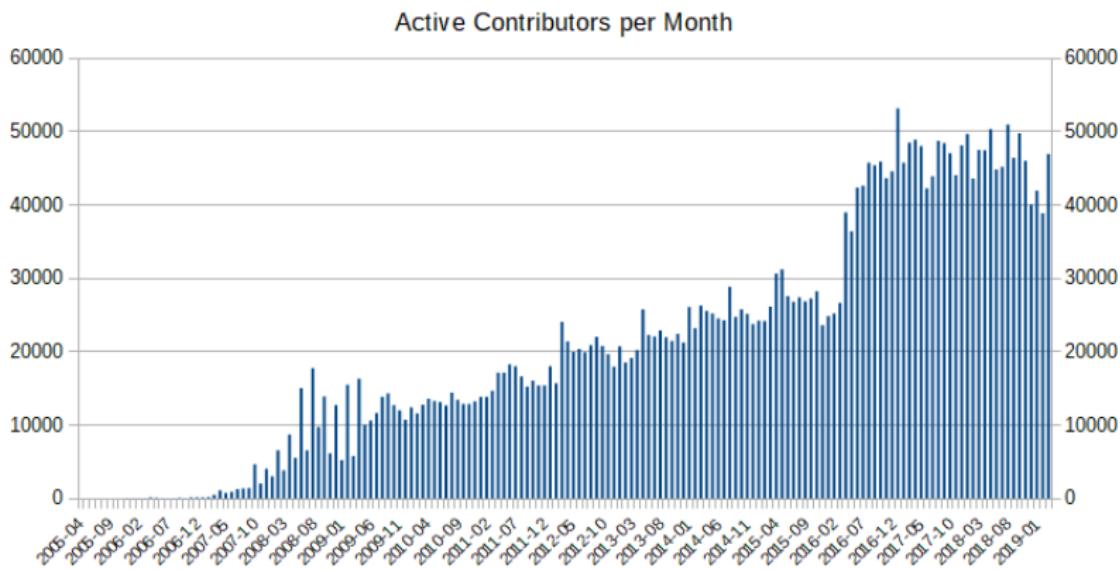
History

- 2004 – OSM founded
- 2006 – release JOSM-Editor
- 2006 – first map rendered with Mapnik
- 2007 – TIGER data import USA started
- 2008 – TIGER data import USA finished
- 2009 – API 0.6 (still latest version)
- 2009 – cooperation with Wikipedia
- 2010 – Bing Imagery allowed usage for OSM
- 2013 – 1 mio. registered users
- 2016 – Maps.me app enabled edits

Statistics

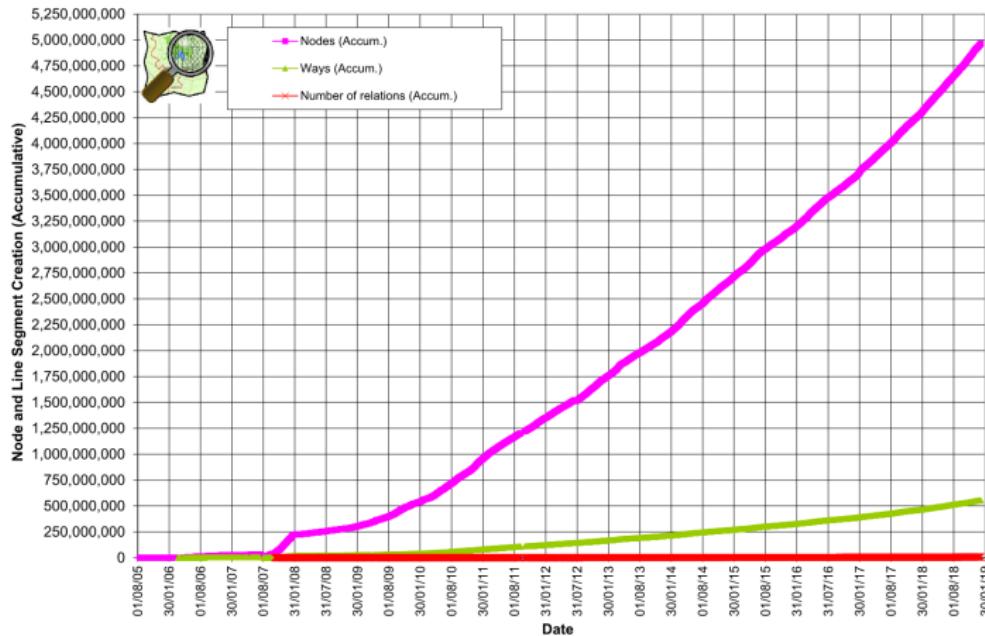


Statistics



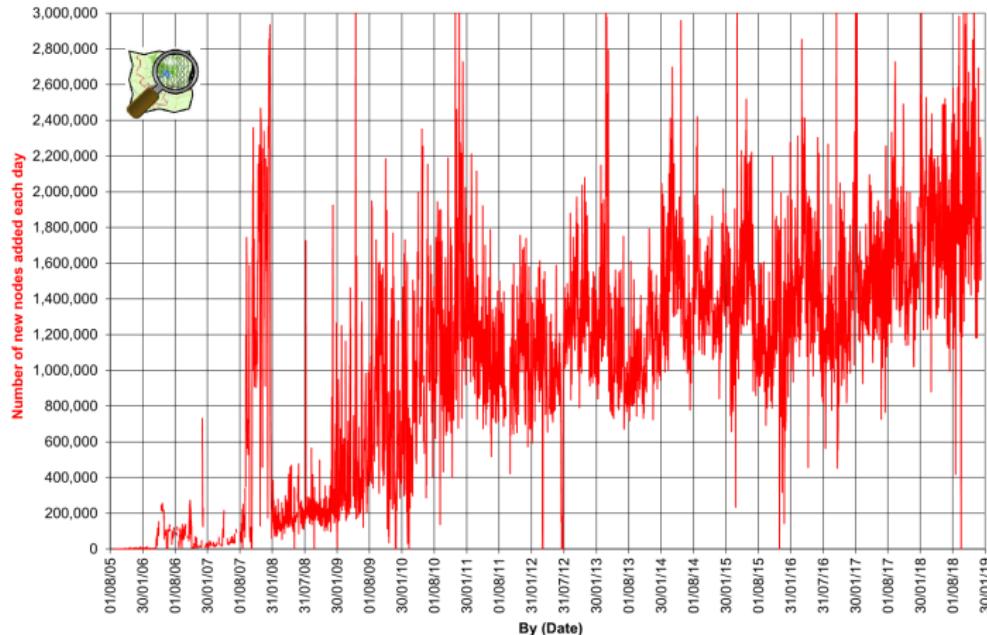
Statistics

OpenStreetMap Database Statistics
Node, Way and Relation Creation



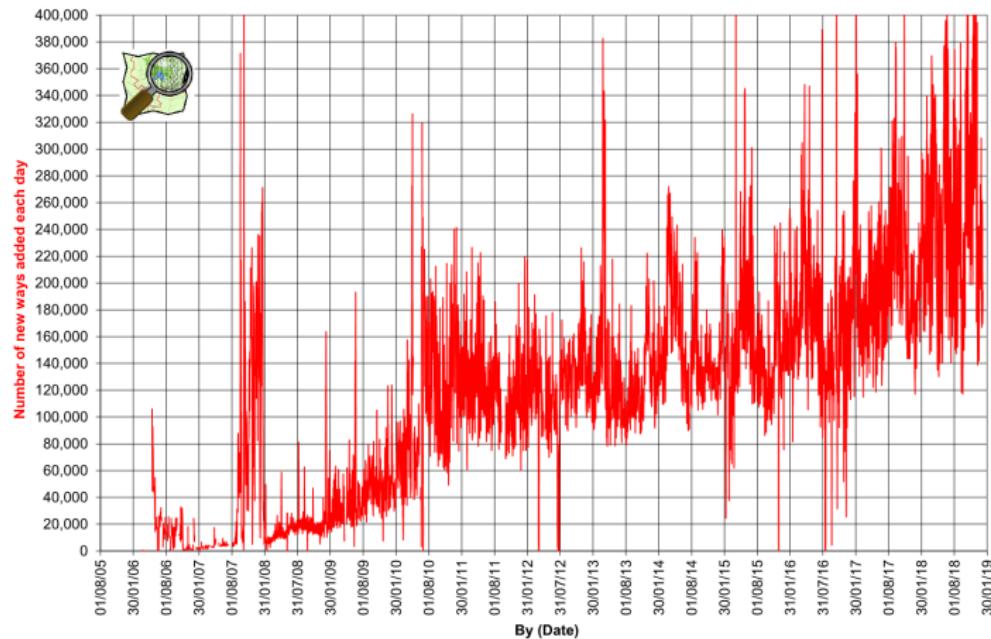
Statistics

OpenStreetMap Database Statistics
Number of nodes added each day



Statistics

OpenStreetMap Database Statistics
Number of ways added each day



Community

What is done?

- developing software and tools
- actual mapping
- creating and maintaining documentation
- doing public relations activities

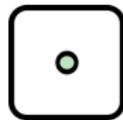
Community

How is it done?

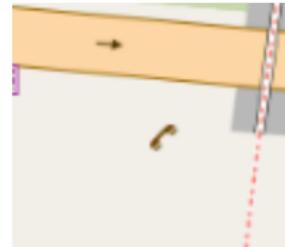
- going outside collecting information
- using imagery services
- meet other mappers
- participating in a mapathon

Node

- single location on map



amenity=telephone
covered=booth

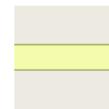


Way

- line on map
- 2-2000 points per way

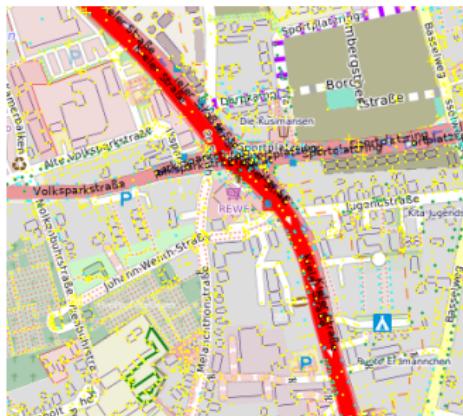


highway=secondary



Relation

- combination of ways (e.g. to a bus route)



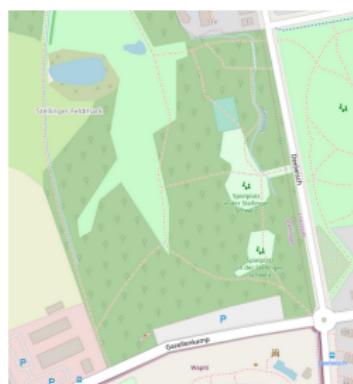
`type=route
route=bus
name=MetroBus 4
ref=4
from=Wildacker
to=Brandstwiete`

Area

- basically a closed way



landuse=forest
leaf_type=broadleaved



Multipolygon

- basically a polygon with polygons inside
- role inner and outer



landuse=farmland

A screenshot of a GIS application interface. On the left, a table titled "Merkmale / Mitgliedschaften: 1" shows a single entry: "Geografie/Landnutzung/Ackerland ...". Below the table, a detailed view of a polygon is shown, divided into two parts: an "inner" part colored pink and an "outer" part colored light blue. The "inner" part is labeled "farmland". At the bottom of the screen, there is a toolbar with various icons for editing and managing features.

Schlüssel	Wert
landuse	farmland

Element von: multipolygon ("Staatsforst Rosen...")
Rolle: innerer
Position: 14

Hinzufügen Bearbeiten Entfernen

Trace aerial imagery



What is this?
○○○○○○○○○○

The data
○○○○○

Contributing to OSM
○●○

Go outside

Surveying



What is this?
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The data
○○○○

Contributing to OSM
○○●

Go outside

Mapping

