

# 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

- free<sup>1</sup> project collecting **free accessible** geodata
- open database for geodata
- ODC-ODbL
  - ▶ OpenDataCommons Open Database License
  - ▶ Ersetzt CC BY-SA 2.0 (share alike & attribution)

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<sup>1</sup>free as in freedom

# Motivation

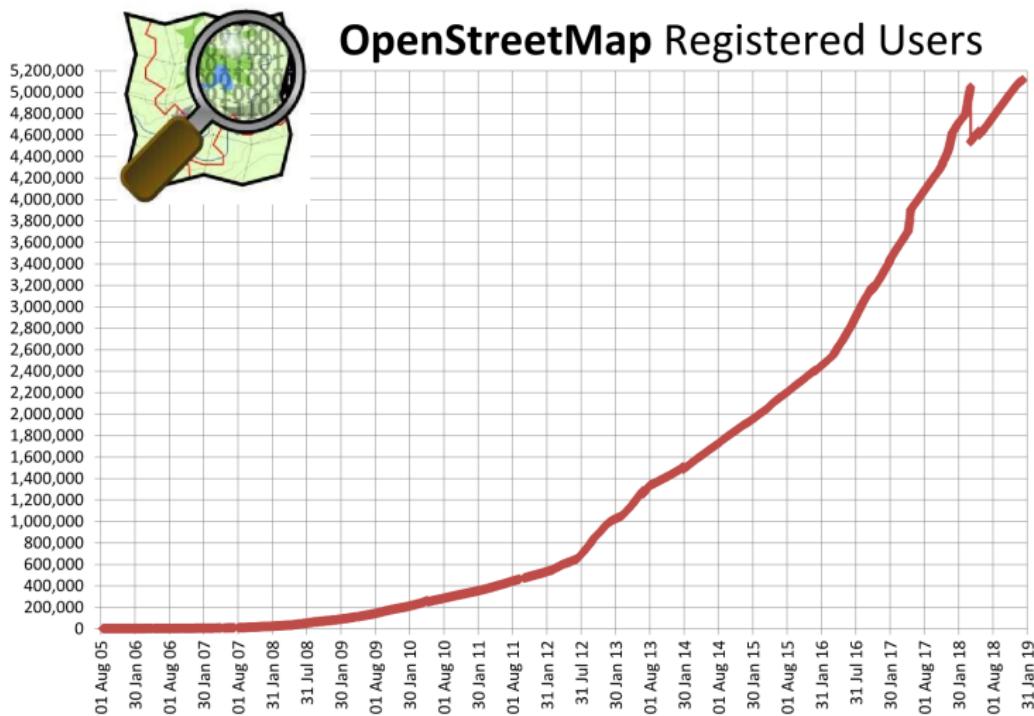
Why has OpenStreetMap been created?

- 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

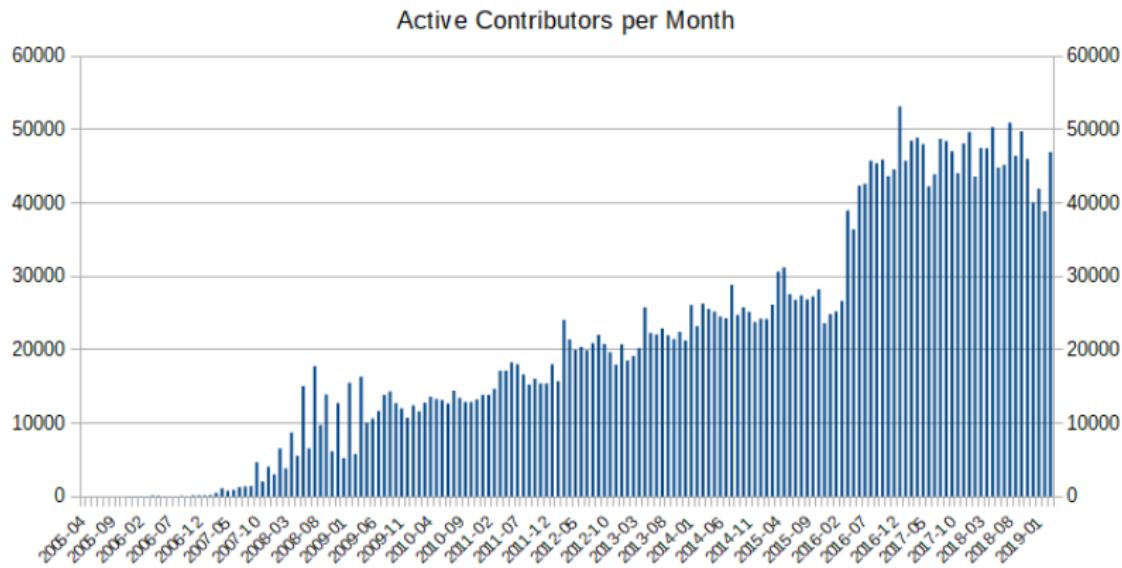
# History

- 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

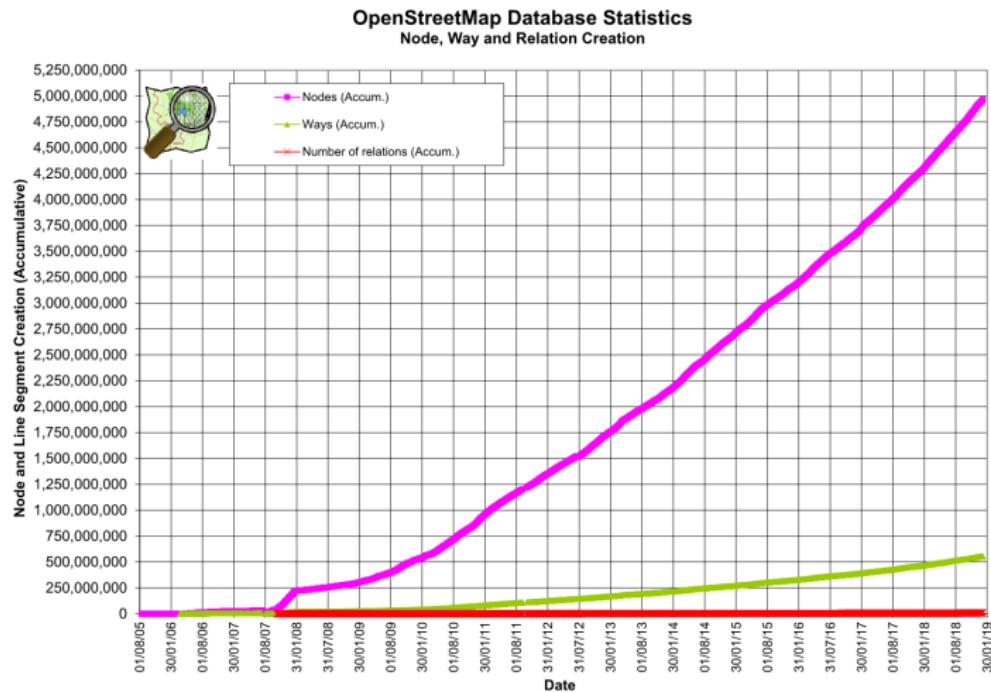
## Statistics



# Statistics

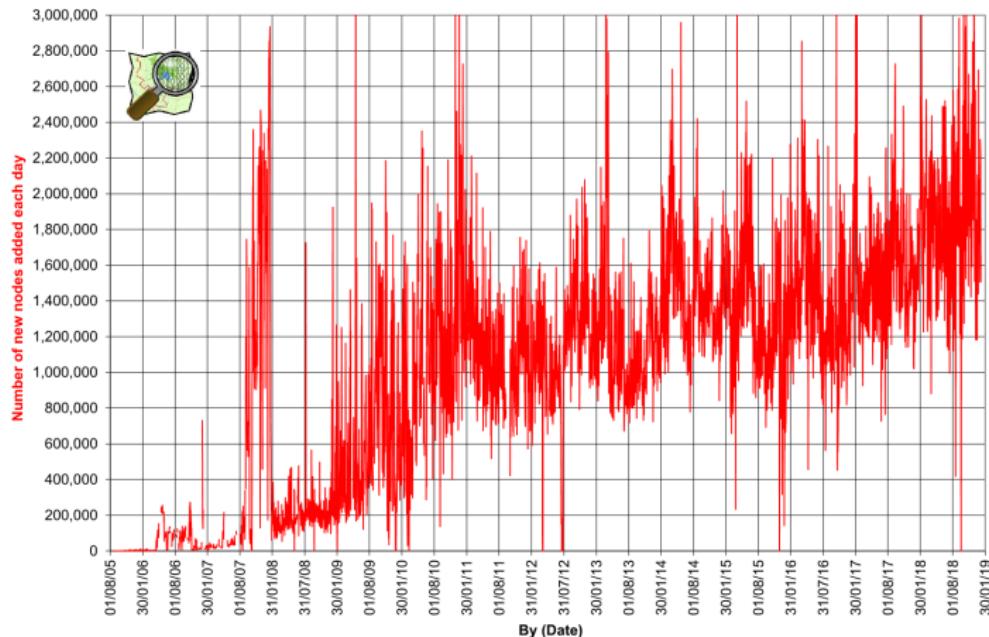


# Statistics

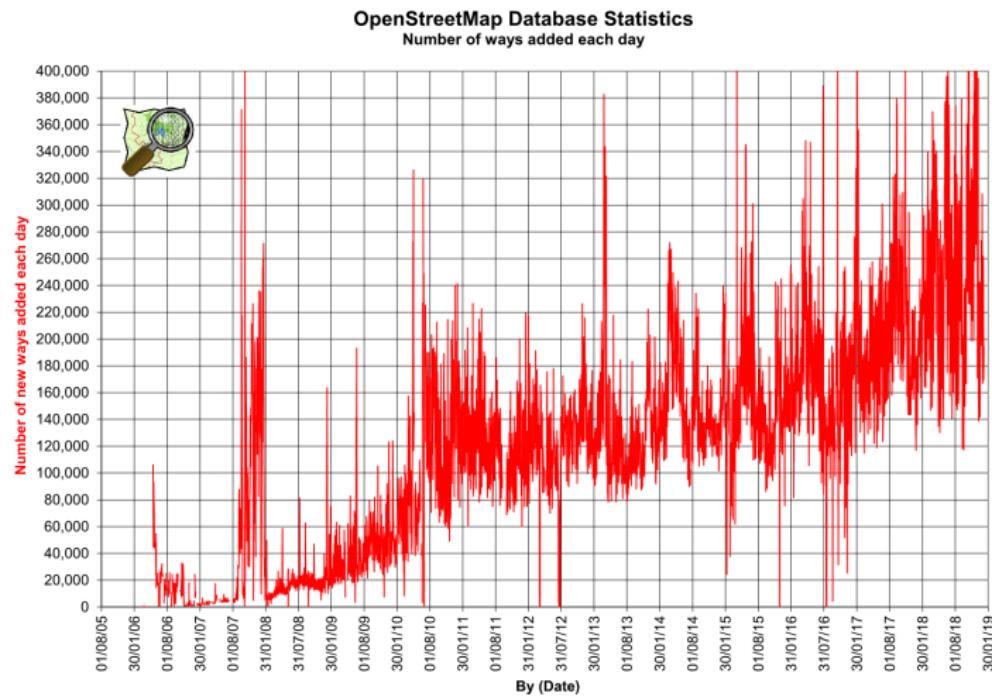


# Statistics

**OpenStreetMap Database Statistics**  
Number of nodes added each day



# Statistics



## Community

### What is done?

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

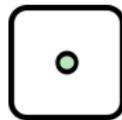
## Community

### How is it done?

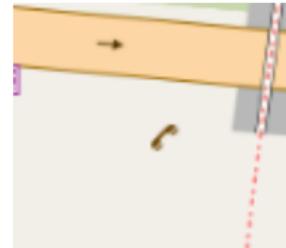
- going outside collecting information
- using imagery services
- meet other mappers
- participating in a mapathon

# Node

- single location on map



amenity=telephone  
covered=booth



# Way

- line on map
- 2-2000 points per way

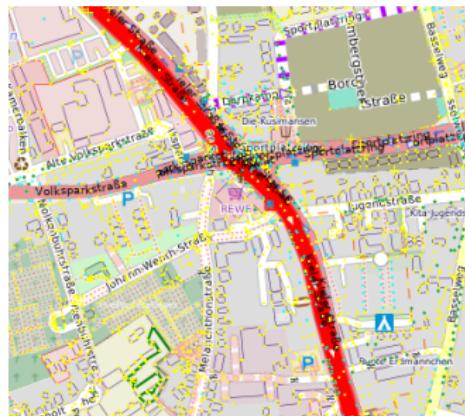


highway=secondary



## Relation

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



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

## Area

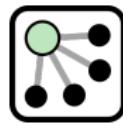
- basically a closed way

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. At the top, a table titled "Merkmale / Mitgliedschaften: 1" shows a single entry: "Geografie/Landnutzung/Ackerland ...". Below this, another table shows "Schlüssel" (key) "farmland" and "Wert" (value). Further down, it lists "Element von" (part of) "multipolygon ('Staatsforst Rosen...'" and "Rolle" (role) "innerer". At the bottom, there are buttons for "Hinzufügen" (add), "Bearbeiten" (edit), and "Entfernen" (remove). To the right, a 3D-style map view shows a pink-shaded multipolygon with a red outline, representing the same feature as the white polygon in the aerial photo.