Mapping Team

Introduction to OSM

History

Overview

- **OSM is an open source mapping project originating in 2004**

- **The project started in Britain to provide publicly available geographic datasets**

- **OpenStreetMap Foundation was founded in 2006**

Changeset: 1

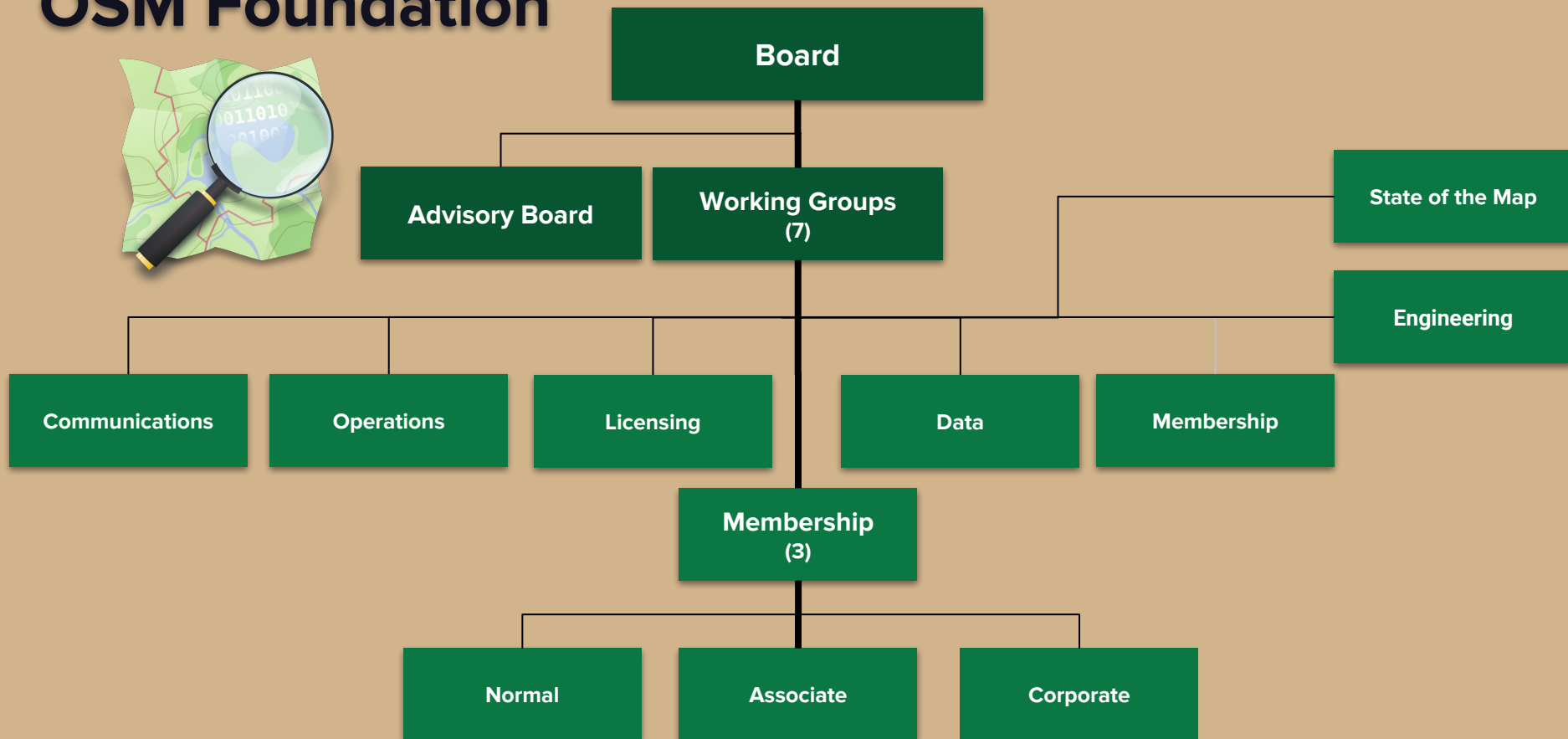(no comment)

Closed over 13 years ago by Steve

OSM Today

- **Used by companies such as Microsoft, Facebook, Apple, and of course, lyft**

- **A growing ecosystem of tools and plugins to help editors and analysts**

- **International State of the Map conferences**

OSM Organization

- **OSM Foundation is a non profit dedicated to supporting the OSM project; anyone can join, pay dues, and vote**

- **The Data Working Group is an organization within the foundation that resolves disputes. It is invitation only**

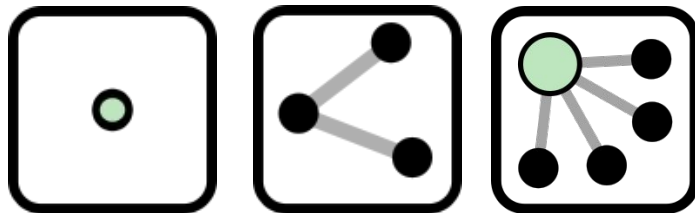- **Contact channels including a wiki, mailing lists, and forums**

The Data

Overview

- **OSM information is all in one layer**

- **In contrast to traditional GIS data**

- **Every object in OSM is made up of nodes,**

  ways, relations, and their attributes

- **Attributes are made of keys and values in**
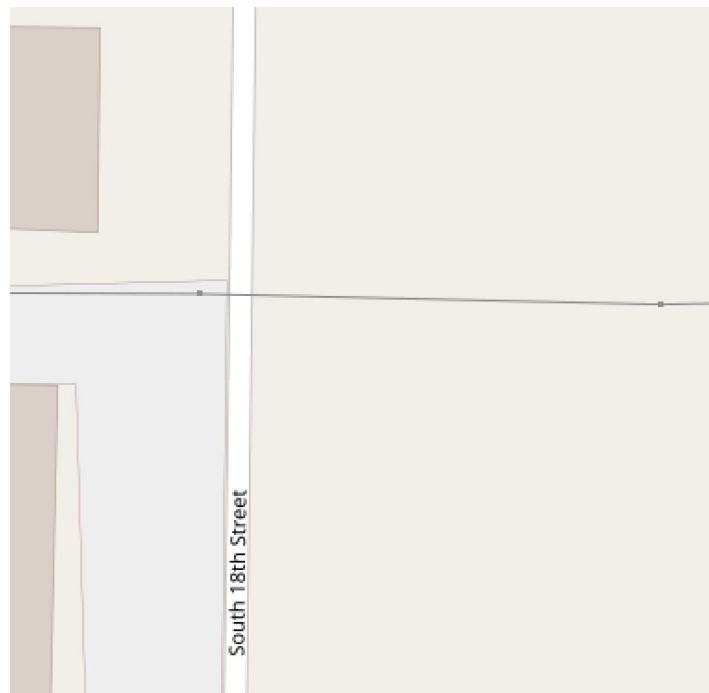
  endless combinations

Nodes

- **A single point**

- **Can stand alone or in conjunction with ways**

- **Used to tag anything from businesses, traffic control elements , to natural features**

Ways

- **A way is a line between two nodes**

- **Divided into open ways and closed ways**

- **A closed way is another word for a polygon**

- **Each one carries a direction**

- **Used to model anything from roads, buildings, to boundaries**

Tags

- **Contain the attributes for OSM objects**

Key	Value
addr:housenumber	400
addr:postcode	98109
addr:state	WA
addr:street	Broad Street
building	yes
ele	40
gnis:county_name	King
gnis:feature_id	1508574
height	158.115
man_made	tower
min_height	156.058
name	Space Needle
note	Appoximate Height at Bottom of "Halo"
opening_hours	Mo-Sa 08:00-23:00; Su 08:00-21:00
phone	+1 (206) 905-2100
seamark:landmark:category	tower
seamark:name	Space Needle
seamark:type	landmark
source	Yahoo aerial imagery;local knowledge
toilets:wheelchair	yes
tourism	attraction
tower:type	observation
website	http://www.spaceneedle.com/
wheelchair	yes
wikidata	Q5317
wikipedia	en:Space Needle

Relations

- **A relation is an ordered list with some sort of theme uniting them**

- **A multipolygon is a type of relation used to unite complex areas made up of separate polygons**

- **Used to model routes and boundaries**

Type	Status	Element	Comment
multipolygon	de facto		For areas where the outline consists of multiple ways, or that have holes; also used for boundaries.
route	approved		Like bus routes, cycle routes and numbered highways
route_master	approved		route_master contains (parallel, opposite, variant, …) routes only; heavily used to group route variants in public transport.
superroute			Avoid, superroute contains (concatenable) routes only.
restriction	de facto		Any kind of turn restriction.
boundary	de facto		For grouping boundaries and marking enclaves/exclaves.
site	de facto		Relation to group elements of a site such as a school together.

Our Role

OSM Relevance to Lyft

- **Our job is to provide the engineers for the Automated Vehicle with the best route data possible**

- **OSM is a starting point but the data is incomplete and always changing**

- **OSM used in conjunction with other in house teams using other map editing tools**

OSM Mapping Team Diagram

Our Relationship with OSM

- Corporate editing is a recognized practice known as 'Organized Editing'

- The OSM foundation expects transparency and responsibility

- There have been conflicts with companies in the past

- Organized Editing Guidelines released in November '18

Organized Editing Guidelines

- **OSM wants a public community page explaining our goals, tools, members, training materials, and projects**

- **Periodic communication with the community**

- **Guidelines are non-binding**

- **As long as your edits are done in good faith and you listen to your leads you will *never* run into problems**