



August 1-3, Foundation University, Dumaguete

PIISIITIIA NG MIIA PIIA

open data & software • free maps • community • talks • workshops



KAART



Introduction to OpenStreetMap

Pista ng Mapa, Dumaguete City, Aug. 1-3

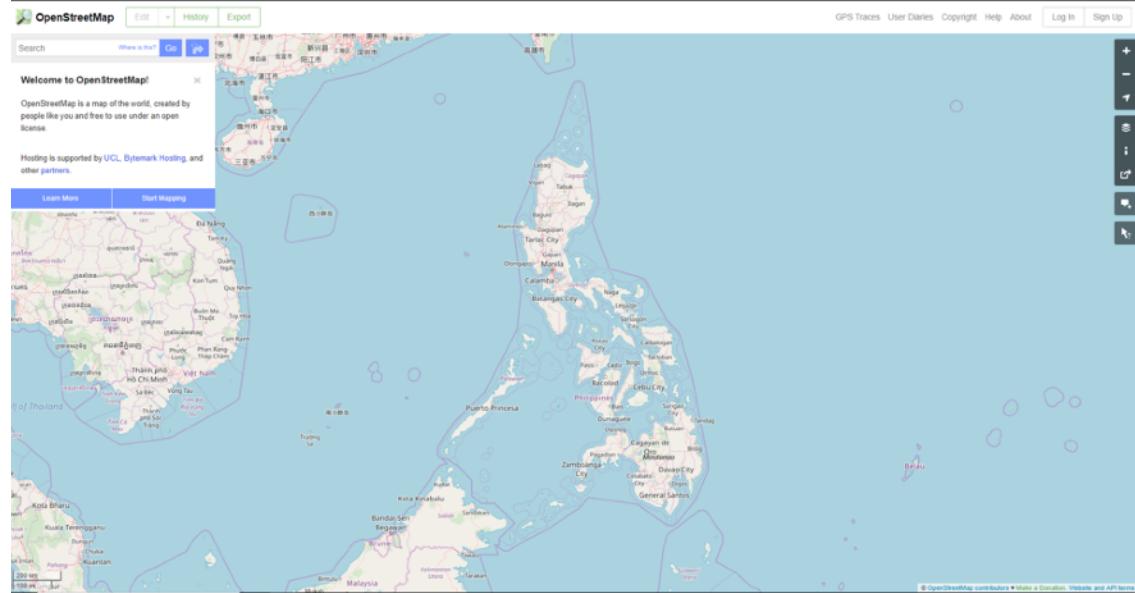


Arnalie Faye Vicario @arnalielsewhere

What is OpenStreetMap?

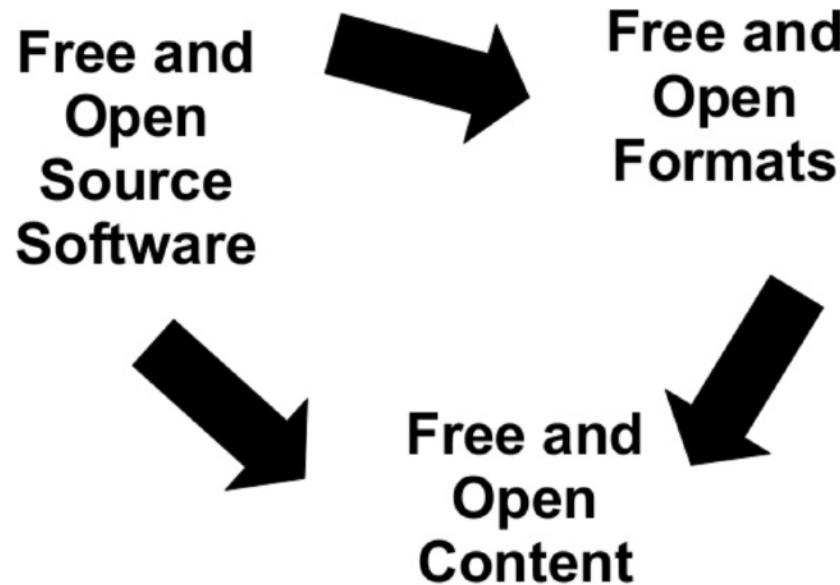
- Crowd-sourced/community project to map the whole world!

“Wikipedia
of maps”



What is OpenStreetMap?

But unlike any other crowd-sourced mapping projects, OpenStreetMap is **free and open!**



OpenStreetMap - License

OSM is licensed under the Open Database License (ODbL) by the OSM Foundation (OSMF)

YOU ARE FREE

To Share: To copy, distribute and use the data

To Create: To produce works from the data

To Adapt: To modify, transform and build
the data

upon



OpenStreetMap - License

AS LONG AS YOU

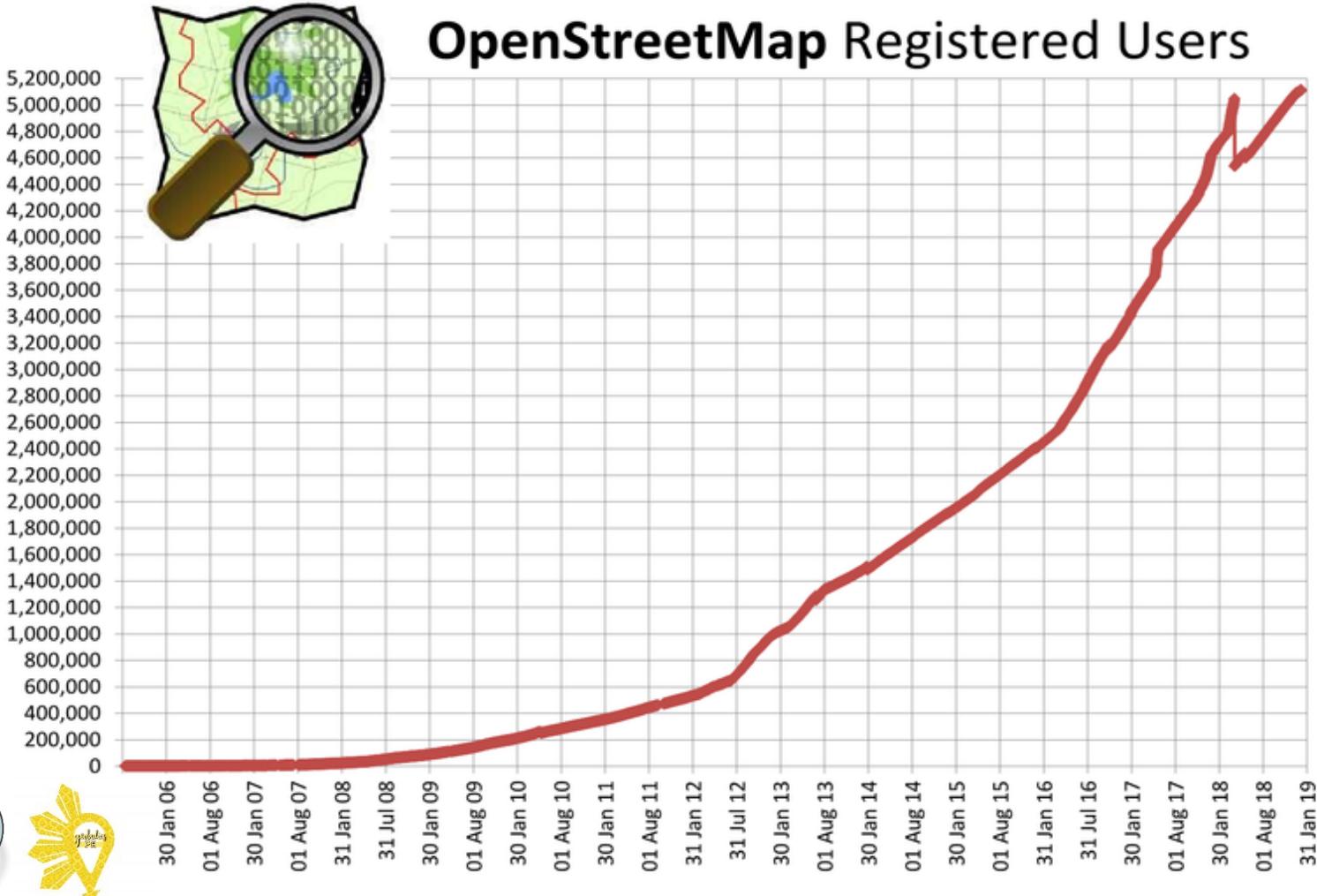
Attribute: You must attribute public use of the data. You must keep intact any notices on the original data.

Share-Alike: If you probably use any adapted version from the data, you must also offer that adapted data under the ODbL.

Keep open.



OpenStreetMap Registered Users



OpenStreetMap stats (July 30, 2019)

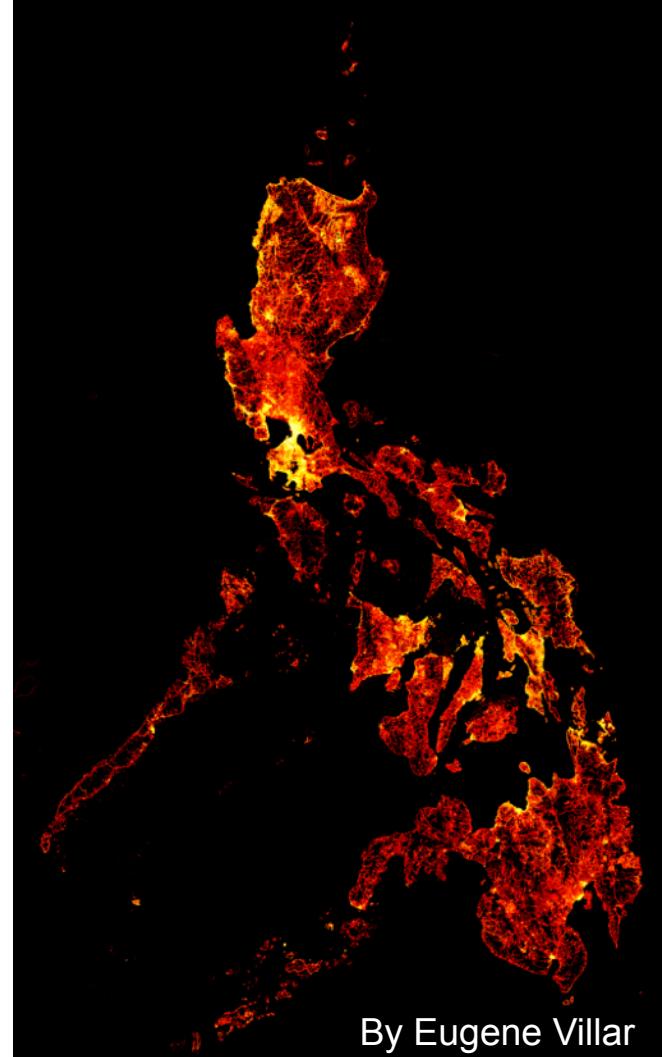
Number of users	5,567,753
Number of uploaded GPS points	7,414,870,420
Number of nodes	5,350,564,153
Number of ways	593,966,407
Number of relations	6,942,884



Source: https://www.openstreetmap.org/stats/data_stats.html

Philippine OpenStreetMap Node Density (as of January 2019)

https://wiki.openstreetmap.org/wiki/Philippines/Node_density_maps

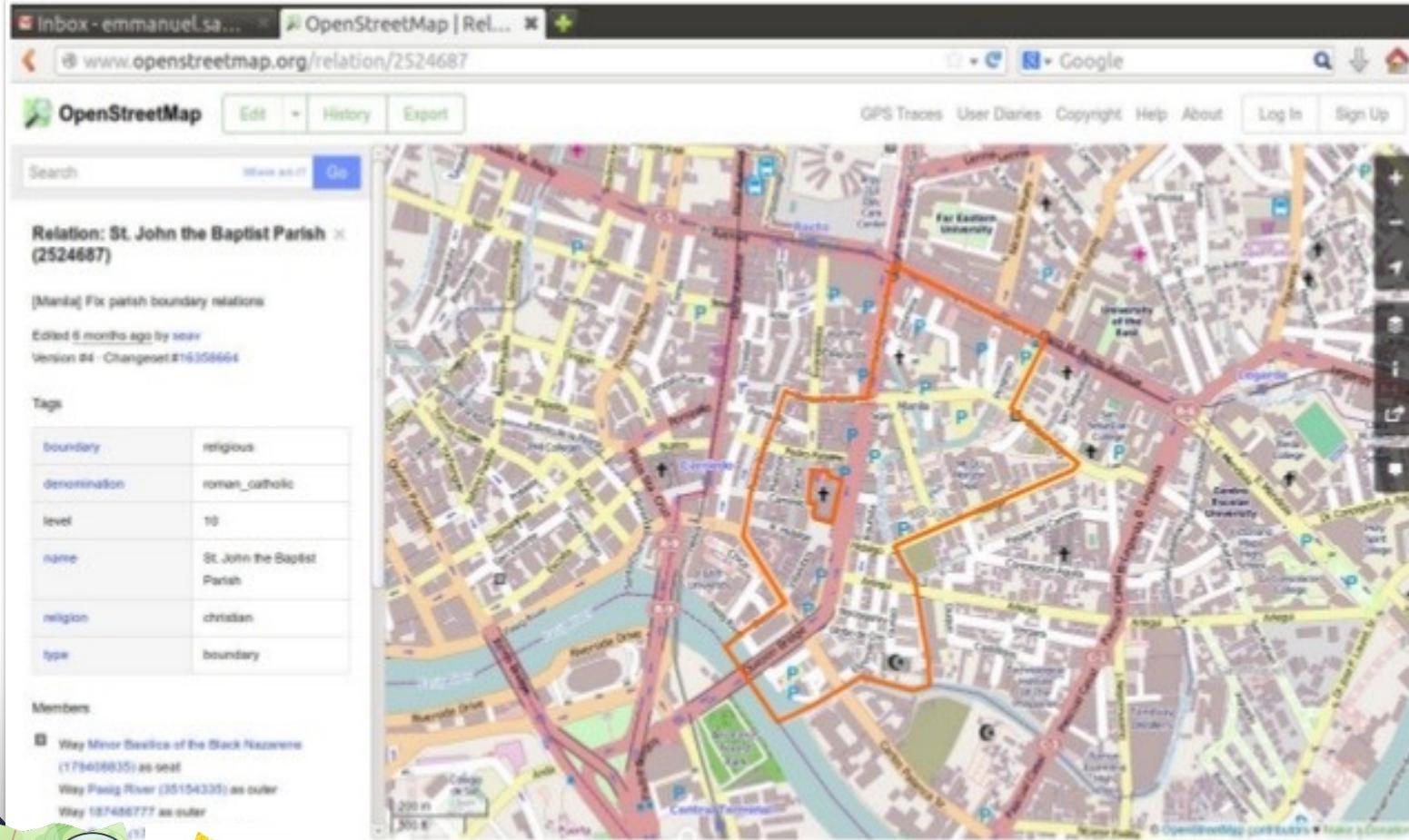


By Eugene Villar

The screenshot shows a detailed map of San Francisco, California, on the OpenStreetMap website. The map features a grid of streets, parks, and landmarks. Two specific routes are highlighted: a red line running generally north-south through the city center, and a yellow line following the coastline along the water. Key locations labeled include the San Francisco International Airport (SFO), Lombard Street, Telegraph Hill, Fisherman's Wharf, and the Golden Gate Bridge. The map also shows the Golden Gate Bridge and the surrounding urban landscape. The OpenStreetMap interface includes a search bar, navigation buttons, and account links for logging in or signing up.



Lubao, Pampanga LGU employees



Parish Volunteers



OpenStreetMap

Edit History Export

GPS Traces User Diaries Copyright Help About

Log In Sign Up



College student





Edit History Export

GPS Traces User Diaries Copyright Help About Log In Sign Up



Bike Commuter



How can we contribute to OpenStreetMap?



Contribute using your personal knowledge!





Go out and survey

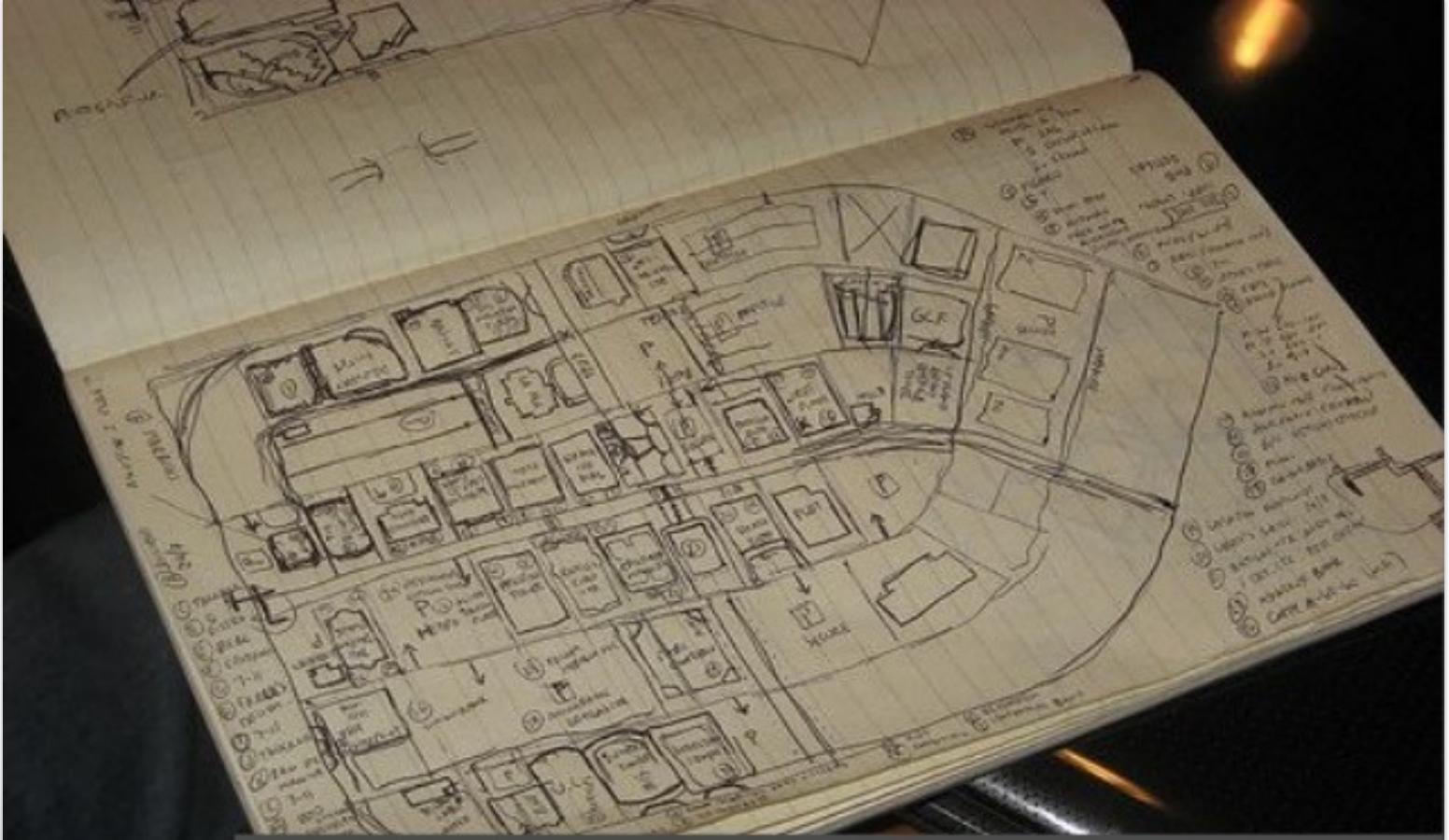




Field Papers

<http://www.fieldpapers.org/atlas.php?d=tb23676v/A1>





Write down notes



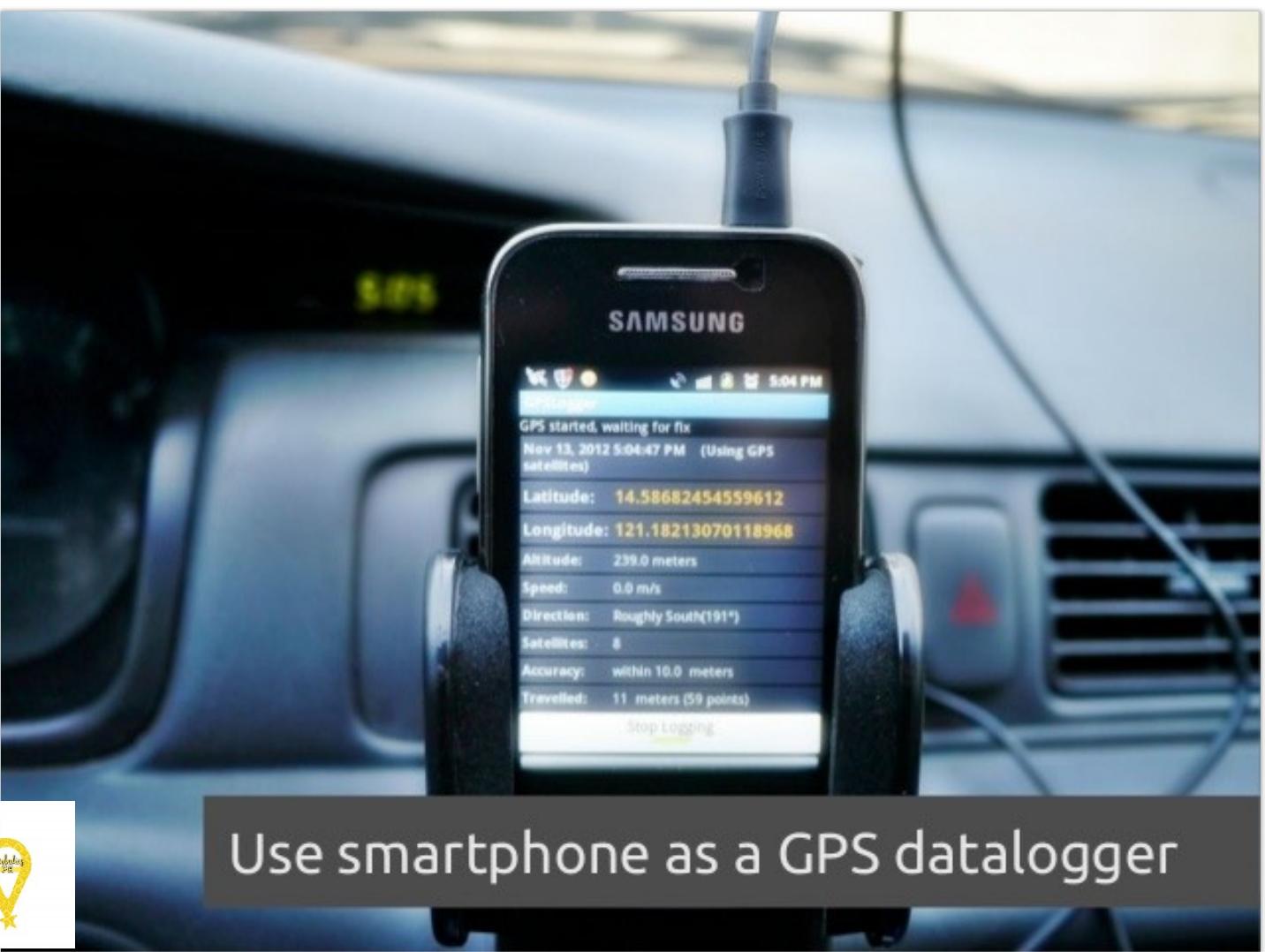
Take photos





Save tracks & waypoints on GPS unit





Use smartphone as a GPS datalogger





Navigate and collect data using a laptop

How helpful is OpenStreetMap?





UPD-Geography OSM-PH Yolanda Mapathon, Nov 15
Photo by David Garcia

OpenStreetMap Activities for Typhoon Haiyan (2013)

Copyright © 2013 NEIS ONE
Map data © OpenStreetMap
OSM is a trademark of OpenStreetMap.org

General Information

Number of OSM Contributors: 1125
Number of Map Changes: 2568613
(Total number of Changesets: 21446)
(Number of visualized Changesets:
with >= 100 Map Changes: 4025)

If you want to help?

Go to the OpenStreetMap Wiki page
[Typhoon Haiyan \(2013\)](#)

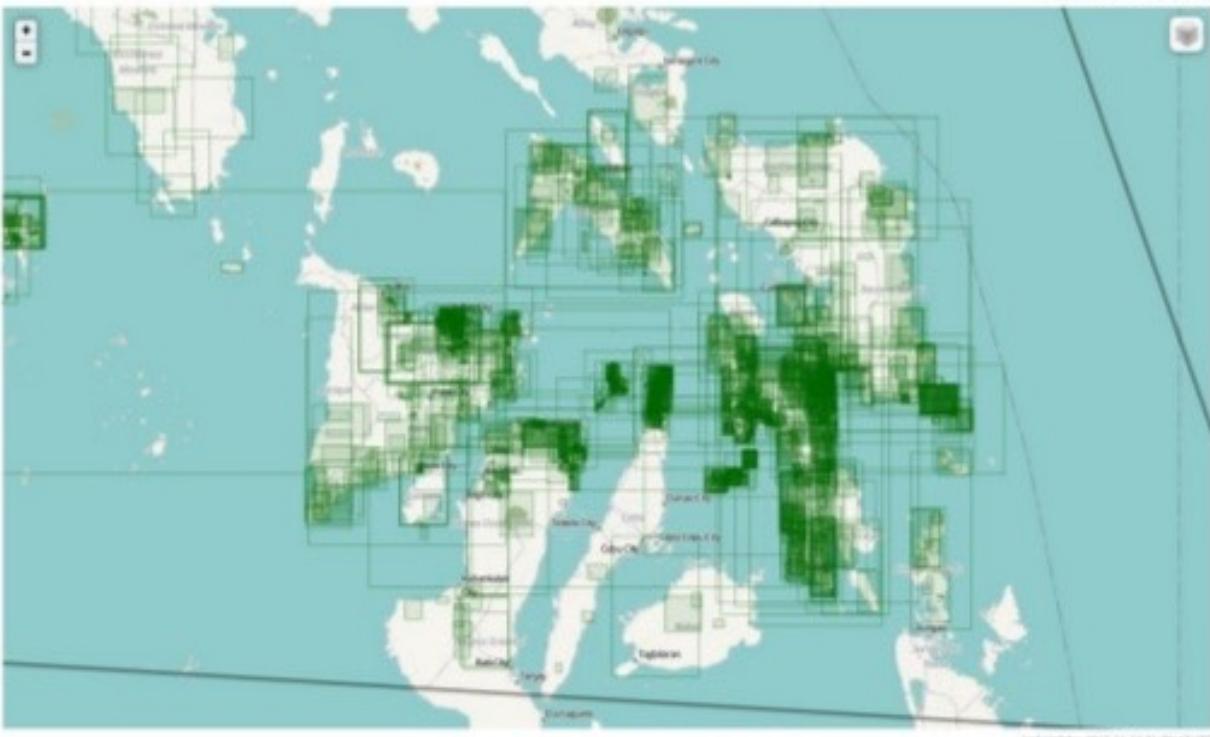
Additional information can be found at
[DisasterResponse OSM Team \(2013\)](#)
Mailing List

Who helped?

[Blog Post](#) about this website

Legend

- Analysis Extent
- OSM Changesets



<http://resultmaps.neis-one.org/osm-typhoon-haiyan-2013>



November 2013



By Eugene Villar

22 days
~1,500 volunteers
82 countries
4.2 millions of changes
448,797 buildings
34,713 roads
7,857 residential areas
4,060 rivers
(as of 2013-11-30)





American Red Cross

@RedCross

Follow



We're sending 5 more specialists to the
#Philippines. They'll assess dmg w/help of
crowdsourced maps **@OpenStreetMap**



12:45 PM - 14 Nov 2013



- Tacloban City
- Assistance Status (Department of So...)
- Assisted
- Not yet Assisted
- Response and Relief Operations
- Points of Interest (Typhoon Haiyan/Y...)
- Evacuation Center
- Command Center/Post
- Military/Police/BFP
- Hospital/Health Facility
- Communication Post
- Airport
- Port
- Relief Goods Drop-off Center
- Point from Link (Department of Public...

<http://disaster.dswd.gov.ph/maps.php>

<https://maps.dswd.gov.ph/special-maps/vawmapph/>



Violence Against Women and their Children (VAWC) Resources Map

Map showing VAWC facilities, as well as Social Welfare and Development Agencies, Police Stations, Hospitals, Barangay Halls, Daycare Centers and Breastfeeding and diaper changing stations.

UP NOAH uses OSM as one of its Base Maps

The screenshot displays a map of Quezon City and its surroundings, including Marikina and San Roque. The map is overlaid with various hazard assessment layers, such as red and orange shaded areas indicating flood-prone or high-risk zones. Key landmarks and barangays are labeled, including EDSA, Katipunan, Bago Bantay, Project 6, UP Campus, Teachers Village (East), Loyola Heights, and various project areas like Project 1, 2, 3, and 4. A legend on the left side provides icons for different hazard types, and a search bar at the top right allows users to find specific locations.

Nationwide Operational Assessment of Hazards (NOAH)

Find a place... OpenStreetMap

Like 62K Share

1

UP NOAH uses OSM data for WebSAFE



DOST - Pro

WebSAFE

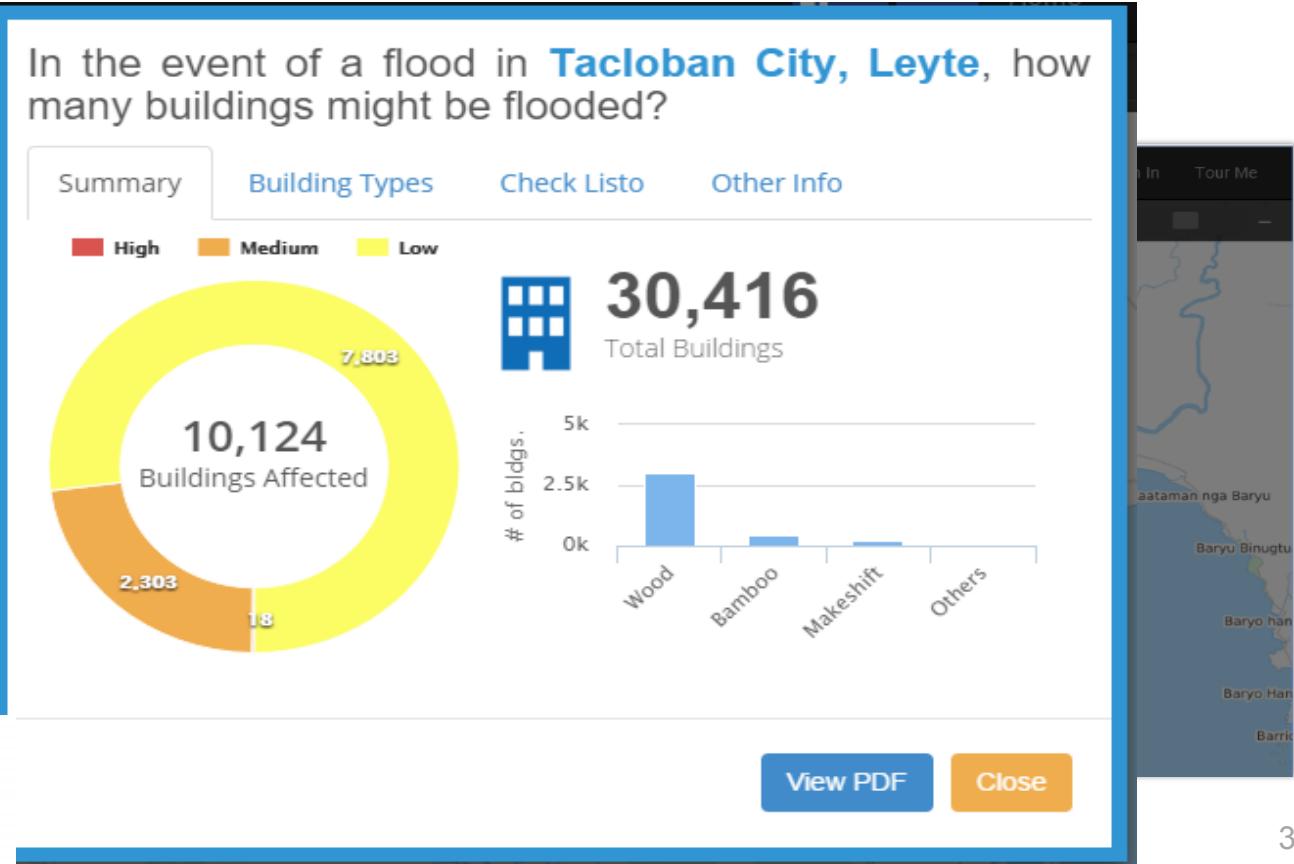
Tacloban City (Capital), ...
Tacloban City (Capital)

QUESTION

In the event of a 100-YE
FLOOD IN TACLOBAN C
(CAPITAL), LEYTE, how m
BUILDINGS will BE FLOODED

Show Report
RESET

WebSAFE, an impact
assessment tool based o



NOAH BUILDING FOOTPRINT MAPPING PROGRESS - 2017

PHILIPPINES



BEFORE - MARCH 14, 2016 - 534,676 STRUCTURES

OSM MAPPING PROGRESS

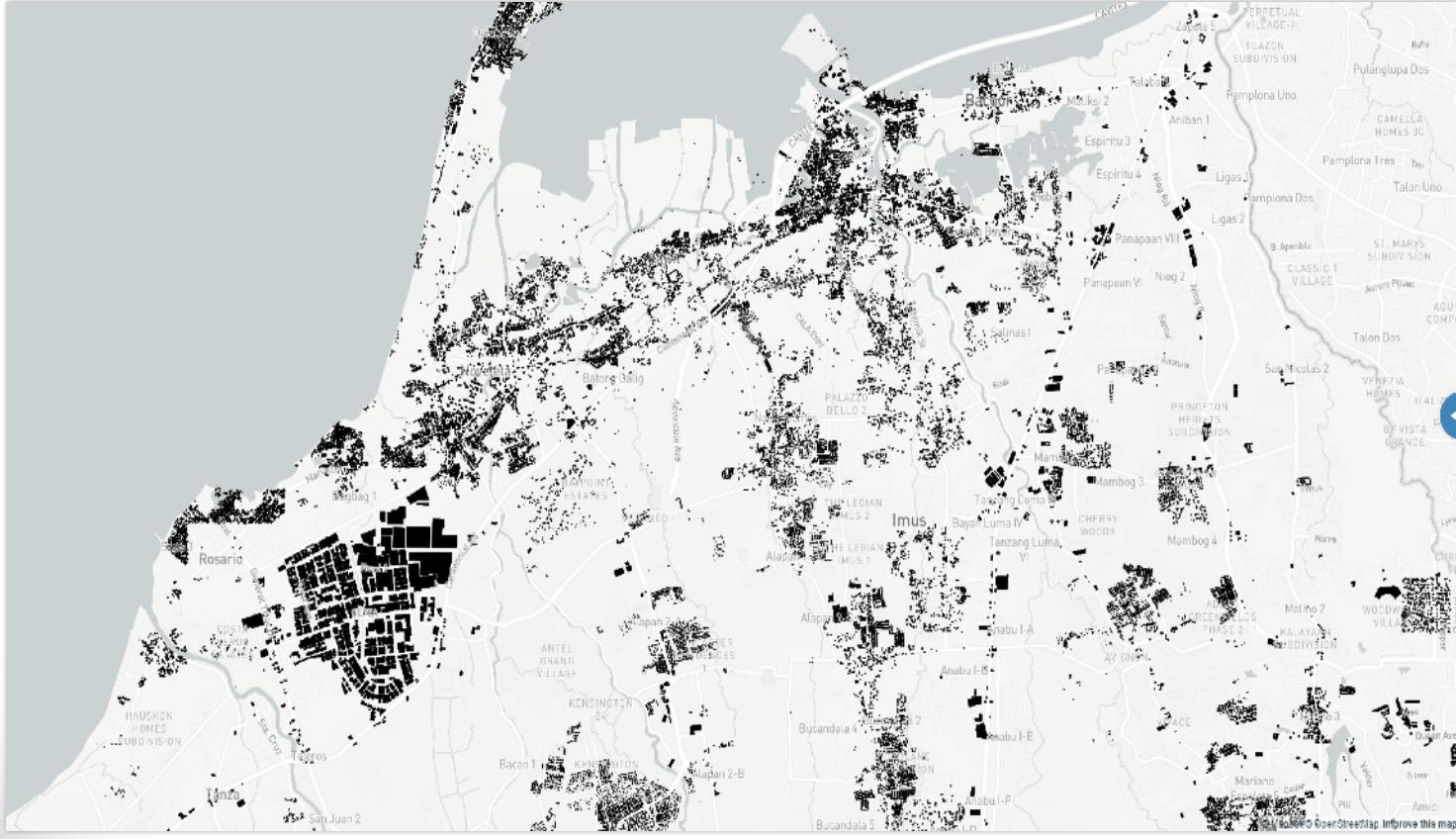
CAVITE BUILDING FOOTPRINT MAPPING HAS BEEN COMPLETED!



TRY BY BING



Nationwide Operational
Assessment of Hazards



Total building footprints mapped:
From **110,506** to **631,825**



OpenStreetMap Philippines (OSM PH) a.k.a. OSM LoCos



Conference: State of the Map Asia (October 2016)

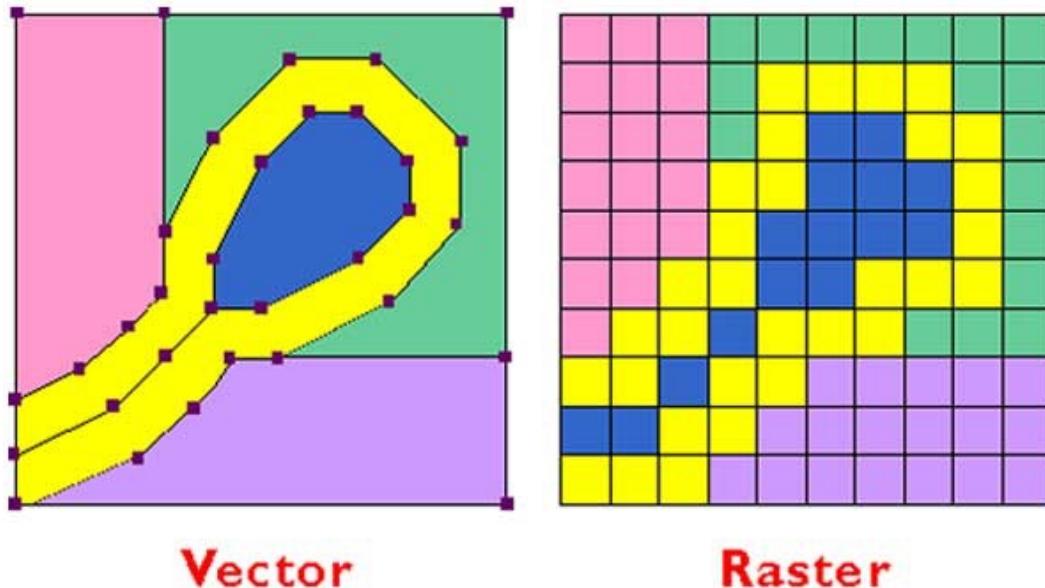


OSM Elements and Tags

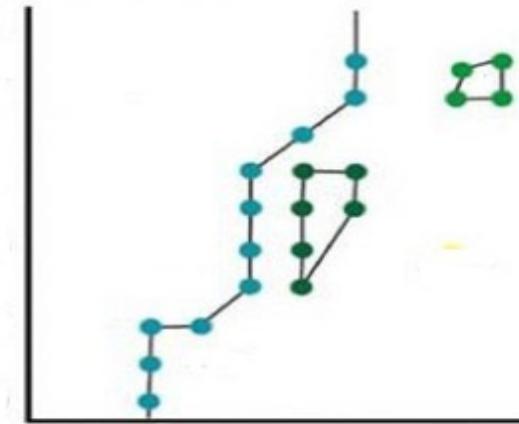
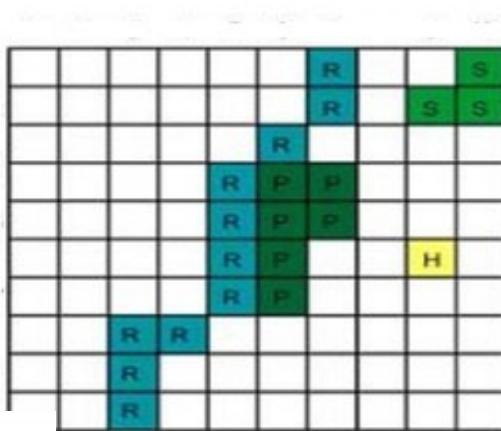
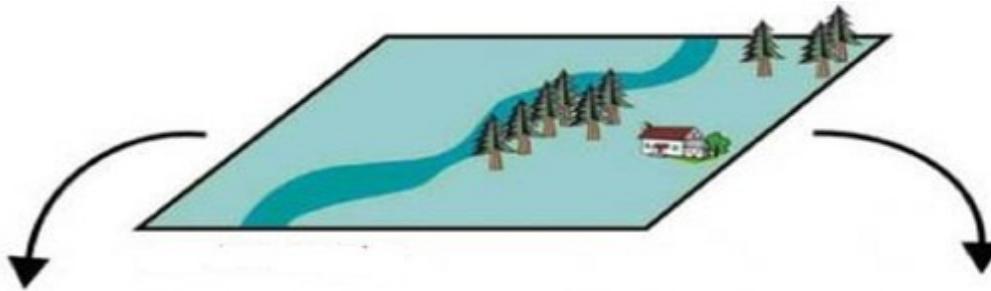


DATA MODELS

- Used to represent the real world
- GIS Data Models: Vector and Raster



DATA MODELS

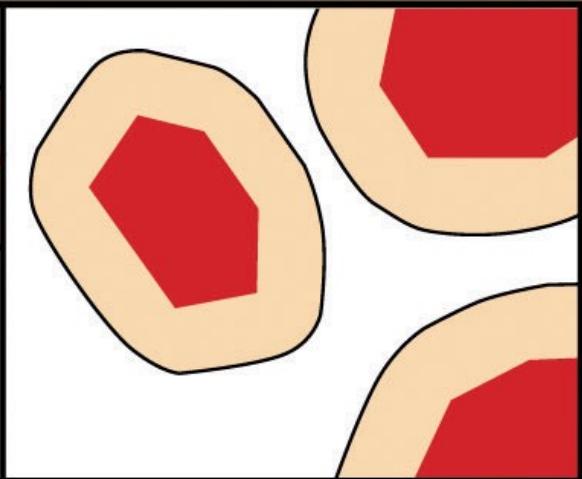
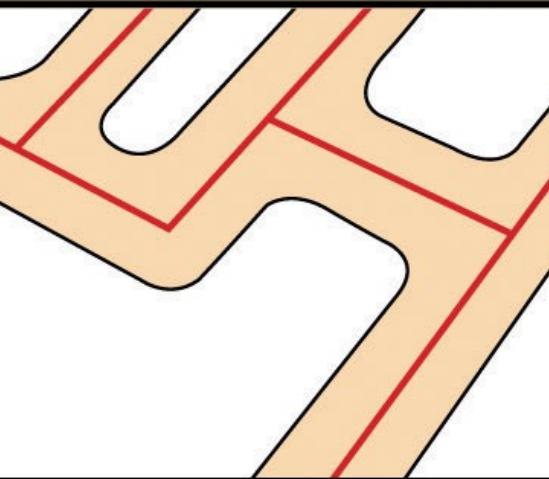
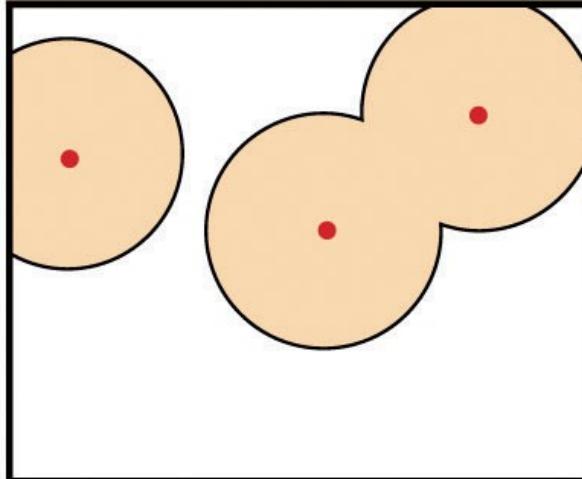


VECTOR DATA MODELS

Points

Lines

Polygons



OSM objects are combination of Elements and Tags



ELEMENTS

- **NODE** is a point in space
- **WAY represents** linear features
- line is a way that is open, while polygon is a way that is closed
- **RELATIONS** multi-purpose data structure that documents a relationship between two or more data



ELEMENTS

OpenStreetMap Translator

2D Map Feature Terminology



Point

OSM

Node



Line

Way (open)



Polygon

Way (closed)



TAGS

- **KEY** category of feature
- **VALUE** details the specific form of the key

For example:

building = yes

building = school

landuse = farmland

highway = *primary*
highway = *unclassified*
landuse = *residential*



Get connected! OSM PH Channels

Mailing list:

<https://lists.openstreetmap.org/listinfo/talk-ph>

Facebook Page:

<https://fb.com/OSMph>

Facebook Group:

<https://fb.com/groups/osmph>

Telegram:

<https://t.me/osmph>



To know more about mapping conventions for the Philippines, see:

[https://wiki.openstreetmap.org/wiki/Philippines/Mapping conventions](https://wiki.openstreetmap.org/wiki/Philippines/Mapping_conventions)



References

- ◆ Coast, Deffner & Weait, 2015. Introduction to OSM
- ◆ UP NOAH, 2019. OpenStreetMap for Disaster Risk Reduction
- ◆ Villar, 2019. Introduction to OpenStreetMap
- ◆ <https://wiki.openstreetmap.org/wiki/Elements>
- ◆ <https://wiki.openstreetmap.org/wiki/Tagging>



#GeoLadies Invitations

- When Woman Map Workshop
1:30 - 3:00 PM, IT Room
- GeoLadiesPH Plenary Session
3:20 - 4:30 PM, Sofia Hall



#GeoLadies Invitations: Talks

- Day 1
 - Introduction Workshop to OSM
1:00 - 2:30 PM CS Lab 2
 - Human Experience Design for Maps
3:00 - 4:30 PM CS Lab 2
- Day 2
 - “DIY” Imagery Collection for Mapping
10:30 AM - 12 NN CS Lab 2



Thank you!

Up next...

OSM id Editor + mapathon





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