



An Introduction to OpenStreetMap

Mele Sax-Barnett

FOSS4G 2014

<http://bit.ly/foss4g-osm>

OpenStreetWhat?

- <http://osm.org/about>
- OpenStreetMap or OSM
- **Not** “Open Street Maps”
- Founded in 2004
- Worldwide and seamless
- “Wikipedia of Maps”
 - Editable by anyone with an account



OpenStreetMap
The Free Wiki World Map

So, what is it really?

- XML data
- Each feature is one of four basic types, and is further defined by tags (key-value pairs)
- Basic types:
 - Nodes (points)
 - Ways (lines)
 - Areas (polygons)
 - Relations (groups)
- Example tag:
 - highway = primary



What is it *not*?

- A rendered map that uses particular cartography, whether for web or paper.
- Proprietary—anyone can use it for free as long as they provide proper credit
- Something static—it changes and grows all the time
- Controlled by an authority—it is driven and maintained by a large community of contributors and data consumers

Who uses OpenStreetMap?

- <http://switch2osm.org>



What kind of things can you find in OpenStreetMap?

- Roads, highways, bridges, and tunnels
- Bus stops, bus routes, bike routes, and railways
- Businesses: shops, restaurants, bars
- Buildings: schools, churches, houses
- Parks, lakes, mountains, and even trees
- Airports, power networks, and mailboxes
- Administrative boundaries
- Almost anything that stays the same for a while,
see <http://wiki.osm.org> for more

How did all this data get there?

- Local knowledge
- In the United States: 2007 TIGER data import [http://
wiki.openstreetmap.org/wiki/TIGER](http://wiki.openstreetmap.org/wiki/TIGER)
- Other imports of open data
- Around the world: lots of people uploading and tidying up GPS tracks
- More recently, tracing aerial or satellite imagery
- *A real person put it there, and other people have looked at it and confirmed that it is correct*
- **Challenge: data maintenance**

What does it look like?

OSM.org default



Stamen Design



MapBox

MapQuest

What does it look like?

OpenStreetMap

Search Where am I? Go

Way: Neuberger Hall (31735442)

Corrected building footprints on PSU campus based on Metro's 2011 aerial imagery

Edited over 2 years ago by [Grant Humphries](#). Version #6 · Changeset #10634092

Tags

addr:housenumber	724
addr:street	SW Harrison St
building	yes
name	Neuberger Hall
operator	Portland State University

Nodes

355121030 (part of way South Park Blocks (130670497))

GPS Traces User Diaries Copyright Help About Log In Sign Up

Map Layers

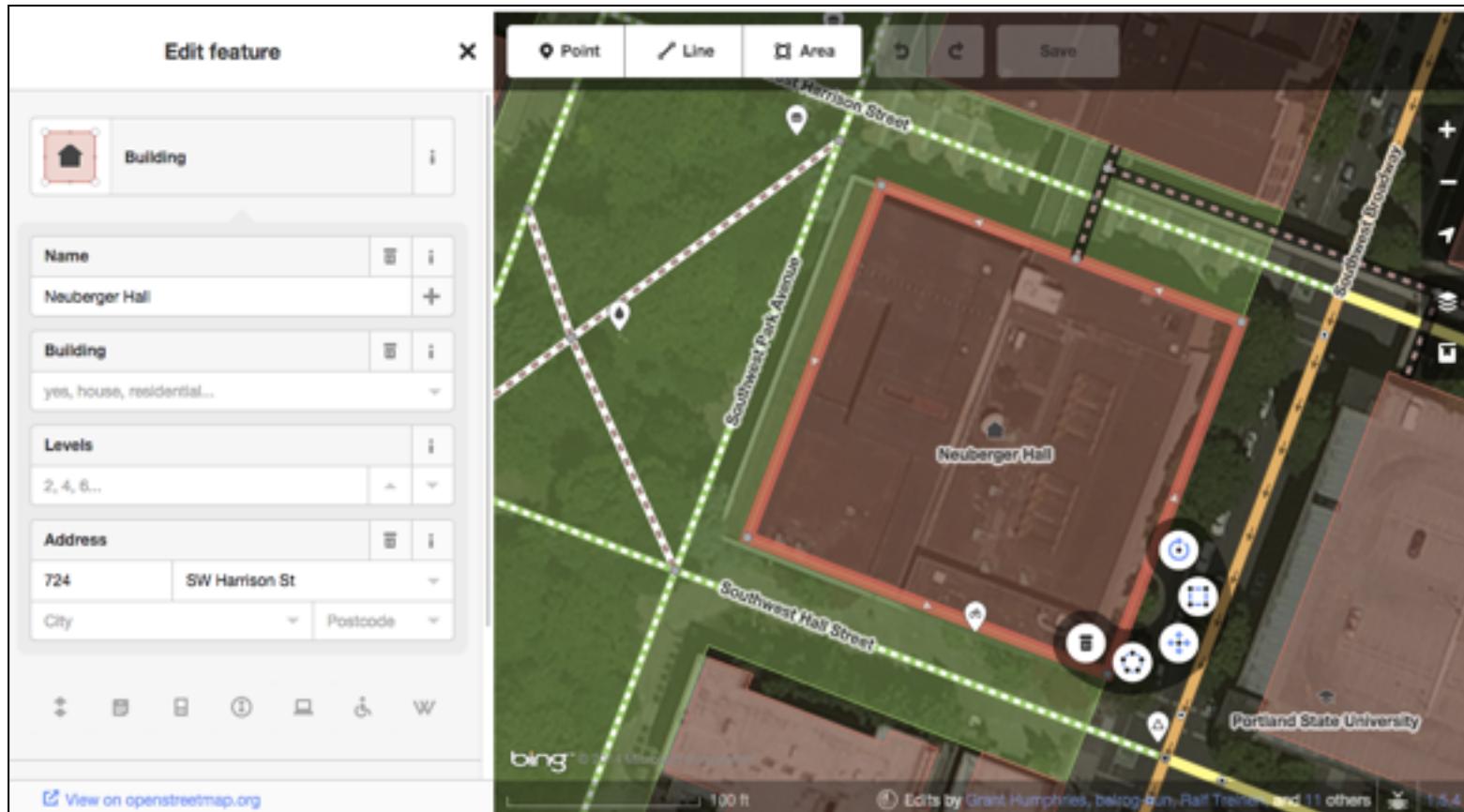
- Standard
- Cycle Map
- Transport Map
- MapQuest Open
- Humanitarian

Enable overlays for troubleshooting the map

Map Notes Map Data

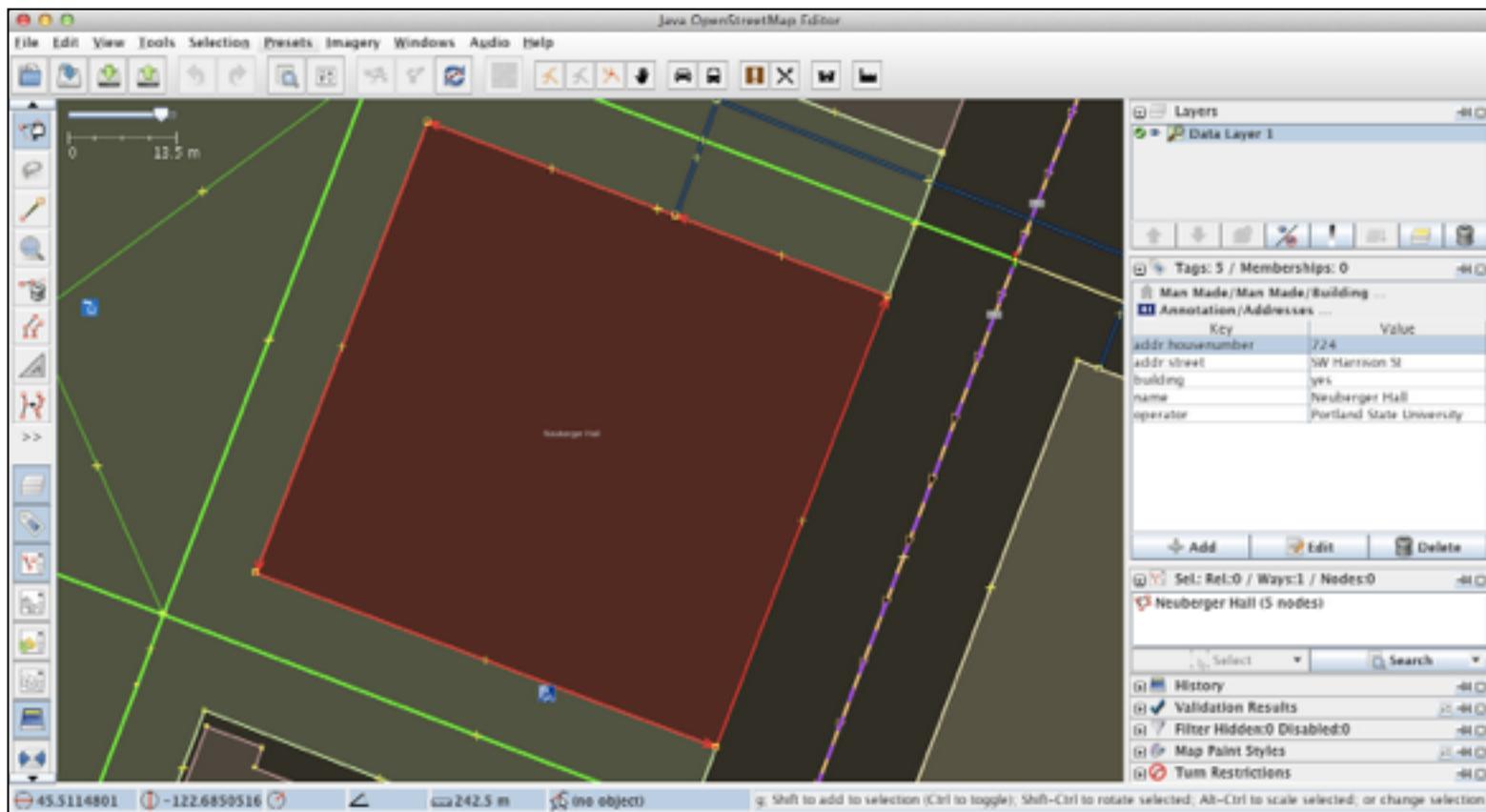
openstreetmap.org data view

What does it look like?



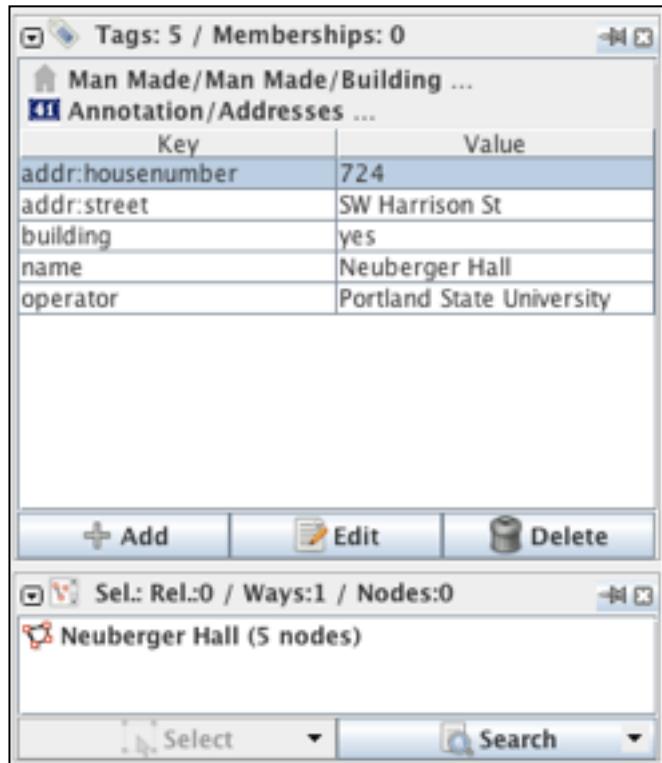
iD editor

What does it look like?



JOSM editor

OSM data



JOSM



iD

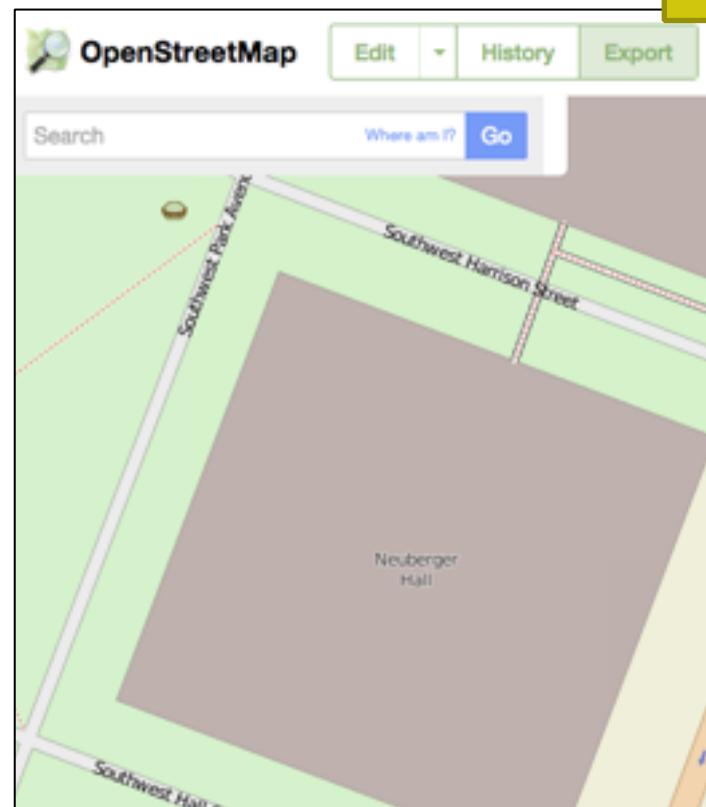


The screenshot shows the iD (Improved Data Editor) interface. It features a sidebar on the left with a building icon and the word 'Building'. The main area has several input fields and dropdown menus:

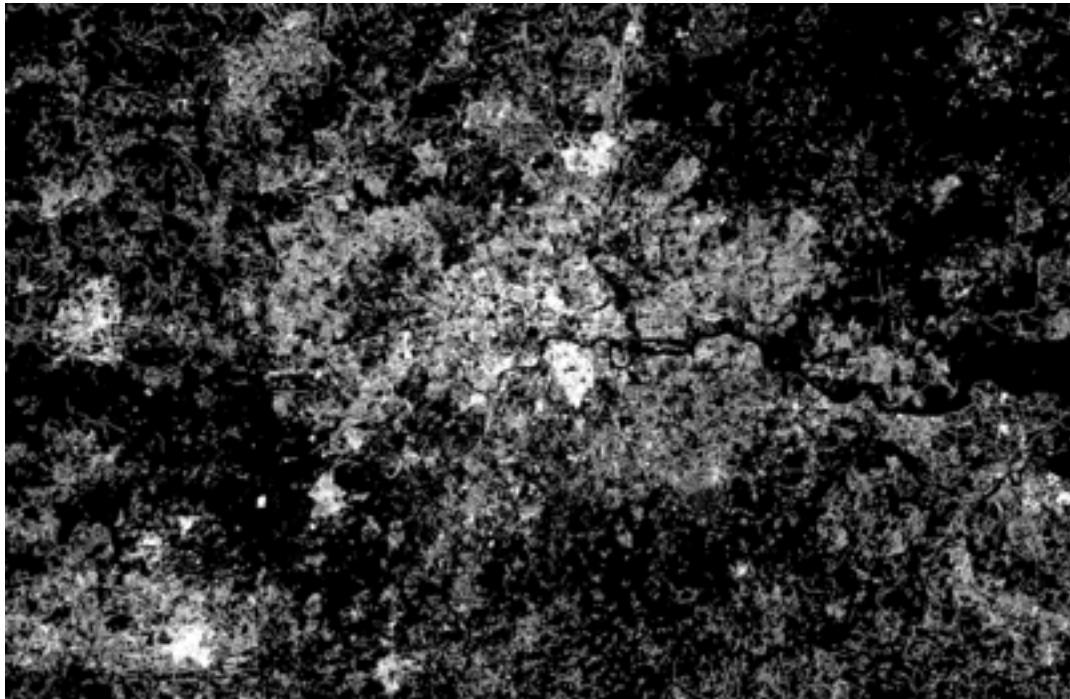
- Name:** Neuberger Hall
- Building:** yes, house, residential...
- Levels:** 2, 4, 6...
- Address:** 724 SW Harrison St
- City:** (dropdown menu)
- Postcode:** (dropdown menu)

How do you get the data?

- [http://wiki.osm.org/wiki/
Downloading_data](http://wiki.osm.org/wiki/Downloading_data)
- Download via OSM editors, APIs, and GIS software OSM plugins
- Large extracts are hosted around the web, updated at differing schedules
- You can also download directly from <http://osm.org> by clicking the “Export” button



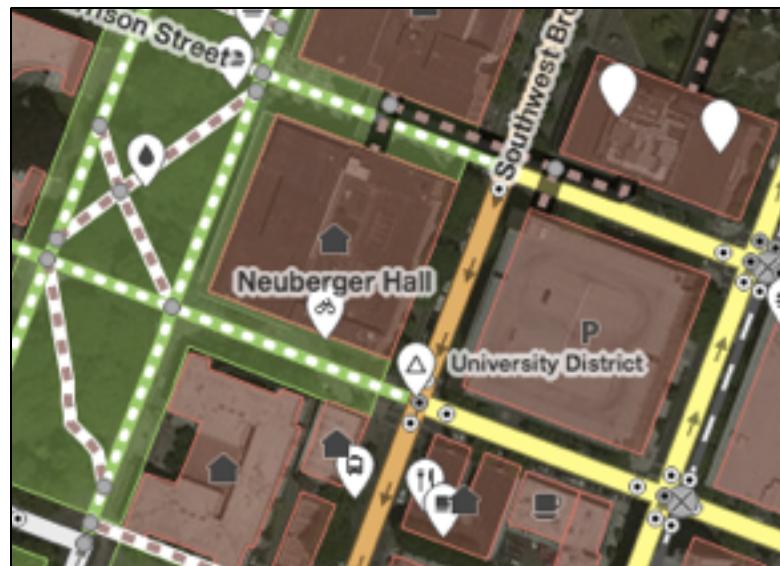
Taking the next step: Editing OpenStreetMap



<https://www.mapbox.com/blog/osm-contributions-around-the-world/>

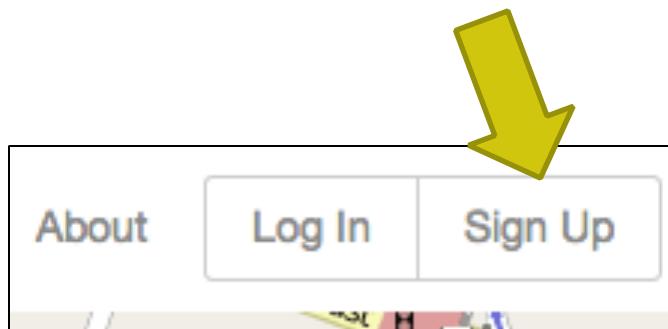
How do you edit OSM?

1. Sign up for an account
2. Choose one of several free and open source editing tools
 - iD and JOSM are the most popular
 - Examples here will use iD, the newer in-browser editor



Step 1: Sign up for an account

- Go to <http://osm.org>
- Click the “Sign Up” link in the **top right corner**



- Set up your account!

A screenshot of the 'Sign Up' form on the OpenStreetMap website. The form is contained within a white box with a thin black border. At the top left is the 'OpenStreetMap' logo. To its right are four buttons: 'Edit', a dropdown arrow, 'History', and 'Export'. Below this is the word 'Sign Up' in bold. To the right of the form is a decorative image of a globe with binary code (0s and 1s) overlaid. The form itself has several input fields:

- Email Address:
- Confirm Email Address:
- Display Name:

Not displayed publicly (see [privacy policy](#))

Your publicly displayed username. You can change this later in the preferences.

On the right side of the form, there is descriptive text:

Free and edita
Unlike other ma
created by peo
anyone to fix, u

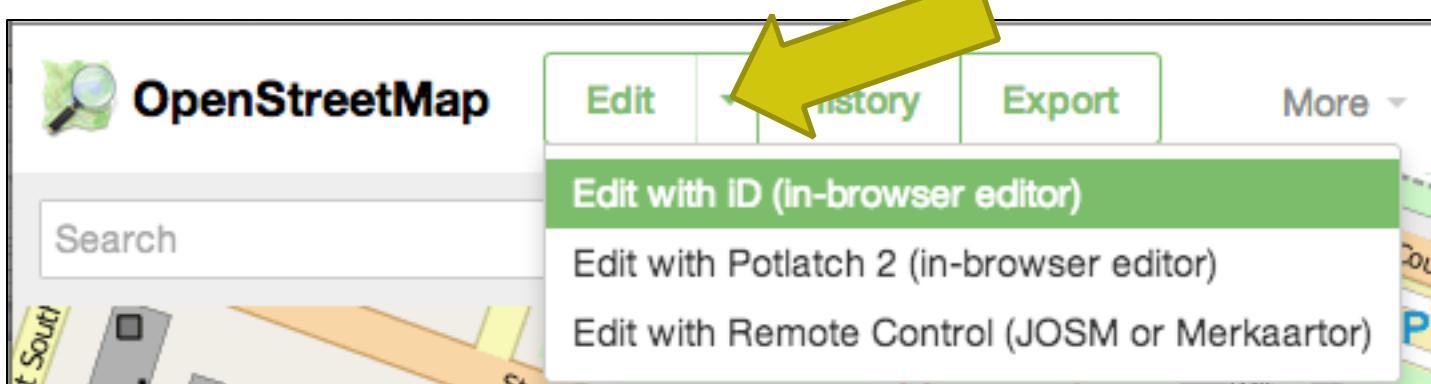
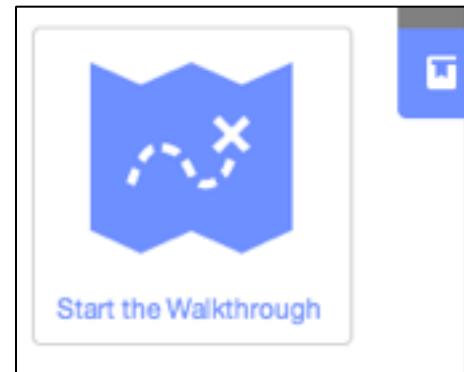
Sign up to get s
email to confirm

Step 2: Where and what

- Congratulations! You are now the owner of one of > 1.7 million OSM editing accounts!
- Go back to <http://osm.org>
- Use the search bar or navigate to a neighborhood that you know well
- Take some time to look at the map key and different tiles and layers
- Think about the places that you know about there - ***local knowledge***
- Notice anything missing?

Step 3: Getting started with iD

- Start familiarizing yourself with iD:
 - Select Edit -> Edit with iD
 - Go through the walkthrough
 - Check out the “Help” section



Step 3: Getting started with iD

- After the walkthrough:
 - Click things to see how they're classified
 - Don't worry, you can't break anything ***until you click "Save"***
 - Click the magnifying glass to search for a city or place
 - Or, click the arrow to go to your current location

Search features

🔍 Portland

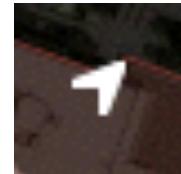
☒ University Portland State University

☒ Building Portland State University

☒ Residential Building Portland Plaza

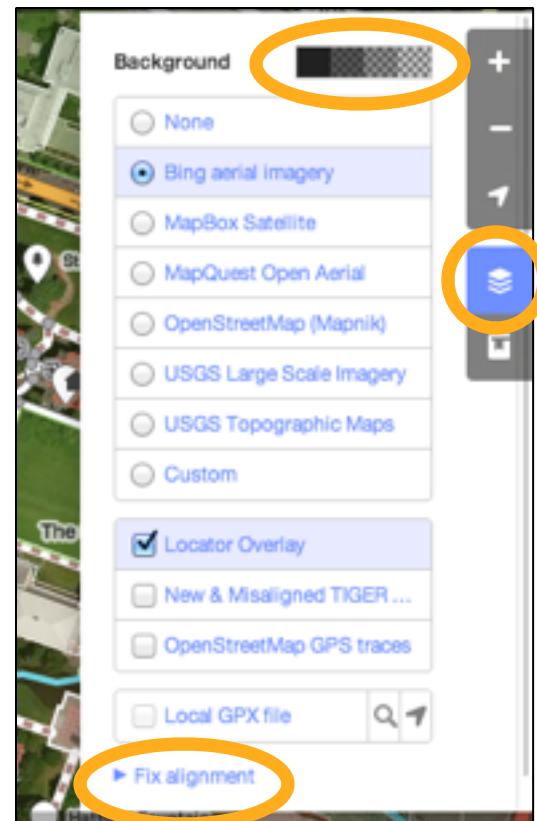
☒ Fire Station Portland Fire&Rescue Station 04 - Portlan...

☒ Tram Portland Streetcar



Step 3: Getting started with iD

- Changing the background imagery
 - Adjust brightness
 - Lots of imagery choices
 - TIGER data overlay
 - Custom/local files and imagery
 - Adjust alignment

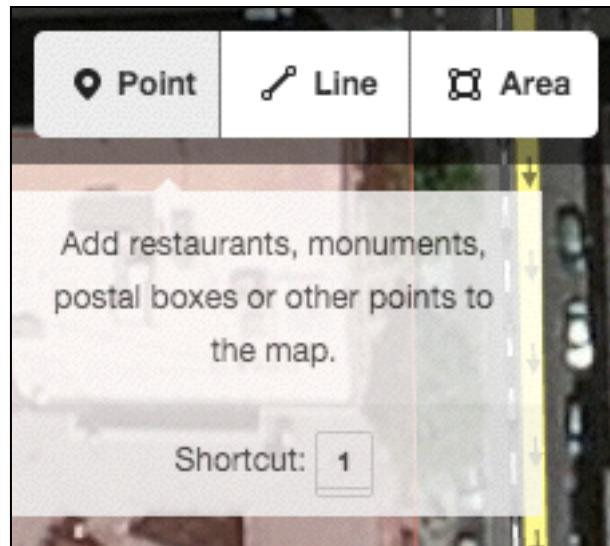


Step 4: Change something

- But first, what's your source?
- **Don't copy from other maps**
- Local knowledge is best, but a dataset with the correct license and permissions can be a valid source
- You even need permission for aerial/satellite imagery (imagery already included in OSM editors is OK)
- More info about the OpenStreetMap license (OdBL) can be found at <http://www.openstreetmap.org/copyright>

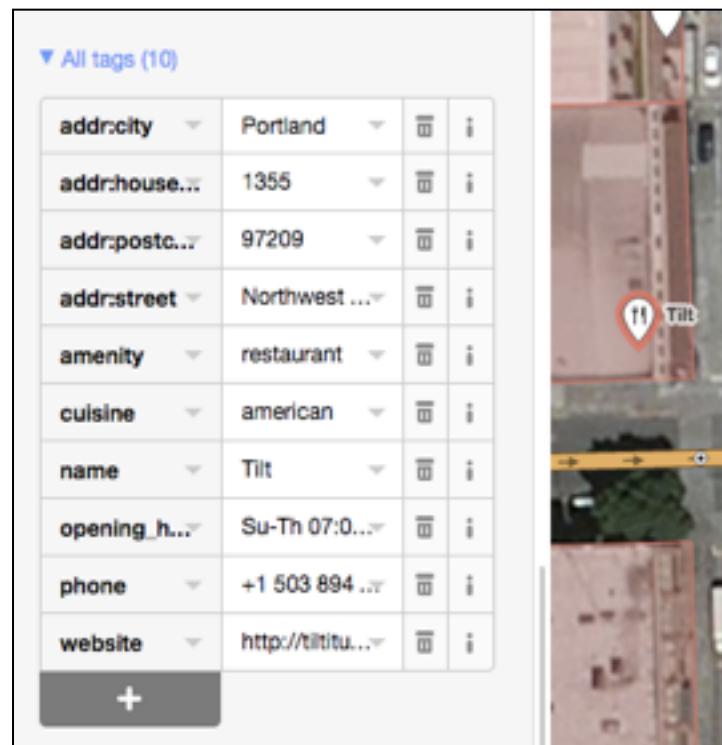
Step 5: Add something

- The map has nothing there, but I know that there's actually:
 - A coffee shop
 - Bike parking
 - Mailbox
 - Something else?



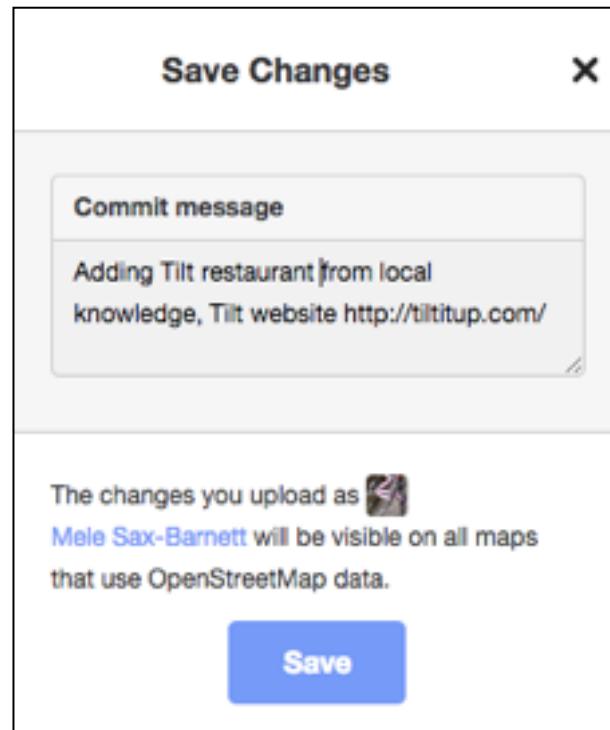
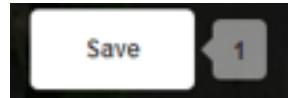
Step 5: Add something

- Drag the point icon to the place where it belongs, and then search for or select the appropriate feature type and fill in other tags for what you know
- If the place has a website, you can get a lot of info there (not from Yelp or Google though)



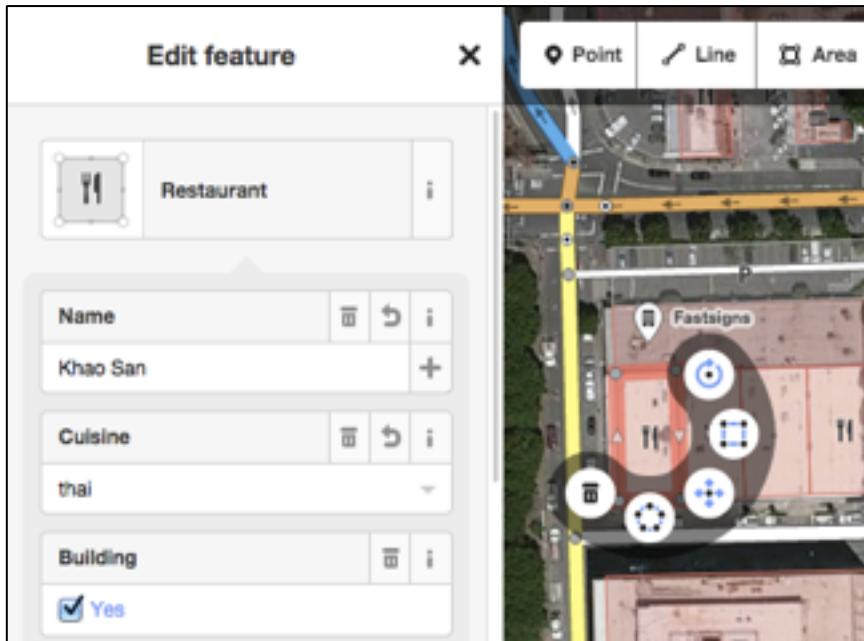
Step 5: Save your edits

- Save early, save often
- This creates a “changeset” that is sent to the database
- **Give an informative changeset comment** that includes what you were working on and your sources
- What imagery are you using?



Step 6: Change something

- This is no longer a piano bar, it's a Thai restaurant



Step 6: Change something

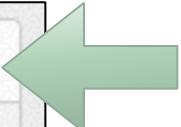
- Try clicking the “i” for a link to the OSM wiki with more info about that thing
- Opening hours can be complicated, see the wiki

Phone

+1 503 227 3700			
-----------------	--	--	--

A telephone number associated with the object.

[View on OpenStreetMap Wiki](#)



Hours

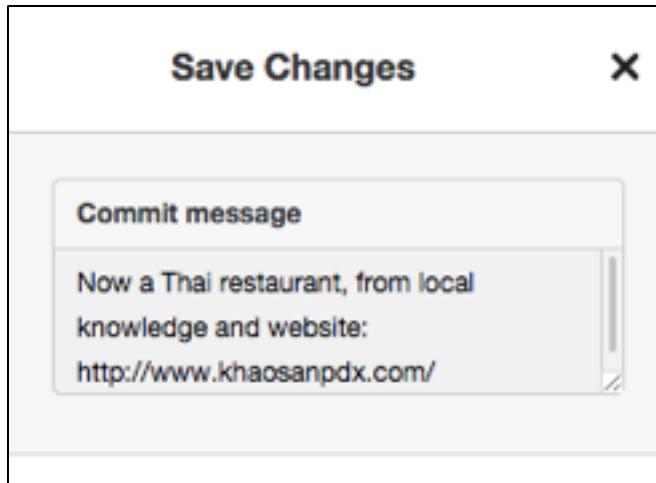
Mo-Th 11:00-22:00;Fr 11:00-24:00;Sa ...		
---	--	--

Describes when something is open or closed.

[View on OpenStreetMap Wiki](#)

Step 6: Change something

- Save again when you're done and use an appropriate changeset comment



Step 6: Change something

bicycle	designated	☒	i
highway	secondary	☒	i
maxspeed	25 mph	☒	i
name	Northwest ...	☒	i
oneway	yes	☒	i
RLIS:localid	137772	☒	i
sidewalk	both	☒	i
zip_left	97209	☒	i
zip_right	97209	☒	i
cycleway	sh	☒	i
+ +	shared		
	opposite_...		
▼ All relations (1)	shared_lane		
	...		

Commit message

This part of NW Everett now has a bicycle
sharrow in the left lane (local knowledge)

Step 7: View your edits!

- Click “View on OSM” (or go to <http://osm.org>)
- Hold down *Ctrl* or *shift* while clicking *refresh* to clear your browser’s cache of map tiles
- Should be updated within a few minutes



[View on OSM](#)



Other editors

- <http://wiki.openstreetmap.org/wiki/Editors>
- JOSM (Java OpenStreetMap Editor) is another very good desktop editor
 - Powerful and not too hard to learn, especially if you're familiar with GIS software
 - Allows you to toggle multiple layers of data and imagery on and off
 - <http://josm.openstreetmap.de/>
 - <http://learnosm.org>
- Editors for mobile devices are good for adding businesses and addresses while you're out and about
 - Pushpin OSM, Vespucci, etc.

More about the OpenStreetMap data structure: Nodes

- Nodes:
 - A node/point can be used to mark a particular place on the map
 - For example, a bus stop may be marked using a node tagged with `highway = bus_stop`

Node: Summer & Union (1943512283) [X](#)

mapped bicycle routes and infrastructure in Salem based on City of Salem bike data and Bing aerial imagery

Edited over 1 year ago by [Grant Humphries](#)
Version #1 · Changeset #13341522
Location: 44.9436487, -123.0276827

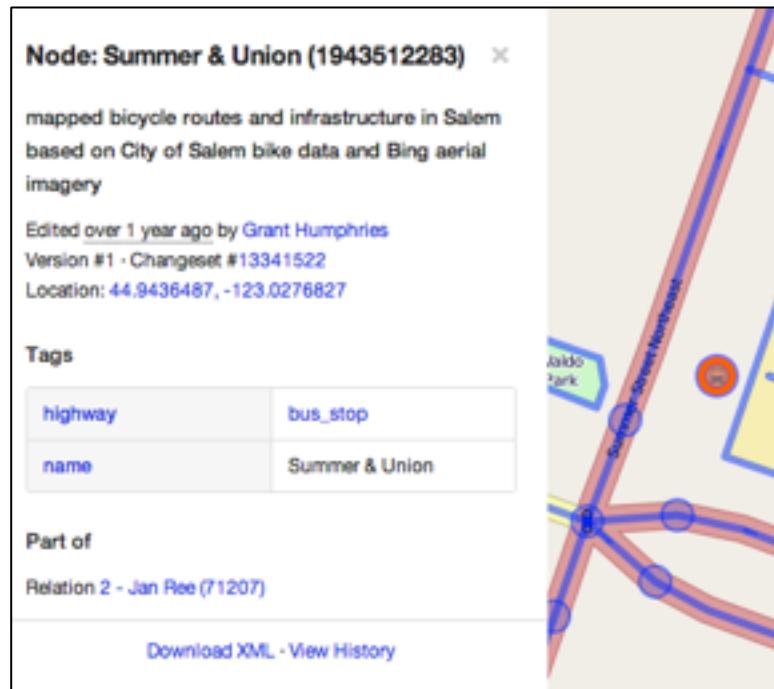
Tags

<code>highway</code>	<code>bus_stop</code>
<code>name</code>	Summer & Union

Part of

Relation 2 - Jan Ree (71207)

[Download XML](#) · [View History](#)



More about the OpenStreetMap data structure: Ways

- Ways:
 - A way is a *line feature*, made up of two or more connected nodes
 - For example, a freeway would be a way tagged with `highway = motorway`

Way: Robert Hugh Baldock Freeway (29170696)

Marion County, OR fixes to Marion County GIS data, Bing

Edited over 1 year ago by Mele Saxi-Barnett
Version #54 - Changeset #13189178

Tags

alt_name	Pacific Highway
bicycle	yes
comment	Named after Sam Baldock.
hgv	designated
highway	motorway
lanes	3
maxspeed	60 mph
maxspeed:hgv	55 mph
name	Robert Hugh Baldock Freeway

More about the OpenStreetMap data structure: Areas

- Areas:
 - A closed way (shares the same start and end nodes)
 - For example, a generic building would be an area tagged with **building = yes**



Tags that can apply to either ways or areas, like `highway = pedestrian`, may also require an `area = yes` tag

More about the OpenStreetMap data structure: Relations

- Relations:
 - Groups of nodes, ways, and/or areas
 - Types:
 - **Route**: includes interstate routes, cycling routes, and bus routes
 - **Multipolygon**: areas with multiple parts or holes (islands and buildings with courtyards)
 - **Boundary**: for administrative boundaries only
 - **Restriction**: describes turn restrictions

Let's talk tags

- Tags are the equivalent of “attributes” for GIS features
- They consist of two text fields, a key and a value
 - name = Neuberger Hall
 - highway = residential
 - building = yes
 - access = private
 - leisure = park
- The key is always one word, and is lowercase
- The value is usually one word and lowercase too unless it's a proper name

Let's talk tags

- Do not use abbreviations of any kind - this helps users who speak other languages do correct translations
- A feature can't have more than one tag with the same key
- If you must have two values for the same key, use a semicolon (this should be rare)
 - ref = I 84;US 30
- Use alt_name, name_1, name_2 etc for multiple names

Let's talk tags

- There are a lot of possible tags, and they can be confusing and even controversial
- Try to use what you see being used for similar types of things in your area
- Visit <http://wiki.osm.org> for tagging help, or ask on the newbies listserv <http://lists.openstreetmap.org/listinfo/newbies>
- Taginfo can also be a helpful tool
- Just try your best! If you make a mistake, someone will come along and help fix it

More tagging peculiarities

- Street names should be what you see on the street sign, but expand the abbreviation ("Southwest Morrison Street")
- Highways may also have ref codes, which are not the same as the name
 - For example, I-5 is known by many names (Robert Hugh Baldoock Freeway, etc.) but it is always `ref = I 5`
- Service roads and ramps are generally unnamed
- Separated roadways (with medians) should be mapped as two one-way streets

Highway classification

- `highway =`
 - `motorway`: freeway
 - `trunk`: not an official freeway, but bicycles and pedestrians not usually allowed
 - `primary`: major arterial
 - `secondary`: secondary arterial
 - `tertiary`: yellow centerline
 - `residential`: no centerline
 - `service`: often unnamed driveway or alley
- <http://wiki.openstreetmap.org/wiki/Highway>

Highway classification

- links, for instance, `motorway_link`:
 - Defined by the highest-classification roadway it connects to
 - Unnamed connectors between named roadways
- Highways are for pedestrians and bicycles too
 - `footway`: primarily for foot traffic
 - `cycleway`: primarily for bicycle traffic
 - `path`: for both foot and bike traffic
 - `pedestrian`: wider way for pedestrian and bicycle traffic, occasional service vehicles

Access tags

- `access = no` : nobody can go there (unless you also add exceptions with = yes)
- `access = private` : only allowed if you are ending or beginning the trip there
- `bicycle = yes` : for places they're not usually allowed, like motorways and trunks
- `bicycle = designated`
- `foot = no`
- `psv = designated, bus = yes`
- <http://wiki.openstreetmap.org/wiki/Access>

Bicycle facilities

- `cycleway = lane` : a regular bike lane
- `cycleway = opposite_lane` : bike lane going against motorized traffic (for one way streets)
- `cycleway = shared_lane` : sharrows
- `cycleway = share_busway` : shared bike/bus lane
- `cycleway:right = lane, cycleway:left = shared_lane` : for when different sides of the street have different facilities
- <http://wiki.openstreetmap.org/wiki/Cycleway>



Topology/connectivity

- Very important for good routing
- Directionality (`one_way = yes`)
- Does this street actually go through and connect to this other street?
- Adding new streets and paths that are missing
- Can tag for prolonged closures due to construction projects with `highway = construction`, `construction = primary`, etc.

Topology/connectivity

- Bridges and tunnels
 - Only connect features to other features according to reality (overlapping is OK)
 - `bridge = yes`
 - `tunnel = yes`
 - Associated layer tags:
 - `layer = 0` is implied, ground level
 - `layer = 1` is the next layer up
 - `layer = -1` is the next layer down
 - Continue incrementing up/down as needed



Turn restrictions

- **Relations** that say you can or cannot go from one way to another via a particular node
 - A “**type**”: no_right_turn, no_left_turn, no_u_turn, no_straight_on, only_right_turn, only_left_turn, only_straight_on
 - A “**from**” way, a “**via**” node, and a “**to**” way
 - Can except or apply to only certain kinds of vehicles or bicycles
- http://wiki.openstreetmap.org/wiki/Turn_restrictions
- Editing turn restrictions with iD: <https://www.mapbox.com/blog/simple-editing-for-turn-restrictions-in-openstreetmap/>

Common businesses

- Try adding a node, then searching for a popular chain like “Starbucks” when selecting the feature type. Notice how it fills in a bunch of tags for you!

The diagram illustrates the workflow for creating a business node. On the left, a screenshot of a node editor shows a node labeled "Starbucks - Cafe". Below it, three input fields are filled: "Name" with "Starbucks", "Cuisine" with "coffee shop", and "amenity" with "cafe". A green double-headed arrow points from this editor to a larger screenshot on the right. The right screenshot shows a "Tags" panel titled "▼ All tags (3)". It lists three tags: "name" with value "Starbucks", "cuisine" with value "coffee_shop", and "amenity" with value "cafe". Each tag has edit and info icons.

name	Starbucks	edit	info
cuisine	coffee_shop	edit	info
amenity	cafe	edit	info

Resources

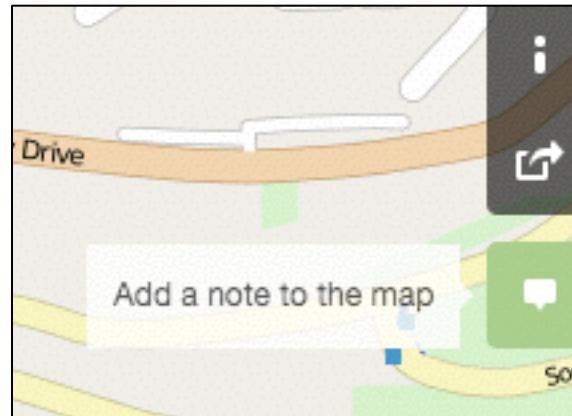
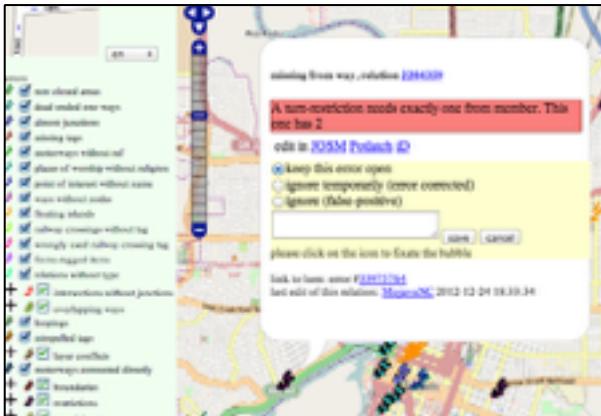
- <http://www.openstreetmap.org/help>
- <http://wiki.osm.org>
- <http://help.osm.org>
- Ask on the newbies listserv: <http://lists.openstreetmap.org/listinfo/newbies>

The screenshot shows the top navigation bar of the OpenStreetMap website. It includes links for 'Edit', 'History', 'Export', 'GPS Traces', 'User Diaries', 'Copyright', and 'Help'. A yellow arrow points to the 'Help' link. Below the navigation bar, the page title 'Getting Help' is displayed, followed by a paragraph of text.

OpenStreetMap has several resources for learning about the project, asking and answering questions, and

More resources

- QA tools:
 - http://wiki.openstreetmap.org/wiki/Quality_assurance
 - Keep right: <http://keepright.ipax.at/>
 - Notes: <http://wiki.openstreetmap.org/wiki/Notes>



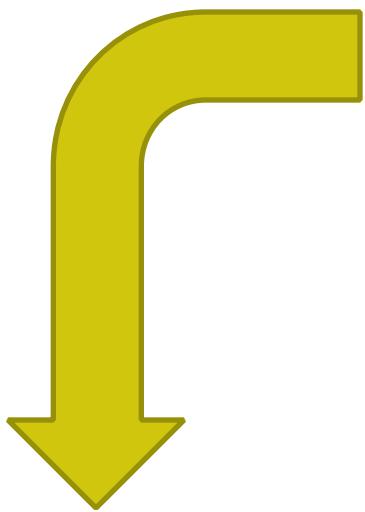
Practice makes perfect

1. Trace and tag a building
2. Try adding a new walkway or road, and make sure you connect it to the surrounding features correctly
3. See if you can figure out how to *split*, *straighten*, and *orthogonalize* a feature, *make a circle*, or *change the direction* of a way
 - You can always re-run the iD walkthrough or look at the help manual (behind the book icon) if you forget how to do it
 - Hover over icons to see their shortcuts and what they do
 - <http://wiki.openstreetmap.org/wiki/ID/Shortcuts>

Getting Data Back Out of OpenStreetMap



Nodes



Node: Spirit of '77 (1947887413) ×

walk home from sotm

Edited almost 2 years ago by [iandees](#)
Version #2 · Changeset #13500415
Location: [45.526692, -122.6614699](#)

Tags

addr:housenumber	500
amenity	pub
name	Spirit of '77

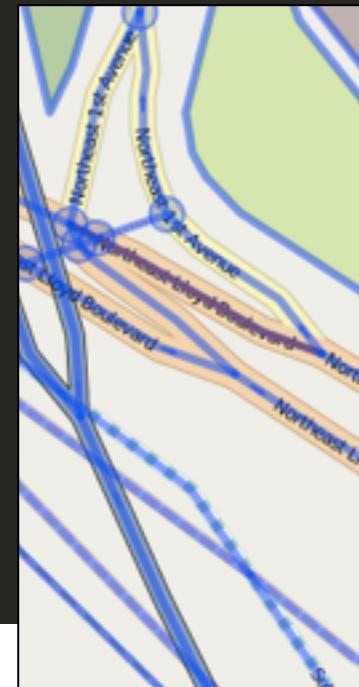
[Download XML](#) [View History](#)



```
<node id="1947887413" visible="true" version="2" changeset="13500415"  
timestamp="2012-10-15T01:03:53Z" user="iandees" uid="4732" lat="45.5266920"  
lon="-122.6614699">  
  <tag k="addr:housenumber" v="500"/>  
  <tag k="amenity" v="pub"/>  
  <tag k="name" v="Spirit of '77"/>  
</node>
```

Ways: groups of nodes

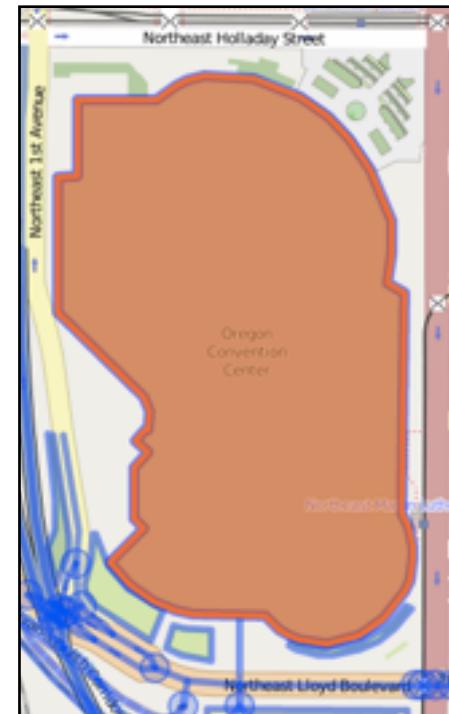
```
<way id="202760535" visible="true" version="1" changeset="14776307"
timestamp="2013-01-25T01:46:00Z" user="Mele Sax-Barnett" uid="362111">
<nd ref="1382201344"/>
<nd ref="1382201361"/>
<nd ref="2127007193"/>
<nd ref="2127007196"/>
<nd ref="1672858746"/>
<nd ref="255974519"/>
<tag k="bicycle" v="designated"/>
<tag k="cycleway" v="lane"/>
<tag k="highway" v="secondary"/>
<tag k="maxspeed" v="30 mph"/>
<tag k="name" v="Northeast Lloyd Boulevard"/>
<tag k="oneway" v="yes"/>
<tag k="RLIS:localid" v="184397"/>
<tag k="sidewalk" v="none"/>
<tag k="zip_left" v="97232"/>
<tag k="zip_right" v="97232"/>
</way>
```



Areas: closed ways

- They contain the same node twice, once at the start and once at the end

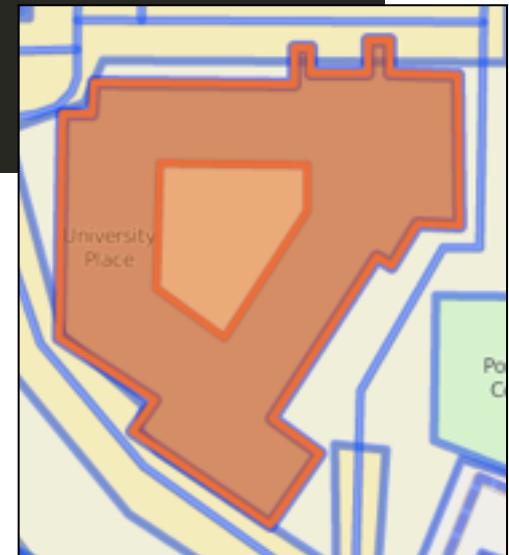
```
<way id="25667700" visible="true" version="1" timestamp="2014-09-07T23:40:29Z" user="Me...<nd ref="279820593"/><nd ref="279820595"/><nd ref="471263019"/><nd ref="1739870833"/>...<nd ref="279820621"/><nd ref="279820593"/><tag k="addr:city" v="Portland"/><tag k="addr:country" v="US"/>...
```



Relations: groups of nodes and ways

- Various types, for example, a multipolygon:

```
<relation id="1665588" visible="true" version="2" changeset="8913915"  
timestamp="2011-08-03T20:09:32Z" user="PJ Houser" uid="372357">  
  <member type="way" ref="121874653" role="inner"/>  
  <member type="way" ref="121874655" role="outer"/>  
  <tag k="building" v="yes"/>  
  <tag k="name" v="University Place"/>  
  <tag k="type" v="multipolygon"/>
```



Before you begin: Think about what you want to do

Let's assume we want to use OSM data for cartography...

- What are you making? A web map? A print map?
- What software do you want to use to make it?
- What formats can that software use? Do you prefer to work with certain data formats?
- What is your geographic extent?
- Which features do you want to show? Everything? Only the highways? Only the coffee shops? Only a few select features?
- How often do you want to update your map?

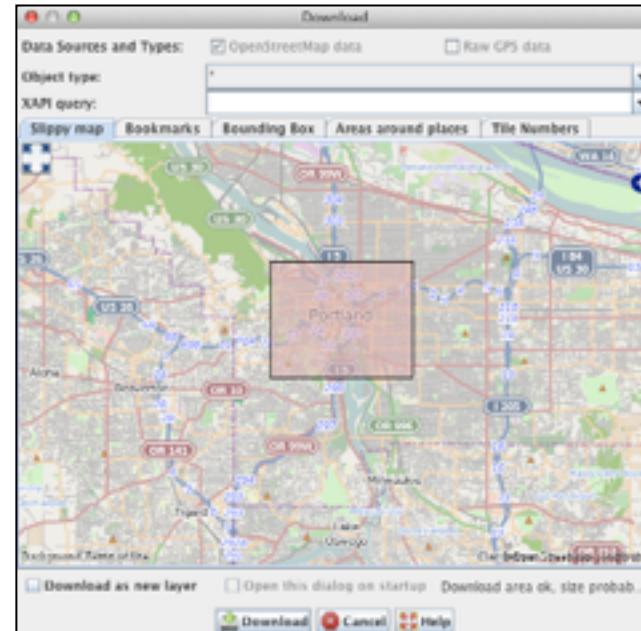
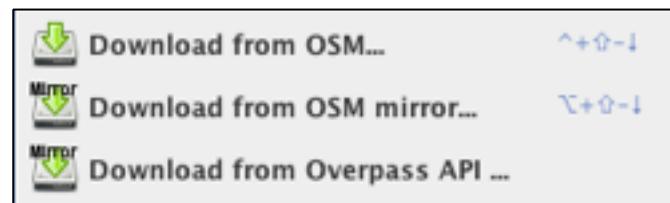
Step 1: Get the data

- http://wiki.osm.org/wiki/Downloading_data
- Small areas and individual features from the OSM website
 - <http://www.osm.org>
 - “Export” button



Step 1: Get the data

- From a standalone OSM editor:
 - JOSM
 - Just download and save, or use “Download from OSM mirror” or “Download from Overpass API” for large areas
 - QGIS 2.0+
 - Plugin for earlier versions

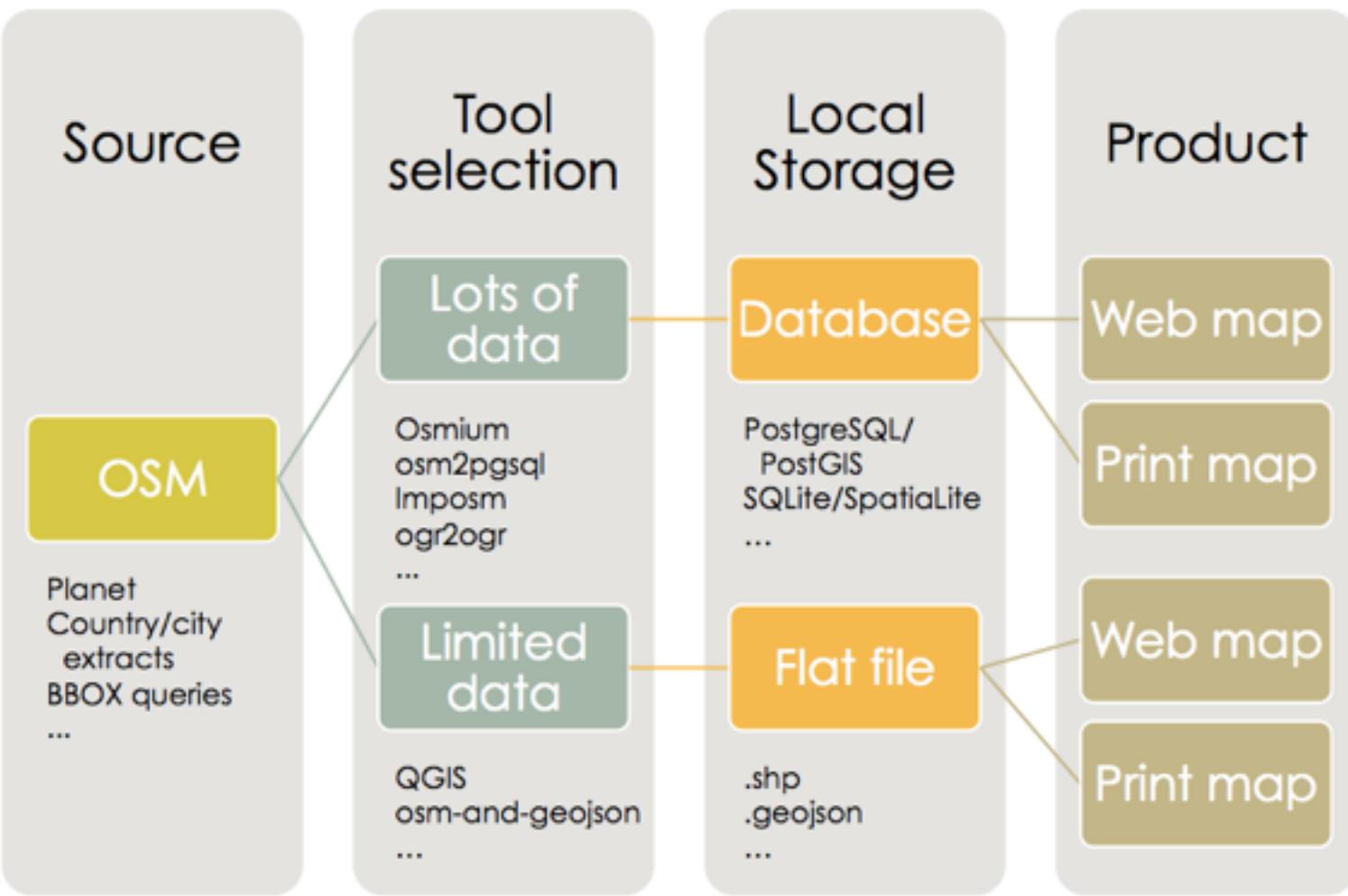


Step 1: Get the data

- Download large areas from various places, free or at cost:
 - “The planet”, countries, cities, etc.
 - APIs: http://wiki.openstreetmap.org/wiki/Overpass_API,
http://wiki.openstreetmap.org/wiki/Databases_and_data_access_APIs
 - <http://download.geofabrik.de/>
 - <http://osmdata.thinkgeo.com/>
 - <http://metro.teczno.com/>
 - <http://download.bbbike.org/osm/>
 - <http://market.weogeo.com/>
- Some of it is already in shapefile format, but it might not have exactly what you're looking for
- Remember to check the date

Step 2: Process the data

- There are an ever-increasing number of tools and scripts that you can use
- Many of them involve using the command line
- I will go over some popular options, and a couple of use cases in some detail
- List at [https://github.com/pdxmele/gwyw-osm/
blob/master/converters.md](https://github.com/pdxmele/gwyw-osm/blob/master/converters.md)
- Feel free to send a pull request to add more!



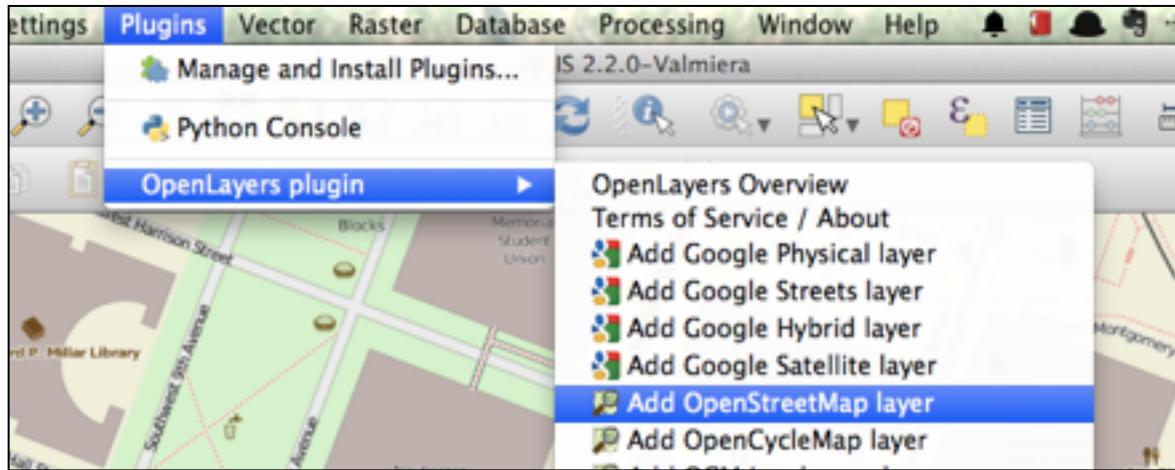
More at <https://github.com/pdxmele/gwyw-osm>

Use case 1: Leaflet POI web map

- Leaflet works nicely with GeoJSON, but how do we change .osm data to that format, and limit it to just the data we want to highlight?
- Let's say we want to show all of the coffee shops and bars in a certain area...

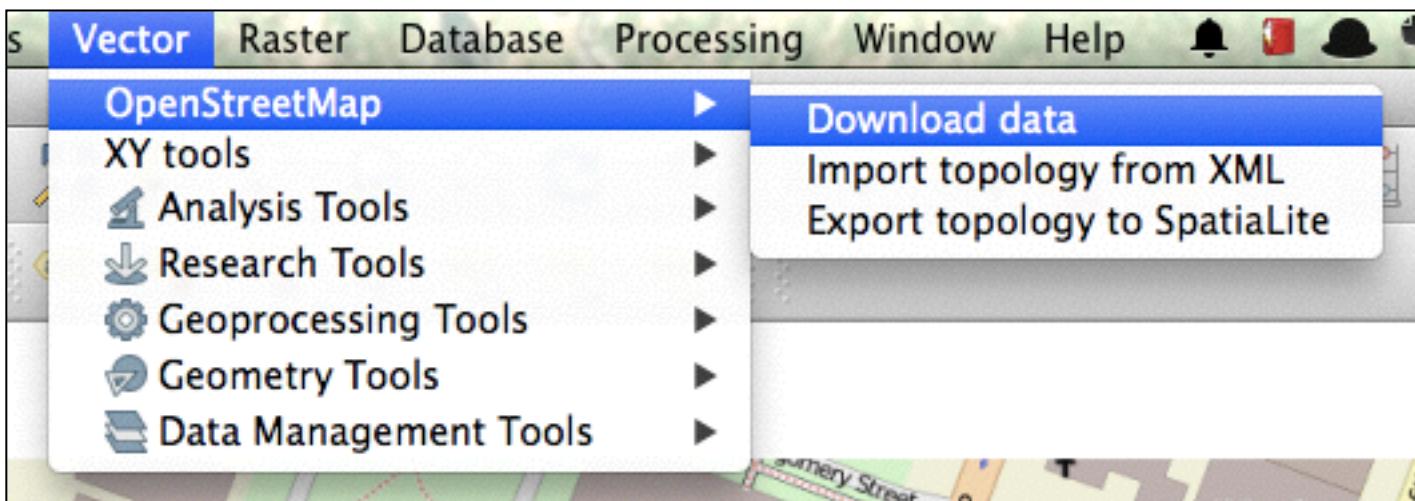
Use case 1: Leaflet POI web map

- First, download the data with your preferred method, but here's how you can do it in QGIS:
 1. Figure out your extent — the OpenLayers plugin is handy for this



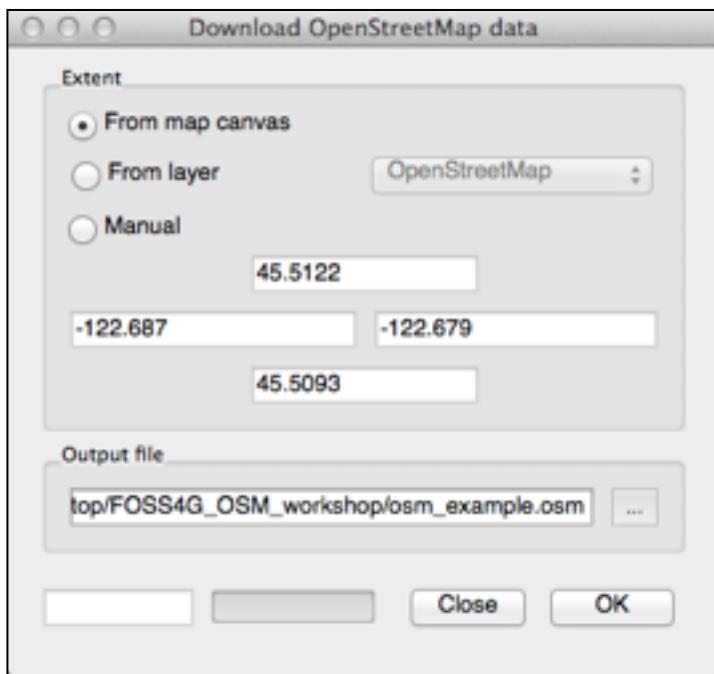
Use case 1: Leaflet POI web map

2. Next, go to vector → OpenStreetMap → Download Data



Use case 1: Leaflet POI web map

3. Verify or change the extent, and save it.



Use case 1: Leaflet POI web map

- Now, get it out of .osm/XML format
 - QGIS will attempt to put it in a SpatiaLite database
 - If you have problems with that, there are other ways:
 - <http://aaronlidman.com/osm-and-geojson/>
 - <http://tyrasd.github.io/osmtogeojson/>
 - <http://geojson.io>
 - <http://overpass-turbo.eu/> (can export as GeoJSON)
 - http://wiki.osm.org/wiki/Converting_map_data_between_formats
 - If you want Shapefiles first: <http://wiki.osm.org/wiki/Shapefiles>

Use case 1: Leaflet POI web map

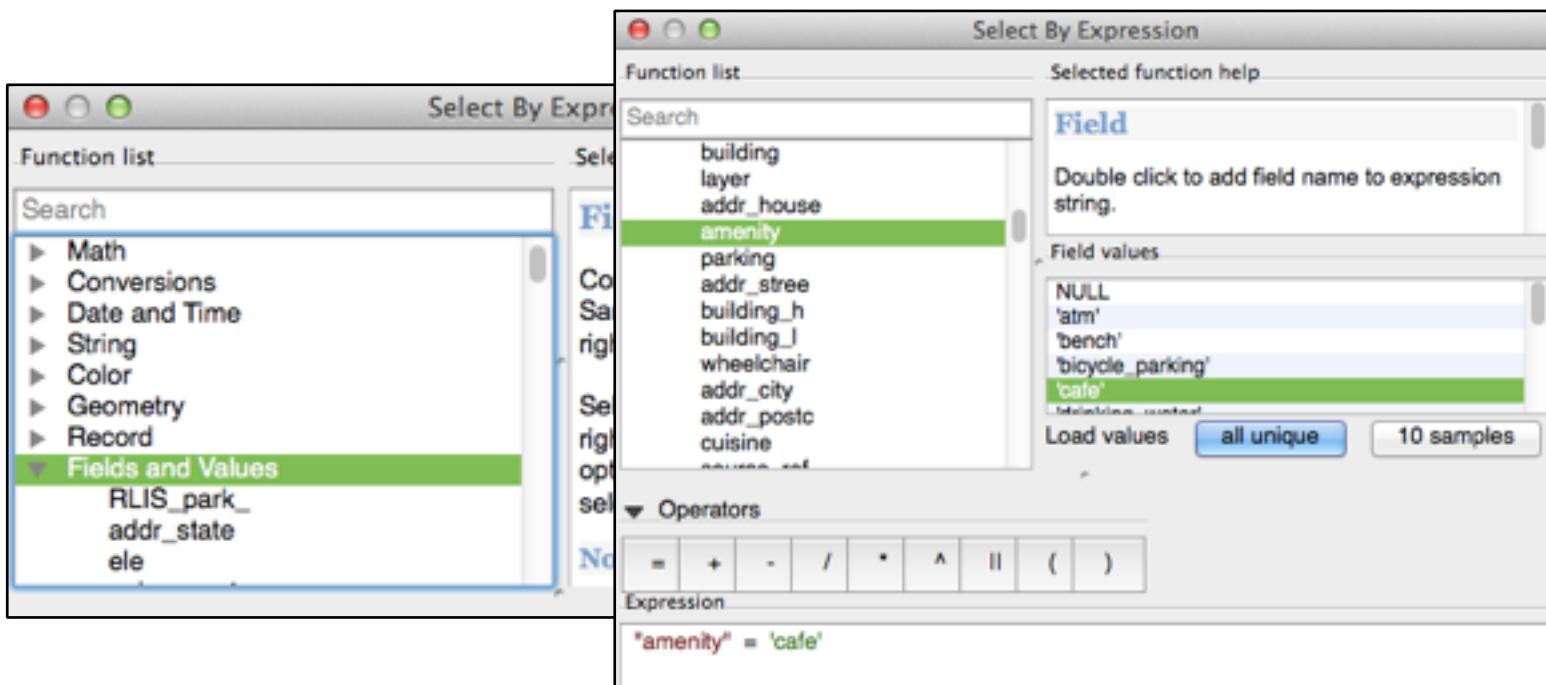
- Once you have something open in QGIS, select only the features you want

The screenshot illustrates the process of selecting specific features from an OSM dataset in QGIS. On the left, the 'Layers' panel shows the 'osm_example' project with several layers listed. A context menu is open over the 'OpenStreetMap' layer, with the 'Open Attribute Table' option highlighted. On the right, the attribute table for the selected layer displays a list of features, including their 'name' and other attributes. A yellow arrow points to the 'name' column header in the table.

	leisure	name	operator
215	NULL	PSU Urban Center	NULL
49	NULL	Portland Campus Christian...	NULL
31	NULL	Pizzicato	NULL
69	NULL	Pita Pit	NULL
233	NULL	Olé Latte	NULL
47	NULL	Murata	NULL
35	NULL	McDonald's	McDonald
231	NULL	Locos Locos Burritos	NULL
20	NULL	Keller Auditorium	NULL

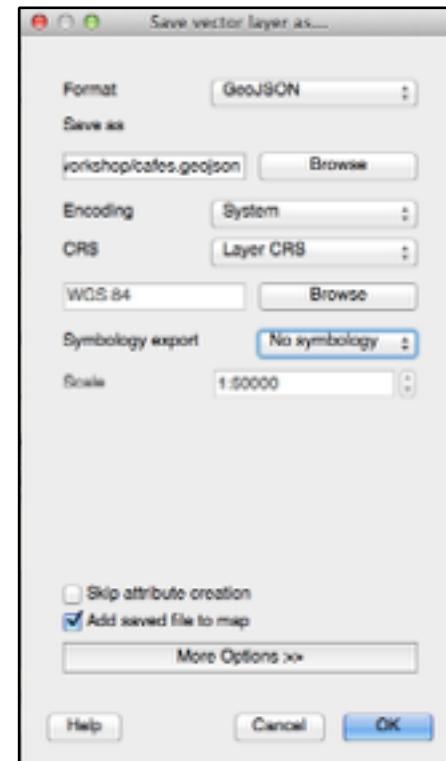
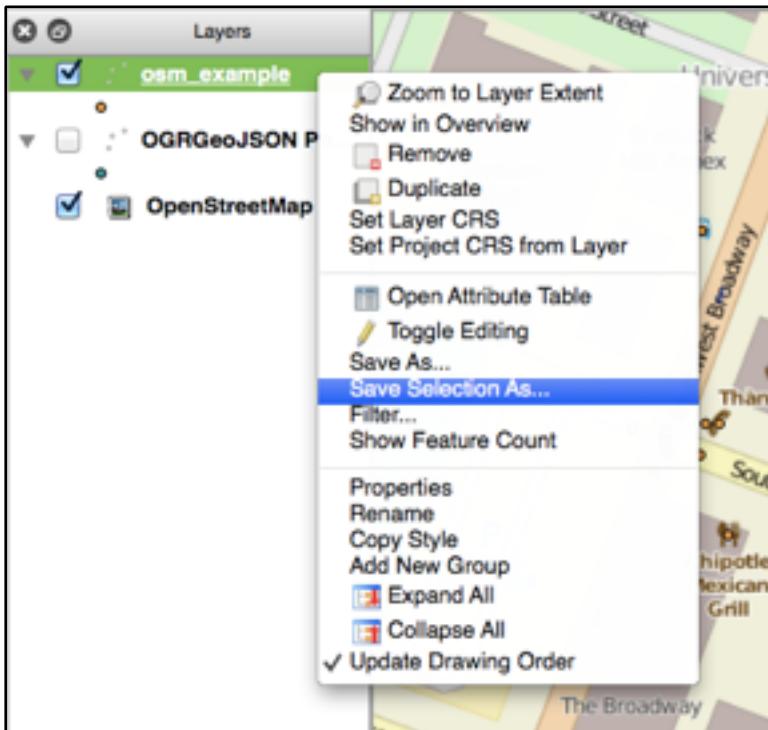
Use case 1: Leaflet POI web map

- Selecting...



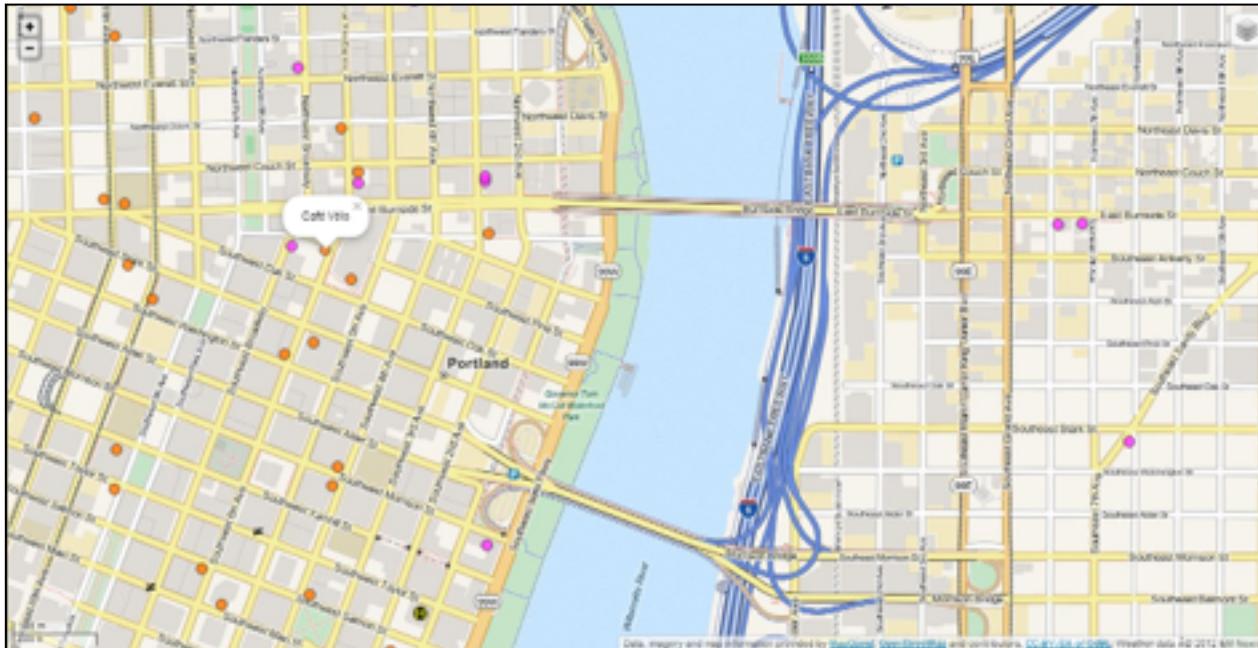
Use case 1: Leaflet POI web map

- Then, save just those features as GeoJSON



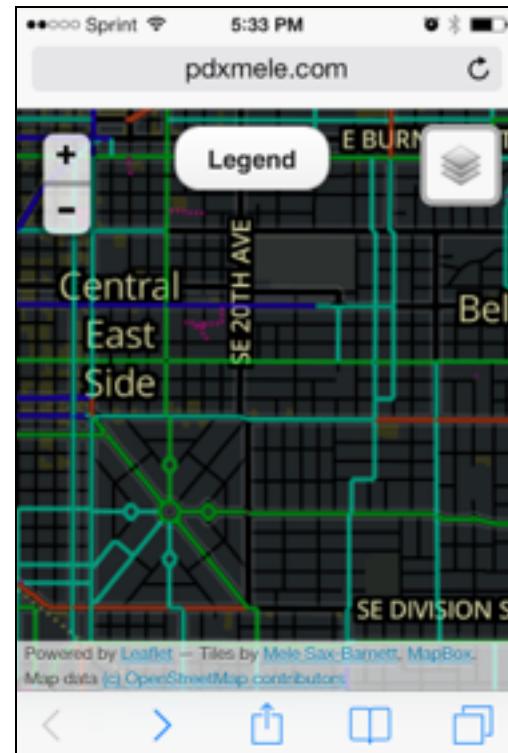
Use case 1: Leaflet POI web map

- Include the POIs as GeoJSON in a Leaflet map by your preferred method, and on top of your tiles of choice



Use case 2: Web map with TileMill

- Can use both flat files and databases
 - Shapefile, GeoJSON
 - PostGIS, SQLite
- This means it can work for both creating a complete basemap from scratch, or for layering a number of features on another basemap
- This use case: make a custom bike map for a city



Use case 2: Web map with TileMill

1. Download the metro area with **JOSM**'s mirrored download plugin and save as a .osm file
2. Use **osm2pgsql** to import the data into a **PostGIS** database, customizing the style file to include specialized tags (I need to pull PDX metro tags)
3. In **TileMill**, add the layer for lines (includes highways) by connecting to the “planet_osm_line” table
4. Style with CartoCSS
5. Upload to MapBox or host on your own
6. Update easily by downloading the same bounding box, running the same osm2pgsql command, and dropping it into TileMill with the same styling

So, you say you want the planet

- Pack your patience – it can easily take weeks to find the method that works for you, fiddle with settings, and get all of the resources you will need ready
- Ask for help from the mailing lists and OSM/GIS help sites when you need it
 - <http://help.osm.org>
 - <https://lists.openstreetmap.org/listinfo>
 - <https://lists.openstreetmap.org/listinfo/newbies>
 - <https://lists.openstreetmap.org/listinfo/dev>
 - <http://gis.stackexchange.com/>

The Future is Now: Vector tiles

- MapBox Studio (formerly “TileMill 2”)
 - <https://www.mapbox.com/mapbox-studio/>
 - <https://github.com/mapbox/mapbox-studio>
- OSM vector tiles
 - Mapnik vector tiles: <http://openstreetmap.us/~migurski/vector-datasource/>

Go for it—the data is yours!

- Your main resource for OSM tags (how to filter the data) is <http://wiki.osm.org>
- I've also made a list of common tag keys for you at <https://github.com/pdxmele/gwyw-osm/blob/master/tags.md>
- Please remember to credit the OSM contributors: <http://www.openstreetmap.org/copyright>
- Questions? Twitter @pdxmele / saxbarm at gmail.com

Go for it!

Extra time

Don't know what to edit?

- Get some more practice by checking out your hometown. Are there streets that need to be cleaned up from the TIGER import?
- There's almost always a Humanitarian OpenStreetMap Team task that needs help. Trace buildings, roads, and save the world!

Go for it!

<http://tasks.hotosm.org/project/641>

(OSM Tasking Manager)

#641 - Ebola Outbreak, Gardnersville-New Georgia-Banersville, Monrovia, Buildings

Instructions Contribute Activity Stats

#hotosm-task-641

Imagery
N/A

2014 West Africa Ebola Response [Wiki Coordination Page] (https://wiki.openstreetmap.org/wiki/2014_West_Africa_Ebola_Response)

Please trace all buildings.

Map roads and smaller paths for as far as you can follow them. Use Bing Imagery.

Save with credit to HotOSM. Comment the changeset with: Liberia #hotosm-task-641

And use the following source tag either on the objects you create or on the changeset itself (if using JOSM): source=Bing

[Wiki Coordination Page] (https://wiki.openstreetmap.org/wiki/2014_West_Africa_Ebola_Response)

[Highway Tag Africa] (https://wiki.openstreetmap.org/wiki/Highway_Tag_Africa)

[Start contributing](#)

en login to OpenStreetMap

Cur. worked on (0)
Invalidated
Done
Validated

3 km
High priority 2 mi

Leaflet | Map data © OpenStreetMap contributors

Go for it!

#641 - Ebola Outbreak, Gardnersville-New Georgia-Banersville, Monrovia, Buildings

Instructions

Contribute

Activity

Stats

Task #205

Locked by you.

119 min. left



Task

Edit with



JOSM

ID editor

Potlatch 2

Walking Papers

Unlock

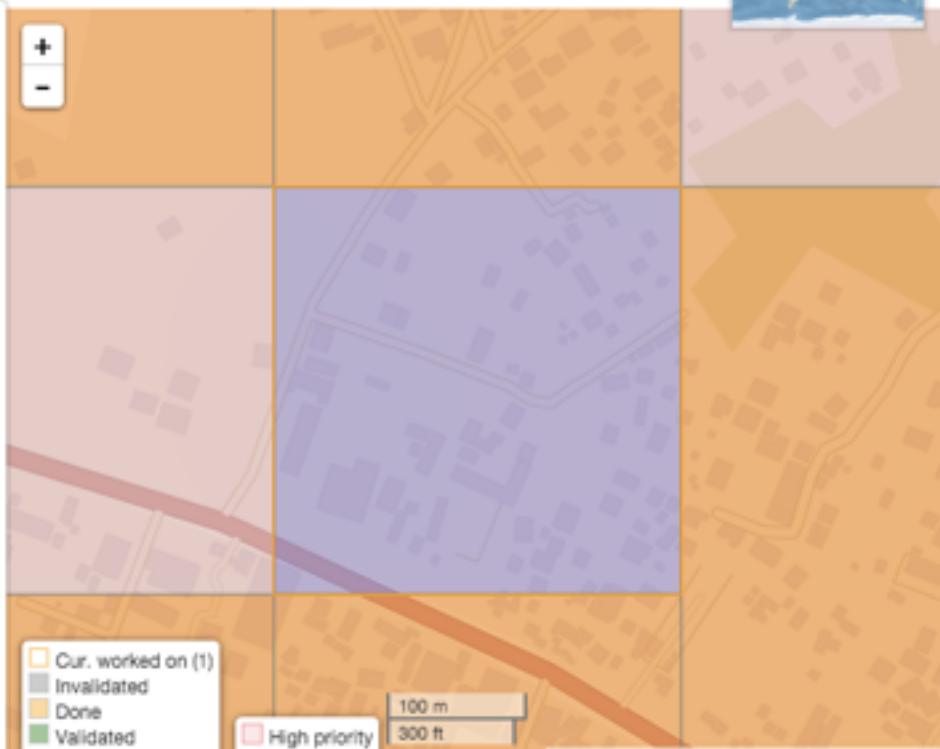
Mark task as done

Leave a comment

Locked by Mele Sax-Barnett

less than a minute ago

OSM changesets



Go for it!

Edit feature

 Building

Name
Common name (if any)

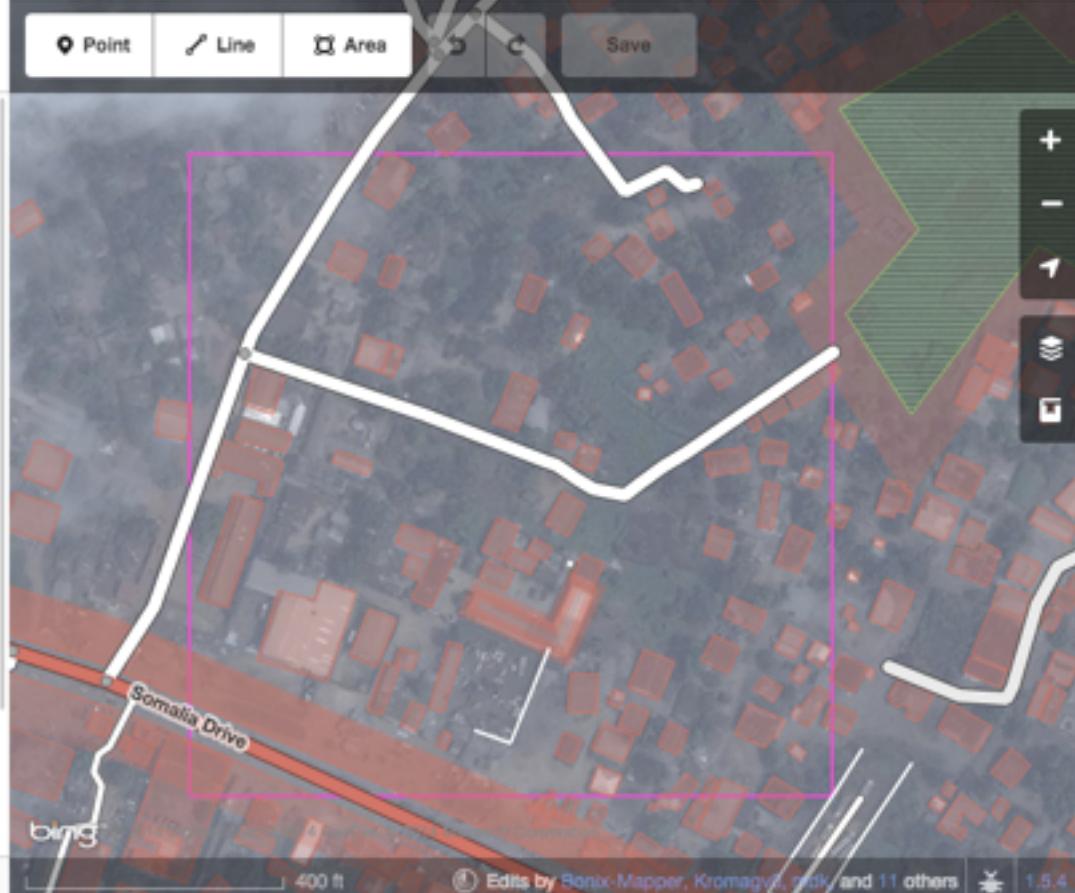
Building
yes, house, residential...

Levels
2, 4, 6...

Address
123 Street
City Postcode

All areas (25)

Point Line Area  Save



Somalia Drive

bing

400 ft

Edits by Bonix-Mapper, Kromaguy, mdk, and 11 others

1.5.4