

An introduction to OpenStreetMap for bushwalkers

presented by David Dean
<http://www.dbdean.com>

What is OpenStreetMap?

- Geographic data
 - For driving, riding, walking, boating, skiing, hiking, anything
- Free
 - Currently CC-BY-SA, moving to ODBL
- Wiki-like editing



<http://www.osm.org>



Why not just use Google Maps?

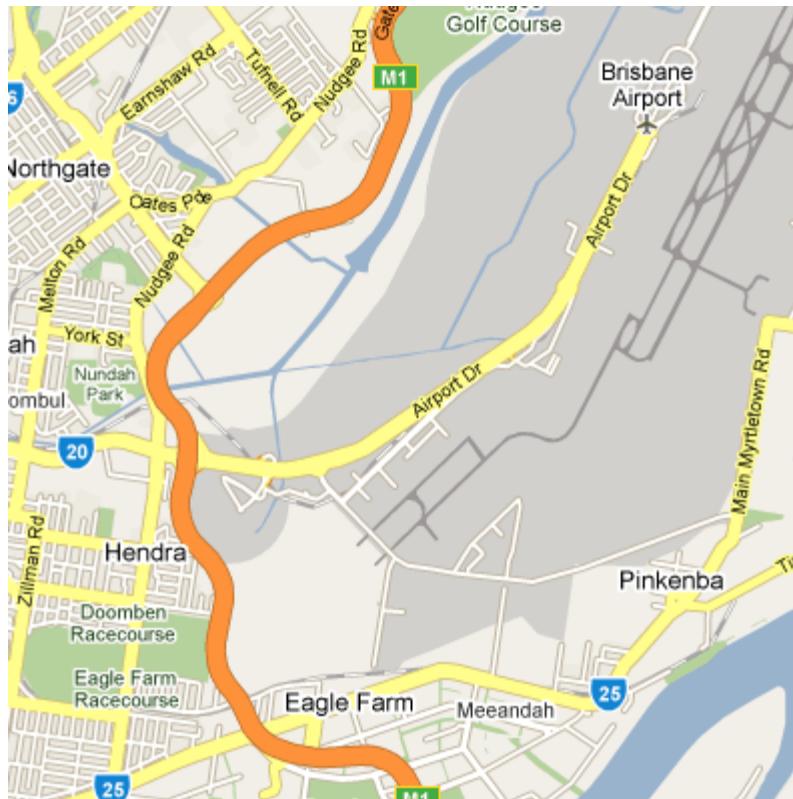
or WhereIs/Yahoo/Bing Maps?

or whatever is on your GPS/Phone?

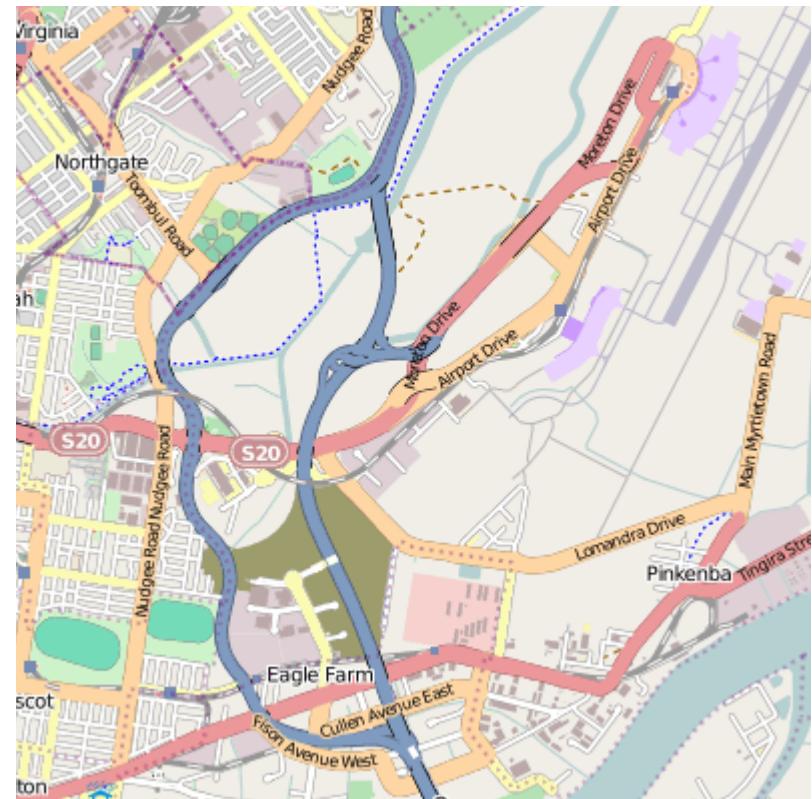
or commercial printed maps?



Updated rapidly



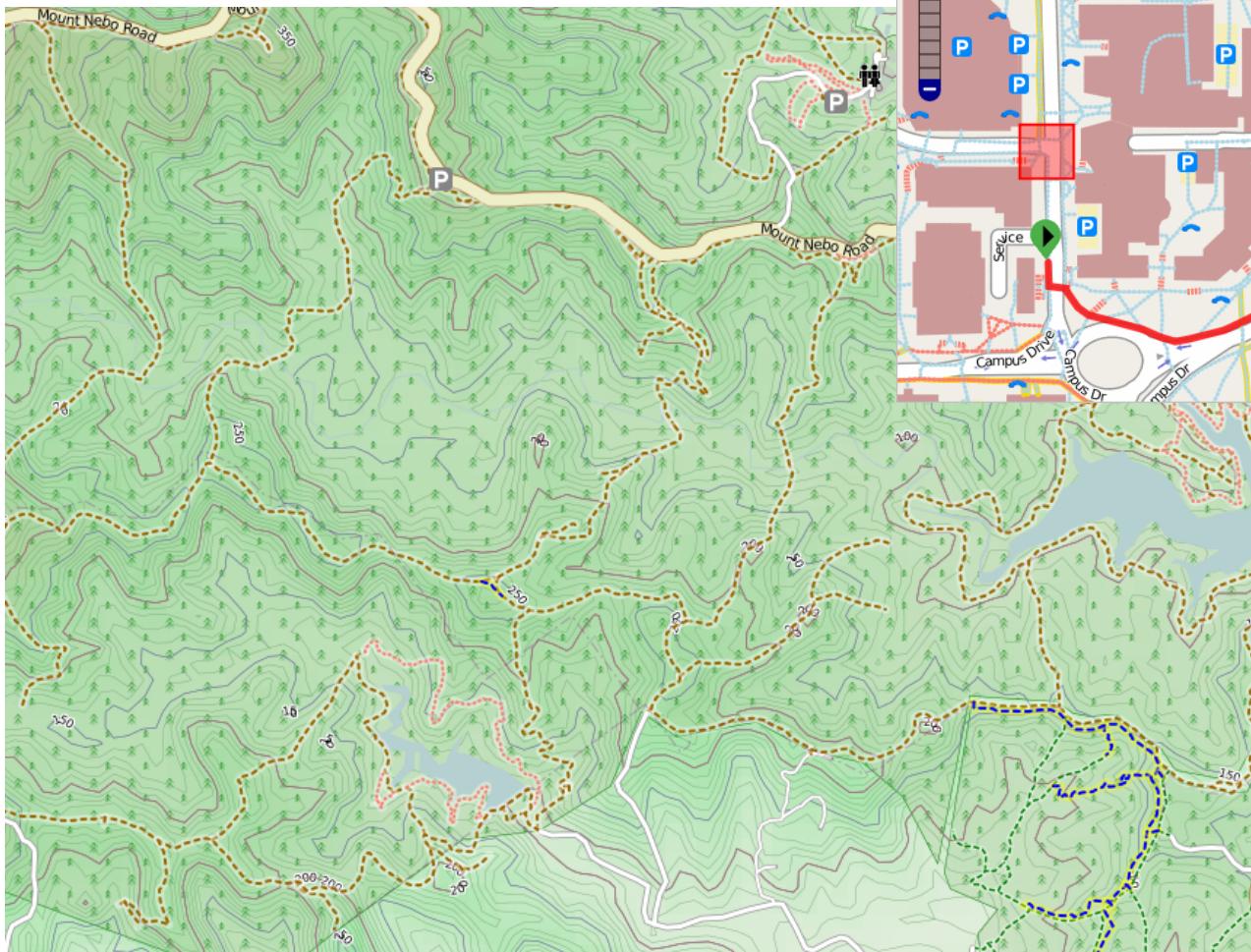
Google



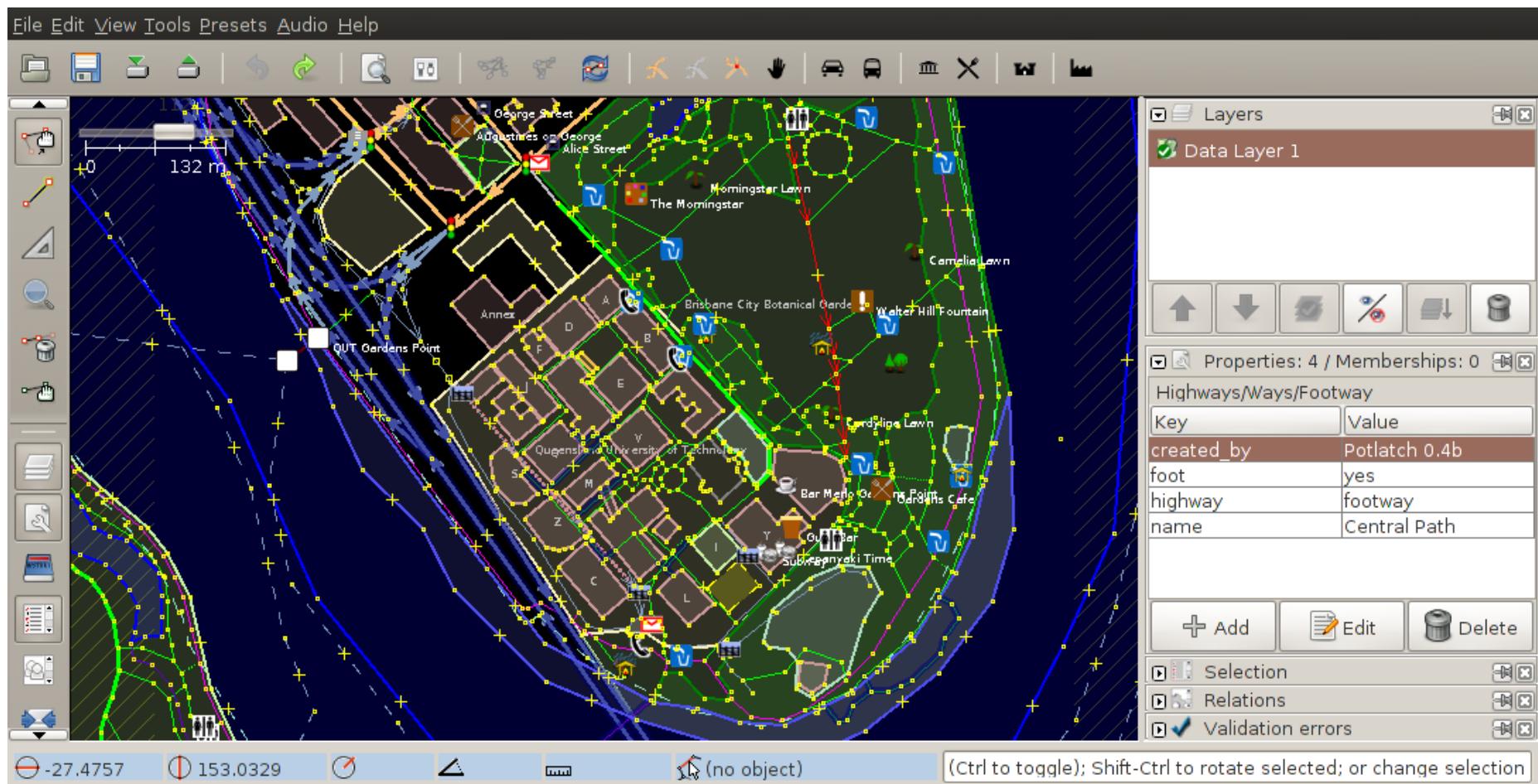
OpenStreetMap



Not just for cars



Data freely available (and editable)



Worldwide activity

OSM 2008: A Year of Edits



Humanitarian OpenStreetMap Team

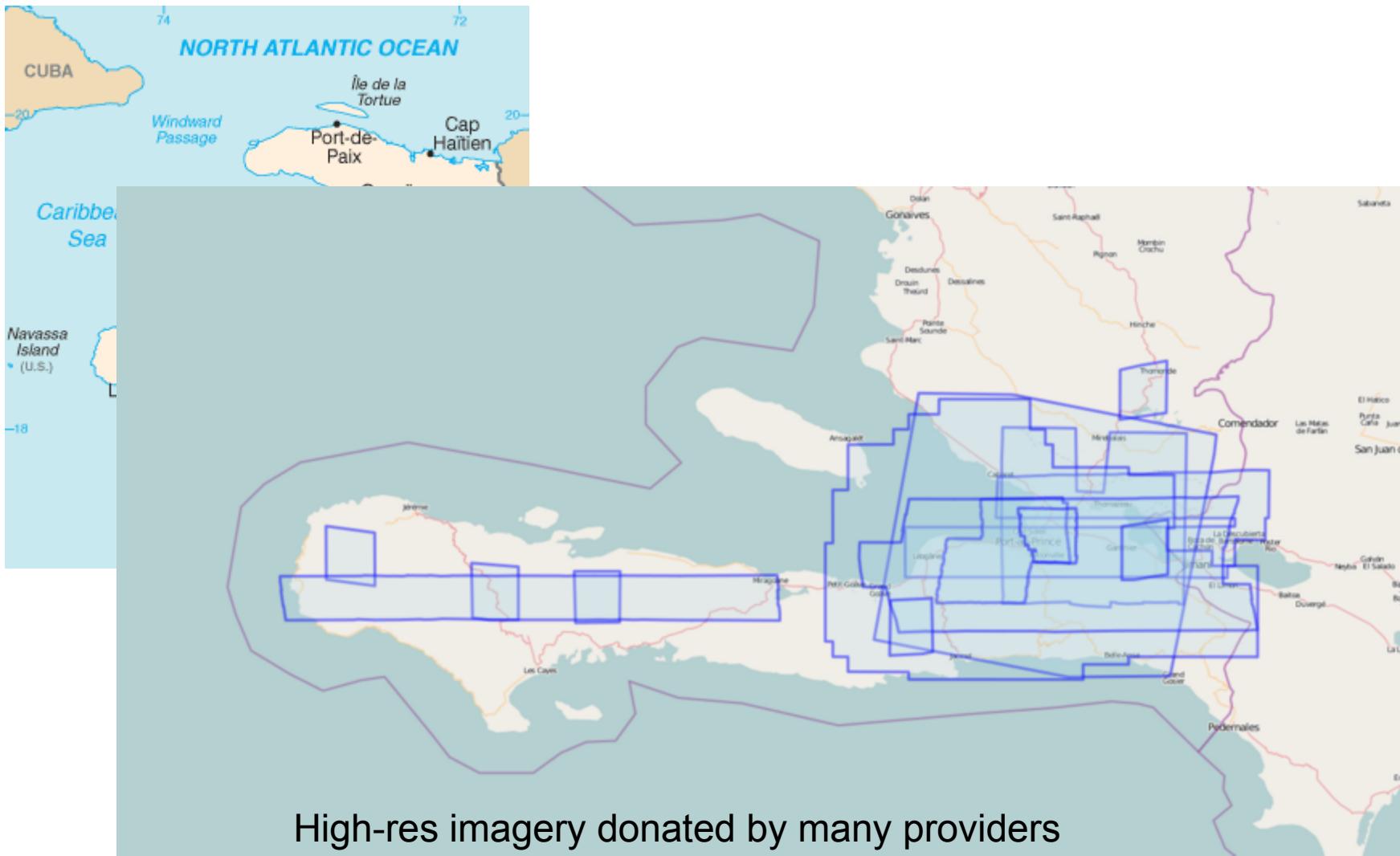
Haiti earthquake response



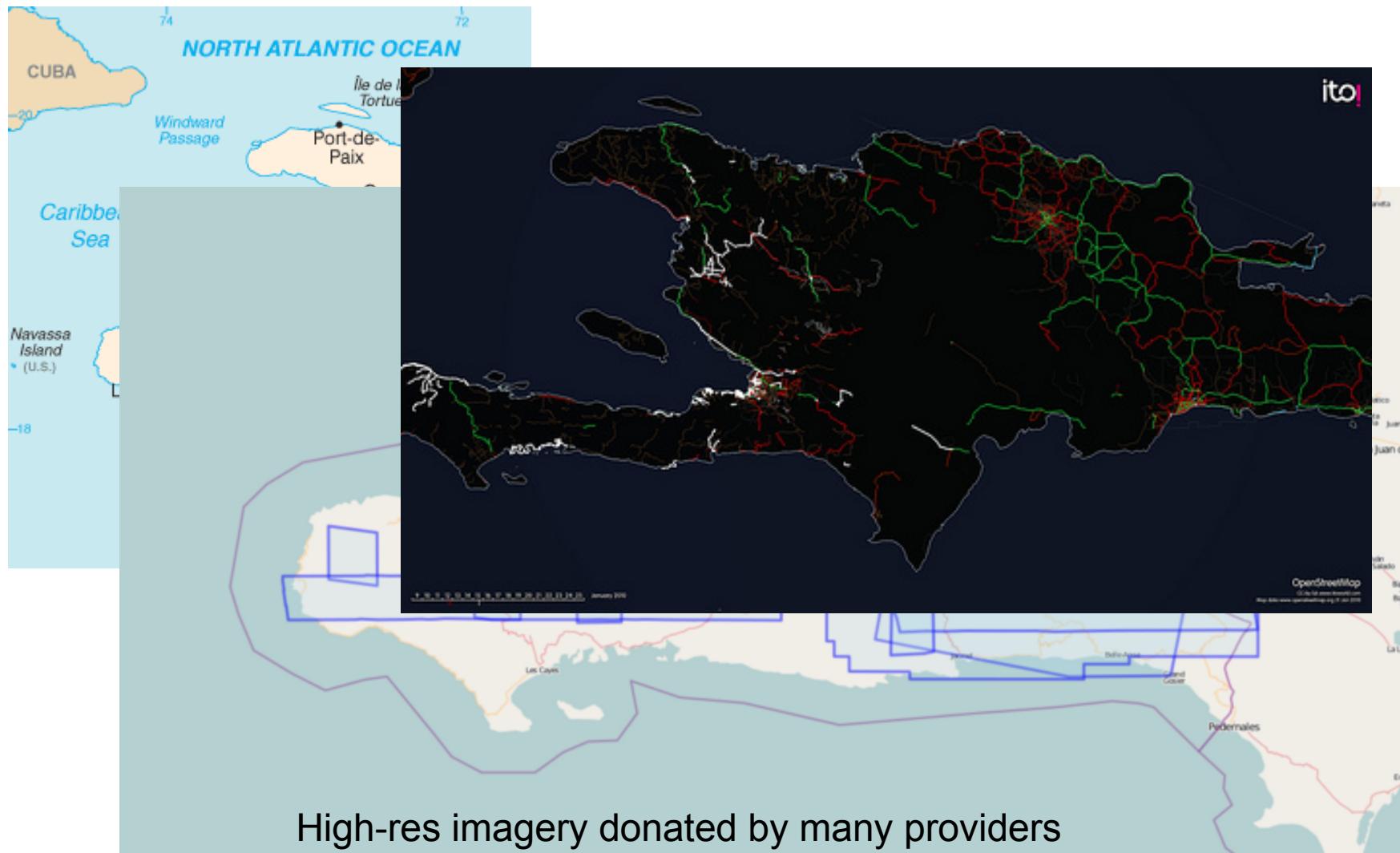
Haiti earthquake, Jan 2010



Haiti earthquake, Jan 2010



Haiti earthquake, Jan 2010



"Hello guys, I just wanted to let you know that your work on improving the Haiti maps is really appreciated here. A few days ago I installed a version on my Garmin Oregon GPS and the result is impressive. It has already saved me and my driver from getting lost twice, and the alternative would have been long delays. In the coming days I will try to update our Red Cross relief GPS receivers with your map." - Kjeld Jensen, Red Cross (IFRC)



OSM for bushwalking



Download and print directly from <http://osm.org>

OpenStreetMap



Welcome, David

View Edit History Export GPS Traces User Diaries

Export Close

Area to Export

-28.2492
152.6752 152.7405
-28.3067

Manually select a different area

Format to Export

OpenStreetMap XML Data
 Mapnik Image
 Osmarender Image
 Embeddable HTML

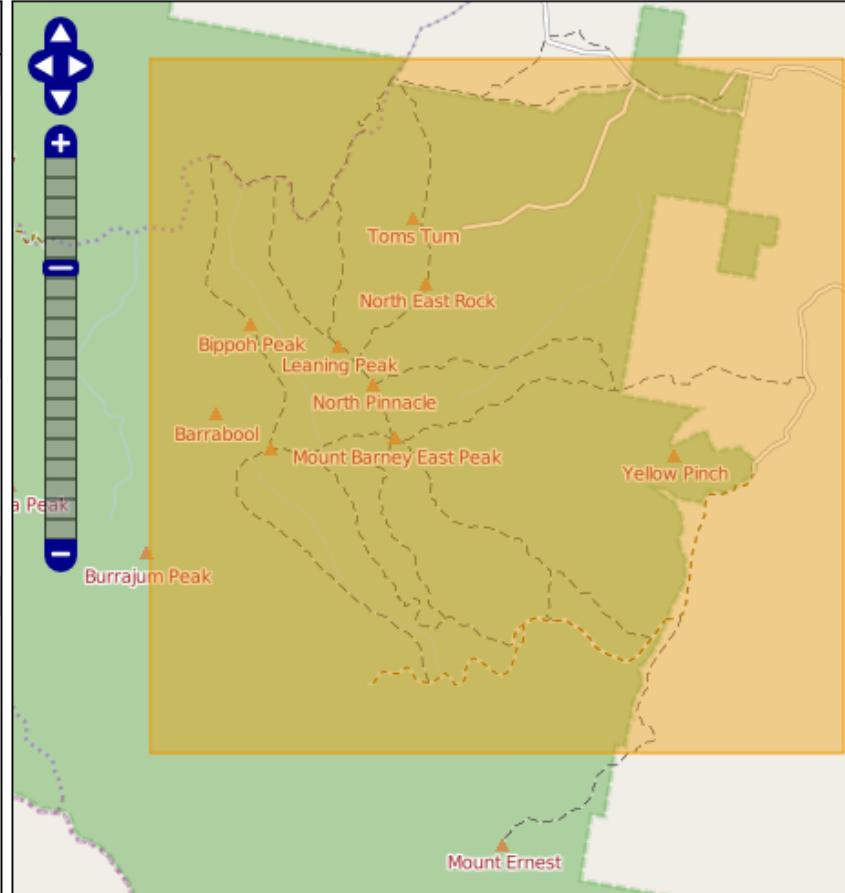
Options

Format **PNG**

Scale 1 : **50000** (max 1 : 13000)

Image Size 519 x 519

Export





Or, load them onto your (Garmin) GPSR

- Available to download from many locations, including
<http://openmtb.org>
- Or, you can roll your own with free tools



Bushwalking for OSM



Aerial imagery is rarely useful (or available)

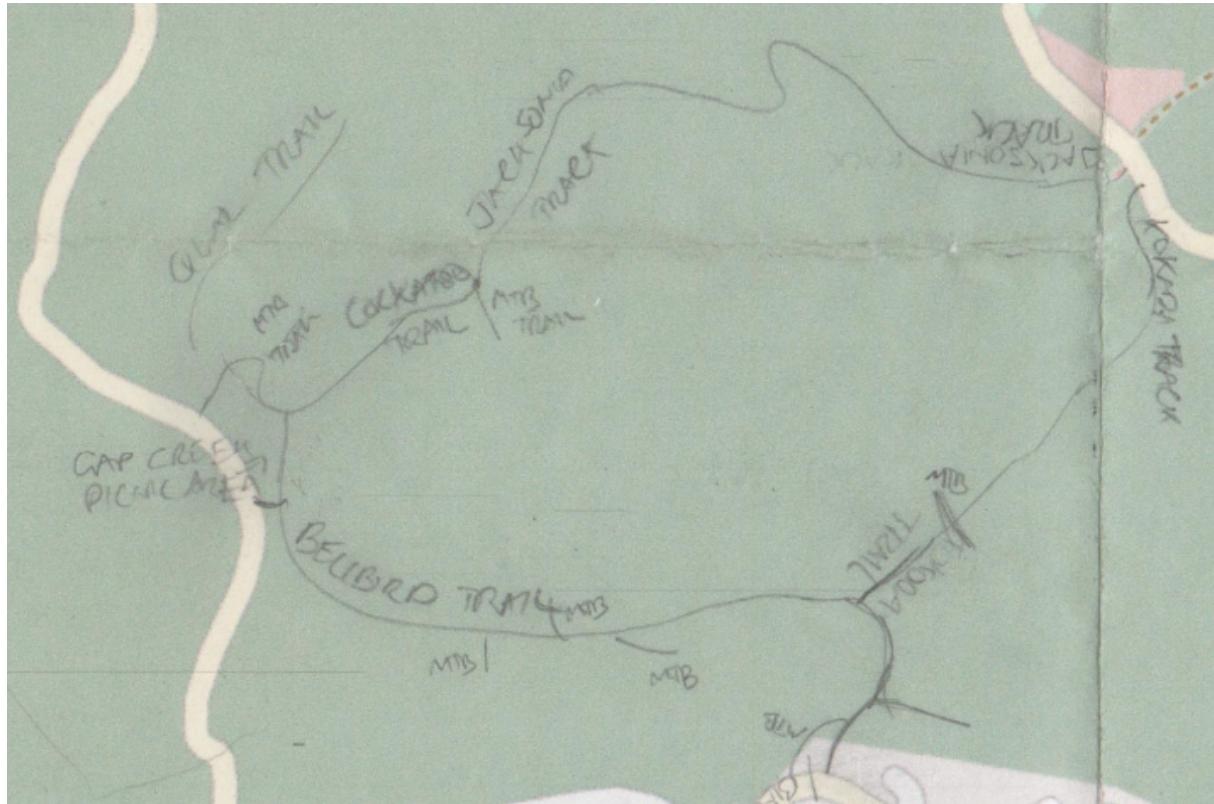


You need to go bushwalking

Take notes, →



record your trip,



and update the map from your notes
and GPS traces at home



Putting trails on the map

The screenshot shows the OpenStreetMap website interface. At the top, there is a navigation bar with links for View, Edit, History, Export, GPS Traces, User Diaries, and Welcome. On the left, there is a sidebar with links for OpenStreetMap, Help & Wiki, Copyright & License, News blog, and Shop. Below the sidebar is a search bar with fields for Search and Where am I?, and a Go button. A text box provides examples of search terms and a link to more examples. To the right of the search bar is a large map of a forested area with several GPS traces overlaid. One trace is red and another is cyan. There are also green dots representing points of interest. At the bottom of the map, there is a legend titled "Drag and drop points of interest" with icons for various locations like Airport, Bus stop, Ferry, Parking, Rail station, Taxi rank, Bar, Cafe, Cinema, Fast food, Pub, Restaurant, Theatre, Hotel, Pharmacy, Postbox, Recycling, Supermarket, Telephone, Hospital, Police station, Place of, Museum, School, and Haiti building. A red arrow points from the text "Turn on GPS traces" to the "GPS Traces" link in the top navigation bar.

OpenStreetMap

View Edit History Export GPS Traces User Diaries Welcome

Help & Wiki Copyright & License News blog Shop

Search Where am I? Go

examples: 'Alkmaar', 'Regent Street, Cambridge', 'CB2 5AQ', or 'post offices near Lünen'
more examples...

Make a Donation

Turn on GPS traces

95m (z17)

Drag and drop points of interest

Airport	Bus stop	Ferry	Parking	Rail station	Taxi rank	Bar
Cafe	Cinema	Fast food	Pub	Restaurant	Theatre	Co
Hotel	Pharmacy	Postbox	Recycling	Supermarket	Telephone	Fir
Hospital	Police station	Place of	Museum	School	X Haiti buil	

Help Find tag Advanced▼



Putting trails on the map

The screenshot shows the OpenStreetMap website interface. At the top, there is a navigation bar with buttons for View, Edit, History, Export, GPS Traces, and User Diaries. A "Welcome" message is visible on the right. On the left, there is a sidebar with links for OpenStreetMap, Help & Wiki, Copyright & License, News blog, and Shop. Below the sidebar is a search bar with fields for "Search" and "Where am I?", and a "Go" button. A note below the search bar provides examples like "Alkmaar", "Regent Street, Cambridge", "CB2 5AQ", or "post offices near Lünen", and a link to "more examples...". There is also a "Make a Donation" button.

The main content area displays a satellite map of a forested area with several trails. One trail is highlighted with a yellow line and red squares, and another is shown in orange. A legend at the bottom left indicates symbols for bicycle, foot, highway, and name. A detailed edit interface is overlaid on the map, showing a table for a specific "Way" object (ID 23797877). The table includes columns for icons, tags, and their values:

Icon	Tag	Value	Action
Walking person icon	unofficial path	yes	▼
Bicycle icon	bicycle	no	✗
Foot icon	foot	yes	✗
Highway icon	highway	path	✗
Name icon	name	Bellbird Trail	✗

At the bottom of the edit interface, there are buttons for Help, Find tag, and Advanced.



What can you map when bushwalking?

- Walking trails
- Mountain-bike trails
- Horse trails
- Fire trails
- Camp sites
- Drinking water
- Shelters
- Rubbish bins
- Stairs
- Bridges
- Rivers and Streams
- Toilets
- Nice views
- Ground cover

Anything you want



Come to a mapping event to learn more

- Brisbane mapping events occur monthly
 - Alternate between mapping parties and meetups
- Next event: OSM Mapping Meetup
 - 7pm **Monday 16st August** at Grange Library
 - See <http://wiki.osm.org/wiki/Brisbane>
- What is a mapping party?
 - A group of people get together to map a large area in a single day
 - Example: **Macleay Island** in November 2009



Questions/Suggestions?

Thanks for listening.

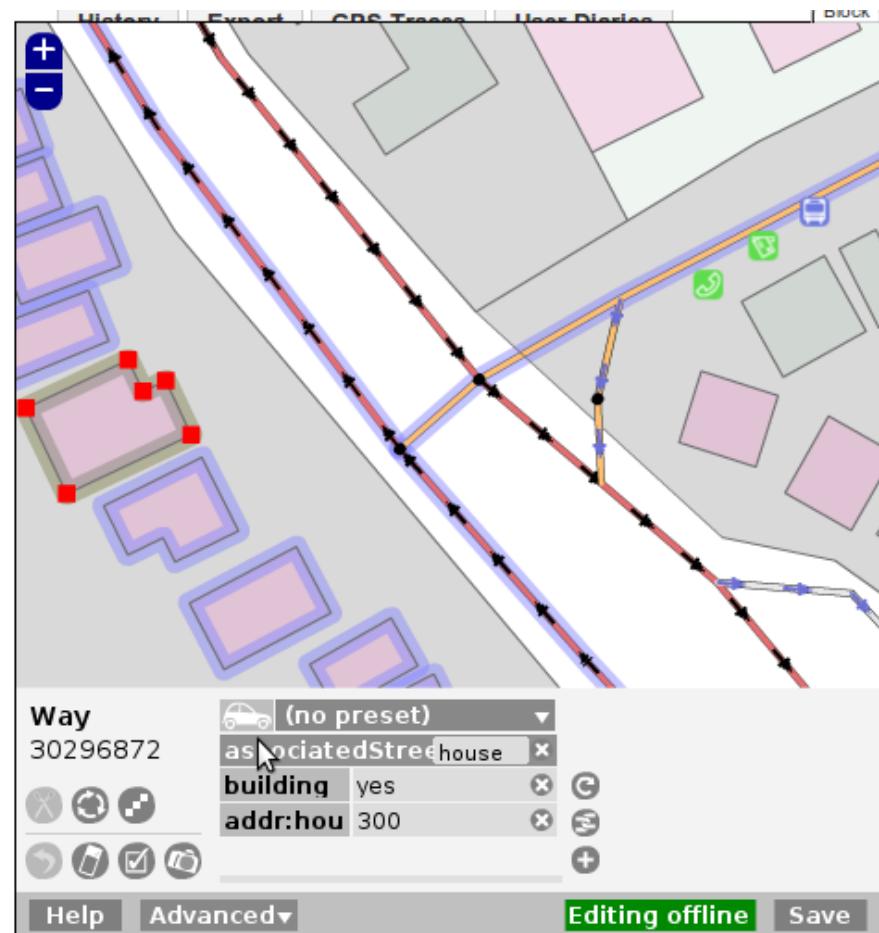


Mapping Party, Gran Paradiso National Park, Italy



Data representation

- Geographic information is represented as
 - Nodes
 - Ways
 - Ordered collections of nodes
 - Closed ways can be areas
 - Relations
 - Ordered collections of ways and nodes
- All can be tagged with any key/value pairs



No formal key/value ontology

- Let freedom flourish!
- Common tagging is encouraged
 - Map Features wiki
 - Editor presets
 - Renderers
 - OSMDoc
 - Tagwatch

highway=motorway +/-



Description
Motorways are high capacity highways designed to safely carry fast motor traffic.

Used on these elements [help](#)



Useful combination

- [name=*](#)
- [ref=*](#)
- [oneway=yes](#)
- [lanes=*](#)

Implies

leisure=park +/-



Description
A park. Open, green area for recreation, usually municipal

Used on these elements [help](#)



Useful combination

- [Key:name](#)
- [Key:operator](#)

Usage figures

- [OSMDOC](#)

Used combinations in [show](#)

Status
Undefined

