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Regional training workshop on geographical information system for energy planning





Introduction to Spatial Data Infrastructure (SDI)

Crowd sourcing

Dakar, 12 August 2014



Crowd sourcing

Definition and synonyms

Crowdsourcing is the practice of <u>outsourcing tasks to a broad, loosely</u> <u>defined external group of people</u>. The idea is generally to introduce new or more developed <u>skill</u> sets or a <u>larger work force</u> to achieve some specific goal.

Synonyms (in GIS):

- Neo-Geography
- Volunteered Geographic Information
- Collaboration GIS

History

The earliest example of Crowd Sourcing is the collection of words for the Oxford English Dictionary (OED) in 1858 (6 million submissions over 70 years).

In 1936, Toyota held a contest seeking a new logo design (26,000 entries).

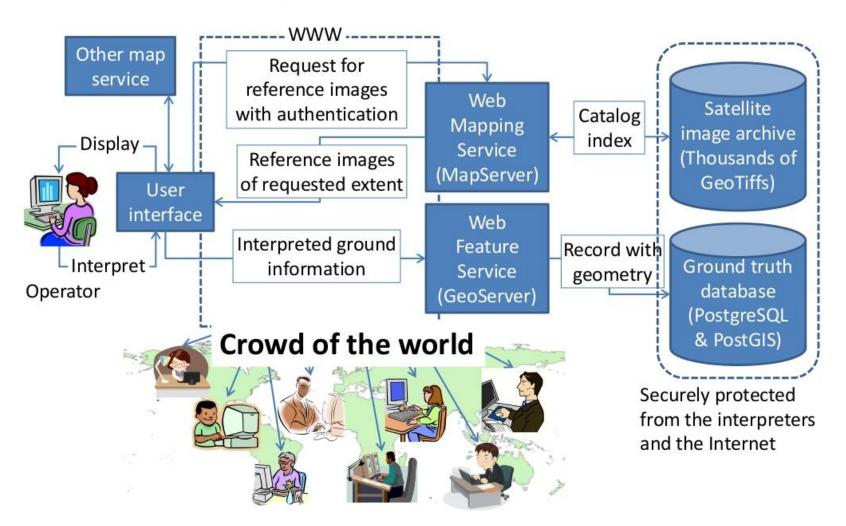
Wikipedia launched in 2001.

WikipediA



How it works?

System overview



Open Street Map (OSM)

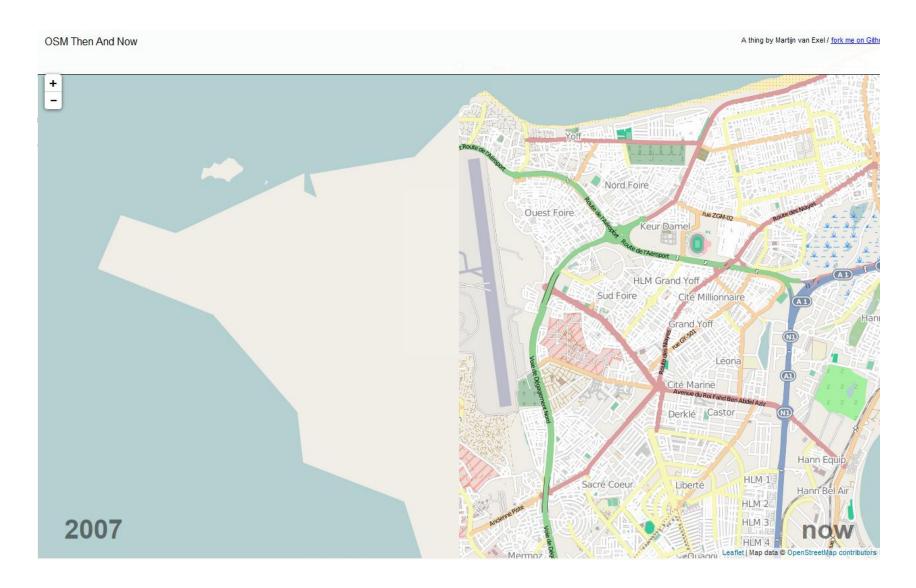
OpenStreetMap is a collaborative project to create a free editable map of the world. Two major driving forces behind the establishment and growth of OSM have been <u>restrictions</u> on use or <u>availability</u> of map information across much of the world and the advent of inexpensive portable satellite navigation devices.

Created by Steve Coast in the UK in 2004, it was inspired by the success of Wikipedia and the preponderance of proprietary map data in the UK and elsewhere. Since then, it has grown to over 1.6 million registered users,[6] who can collect data using manual survey, GPS devices, aerial photography, and other free sources. This crowd sourced data is then made available under the Open Database License.

Used by Apple own mapping application

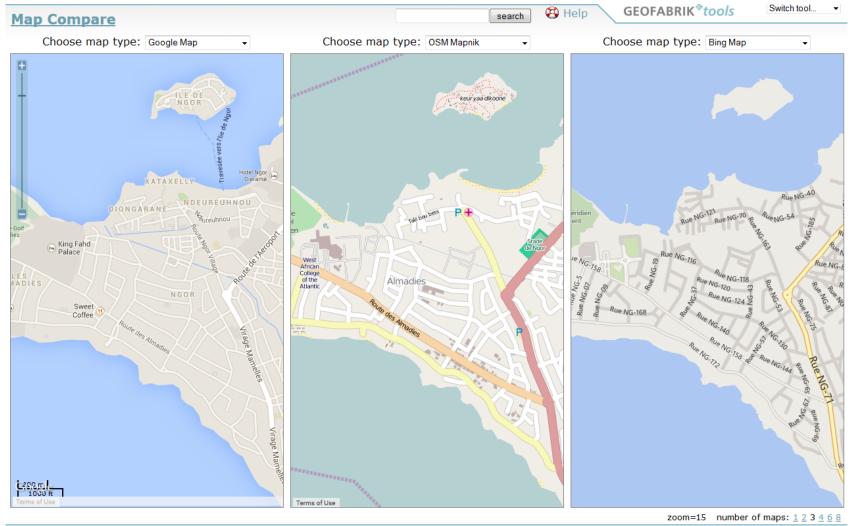
Open Street Map (OSM)

Evolution since 2007



Open Street Map (OSM)

OSM comparison



All maps except Bing/Google/HERE based on OSM data © OpenStreetMap (License: ODbL 1.0), OSM Tiles licensed CC-BY-SA 2.0 - help - contact - fullscreen

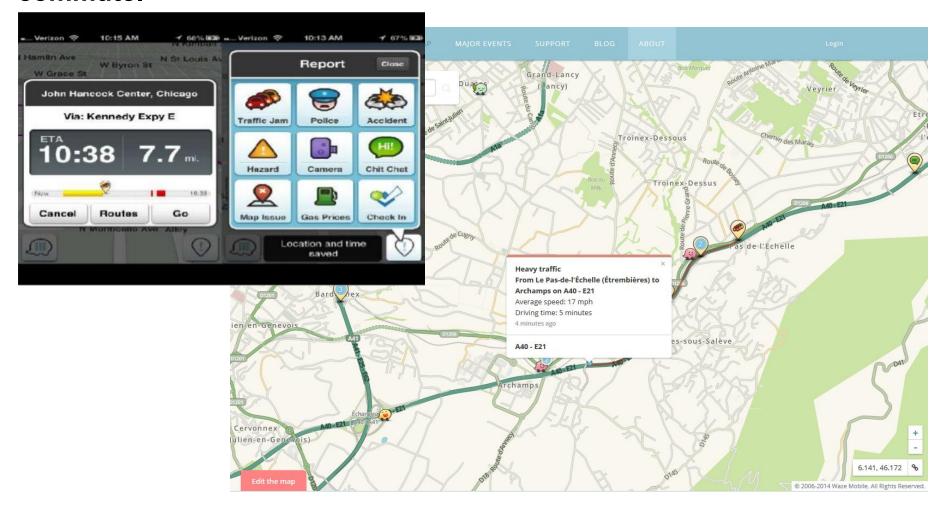
Geo-Wiki

"The Geo-Wiki Project is a global network of volunteers who wish to help improve the quality of global land cover maps. Since large differences occur between existing global land cover maps, current ecosystem and land-use science lacks crucial accurate data"



WAZE

"Waze is one of the world's largest community-based traffic and navigation apps. Join other drivers in your area who share real-time traffic and road info, saving everyone time and gas money on their daily commute."



Ushahidi

"Ushahidi (Swahili for "testimony" or "witness") is a website created in the aftermath of Kenya's disputed 2007 presidential election (see 2007–2008 Kenyan crisis) that collected eyewitness reports of violence sent in by email and text-message and placed them on a Google map. It is also the name of the open source software developed for that site, which has since been improved, released freely, and used for a number of similar projects around the globe."

2007: Kenya

2008: South Africa, Malawi, Uganda

2009: Zambia

2010: Haiti, Chile, USA, Italy, Russia

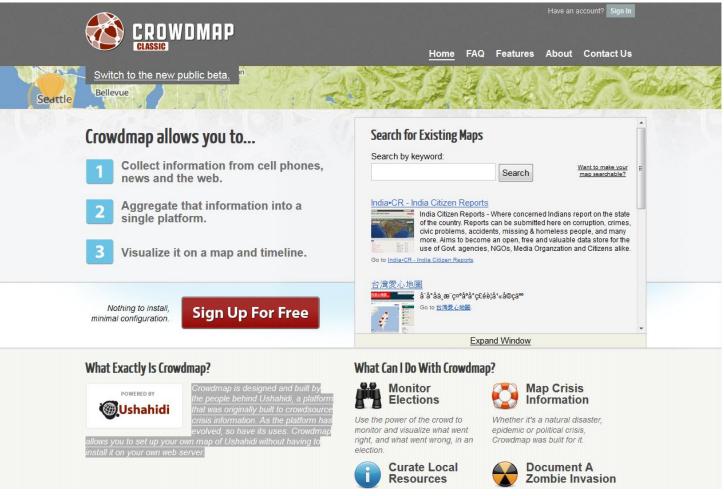
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Initiate your own project

"Crowdmap is designed and built by the people behind Ushahidi, a platform that was originally built to crowdsource crisis information. As the platform has evolved, so have its uses. Crowdmap allows you to set up your own map of Ushahidi without having to install it on your own

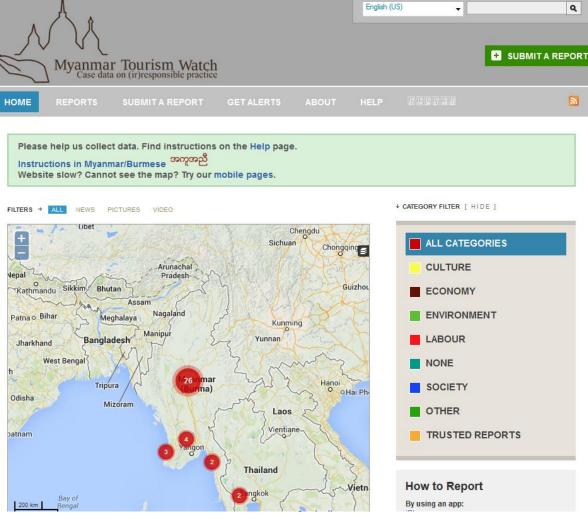
web server."



Initiate your own project

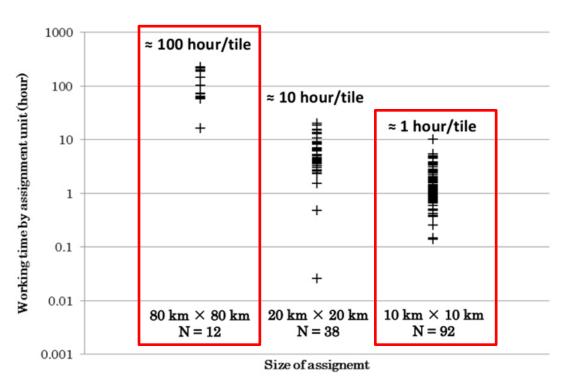
"This web site is a tool to collect case data on the impact of inbound tourism in Burma/Myanmar. It is part of the project EcoBurma, which seeks to promote responsible tourism and empower local civil society

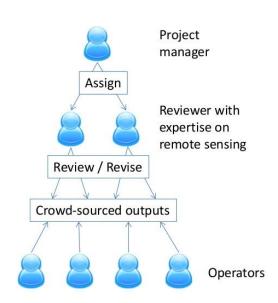
actors in Burma."



Challenges

- Defining tasks to be simple
- Quality assurance
- Managing various types of efforts
- Keeping motivation up (short assignment)
- Reference information for visual interpretation

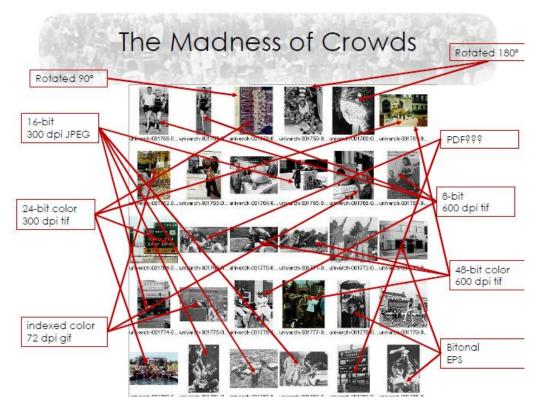




Tile size x 16 working time x 100

Limitations

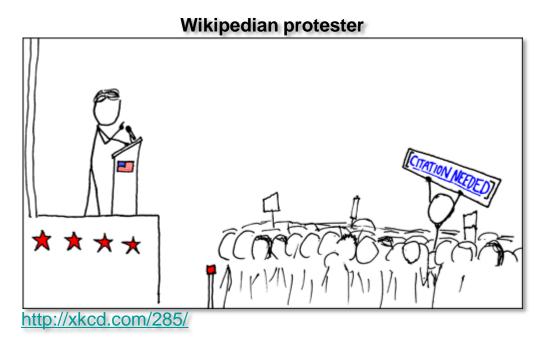
- Non trained volunteers
- Data authentification
- Standards /Quality of acquired data



Metadata entry 10 x longer than scanning!

Needs

- Motivation
- Documentation
- Training
- Empowerment (make people feel responsible)
- Quality check
- Infrastructures and applications



Degree confluence project

"The goal of the project is to visit each of the latitude and longitude integer degree intersections in the world, and to take pictures at each location."







Thanks

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