



SOTM  
2020

cape m

ONLINE!

## Content

Welcome .....	2
Saturday schedule .....	4
Sunday schedule .....	6
Saturday session descriptions .....	9
Sunday session descriptions .....	17
Thanks .....	25
Sponsors .....	26
Legal notice and credits .....	28

## Welcome to State of the Map 2020

State of the Map is the yearly gathering of the global OpenStreetMap community. In 2020, for the first time since ever the conference will not be held as an in-person conference, but as an online conference. We are proud of the participation of the OpenStreetMap community and our rich programme but there is even more! Please do get involved and take advantage of the off-schedule sessions, discussions and spaces.

## **A short history of SotM2020**

In 2019 Bernelle Verster (indiebio), an experienced FLOSS community manager and conference organiser put a lot of effort into formulating a detailed bid for Cape Town. She also managed to rally a passionate local African team of volunteers around her. And would you believe that, South Africa won the vote! **The first SotM in Africa!**

Fast forward to March 2020. Teams and committees already in an efficient routine of regular meetings and organising tasks via GitHub issues with the conference date becoming more and more emergent. The news of COVID-19 first lurking, then hitting the entire planet hard. South Africans like to repeat words for emphasis: “Hard hard”.

With the consequences at that point being not quite clear, alternative paths were mapped out. But eventually President Ramaphosa issued travel restrictions and a state of emergency on March 15. A very strict lockdown following soon. What to do? Postpone to a later date in 2020 with uncertainty? Cancel entirely? No, an online conference it’s going to be!

A new situation to all, we tried to uphold old traditions. We also tried to introduce things that can contribute to a communal atmosphere, hence the distance. One of it being the self-organised sessions. Please find things like FAQ, session URLs, and links to resources at [2020.stateofthemap.org](https://2020.stateofthemap.org).

We thank our sponsors that stayed with us and help us organise this conference under free software principles.

We wish you a wonderful time

Your organising team.

## Saturday Schedule

Time (UTC)	Track 1	Track 2
10:00	<b>Opening</b> <i>SotM Working Group</i>	
10:20	<b>Winds of Change in OpenStreetMap</b> <i>Allan Mustard</i>	
10:45	<b>Drones for Community Mapping</b> <i>Leigh</i>	<b>4 County OSM Digitization Liberia – Lesson Learned</b> <i>Tri Selasa</i>
11:30	<b>OSM Routing Evaluation</b> <i>Yantisa Akhadi</i>	<b>Health Facilities Import</b> <i>Sowmya Nayani</i>
12:15	<b>Ranks for Rendering</b> <i>Michael Reichert</i>	<b>Economy, Human, and Policy Impact on Mapping in Public Sector</b> <i>Asish Abraham Joseph</i>
13:00	<b>Lightning Talks I</b> <i>various</i>	<b>Building mapping communities in rural Tanzania – challenges, successes and lessons learnt</b> <i>Janet Chapman</i>
13:45	lunch break	
15:00	<b>The Map in 360</b> <i>Said Turksever</i>	<b>The State of OpenStreetMap in Africa</b> <i>Geoffrey Kateregga</i>
15:45	<b>Buildings are the new Streets</b> <i>Danijel Schorlemmer, Felix Delattre</i>	<b>Overview on OpenStreetMap Togo Community</b> <i>Ata Franck Akouete</i>
16:30	<b>Mapcampaigner Redesign: The Data Quality Monitor For OSM</b> <i>Jorge Martinez</i>	<b>Creating an open data ecosystem for reviews of places and more</b> <i>Dina Carabas</i>

## Saturday Schedule (continued)

Time (UTC)	Track 1	Track 2
17:15	<b>There might have been a misunderstanding...</b> <i>Frederik Ramm</i>	<b>OSM data assessment in the area of Athens - Greece</b> <i>Stathis G. Arapostathis</i>
18:00	<b>An Incomplete History of Companies and Professionals in OpenStreetMap</b> <i>Mikel Maron</i>	<b>Turkish Law on National Geospatial Data and Its Implications Regarding OSM and the Community</b> <i>Can Ünen, Orkut Murat Yilmaz</i>
18:45	dinner break	
20:00	<b>Visualizing Gender of Street Names in Brazil</b> <i>Bernardo Loureiro</i>	<b>Participatory Budgeting &amp; Mapping with citizens and government</b> <i>Erica Hagen, Lucy Fondo</i>
20:45	<b>Send me a Postcard</b> <i>Ilya Zverev</i>	<b>Sustainability and OSM for Development</b> <i>Erica Hagen</i>
21:30	<b>Building Stronger Communities Together - the Local Chapters &amp; Community Working Group</b> <i>Maggie Cawley</i>	<b>MapImpact: Mapping and social researches by students in Cusco, Perú</b> <i>Regina Campos Cc.</i>
22:15	<b>Meet an OpenStreetMapper</b> <i>Gregory Marler</i>	

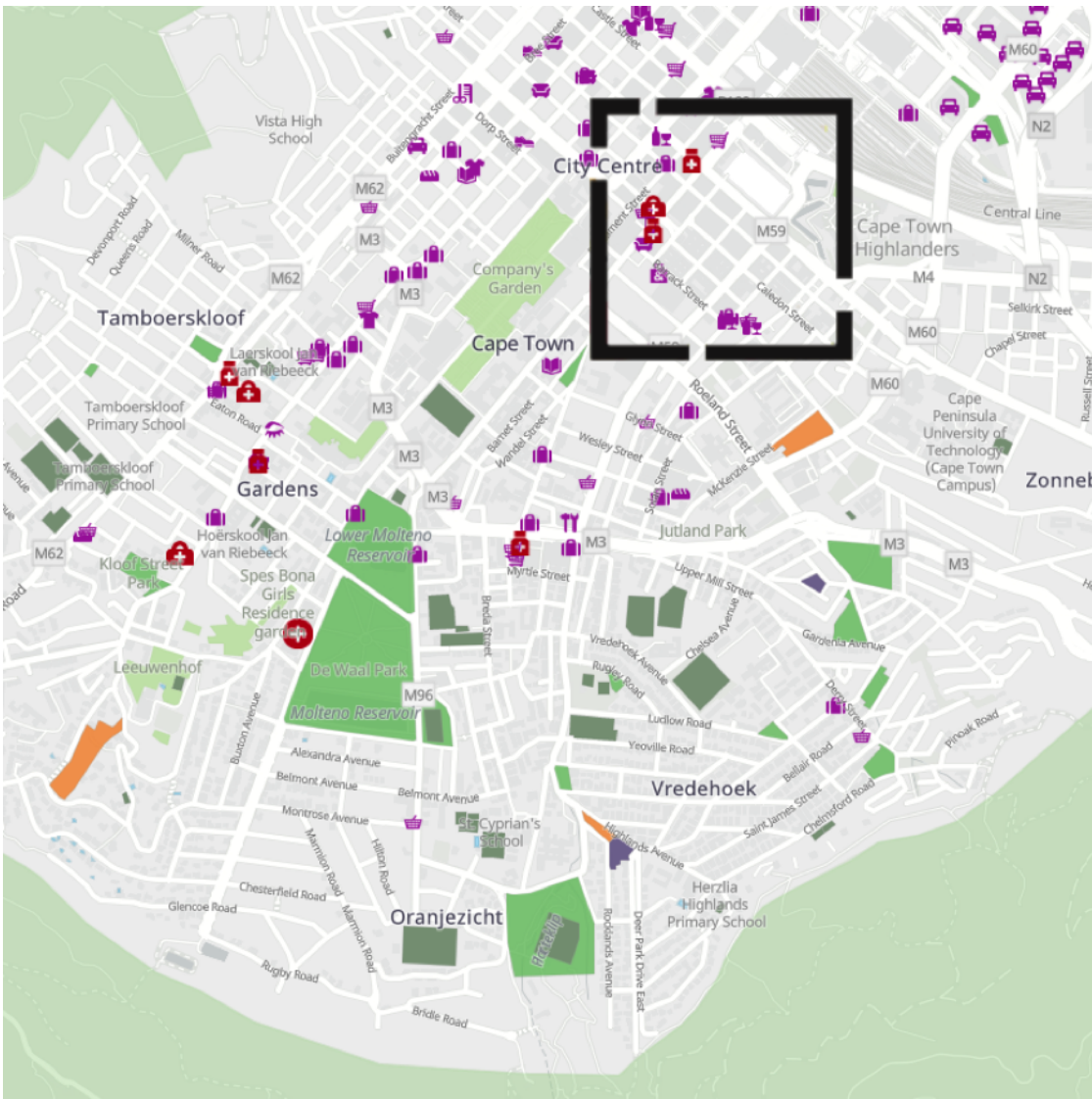
## Sunday Schedule

Time (UTC)	Track 1	Track 2
10:00	<b>MAPBEKS: Mapping of HIV Facilities and LGBT spaces in the Philippines on OpenStreetMap</b> <i>Mikko Tamura</i>	<b>Assessing Global OpenStreetMap building completeness to generate large-scale 3D city models</b> <i>Filip Biljecki, Ang Li Min</i>
10:45	<b>OSM Deep Facts in Developing Country: Indonesia case study</b> <i>Dwi Fanny Wulandari</i>	<b>Measuring OpenStreetMap building footprint completeness using human settlement layers</b> <i>Ardie Orden, Pia Faustino, Mark Steve Samson</i>
11:30	<b>Gender Performance in OSM Mapping, Does It Matter?</b> <i>Zainab Ramadhanis</i>	<b>Towards understanding the quality of OpenStreetMap contributions: Results of an intrinsic quality assessment of data for Mozambique</b> <i>Aphiwe Madubedube, Serena Coetzee, Victoria Rautenbach</i>
12:15	<b>Identify map problems in OSM by connectivity check</b> <i>Evan Hossain</i>	<b>Analyzing the localness of OSM data</b> <i>Susanne Schröder-Bergen</i>
13:00	<b>The use of OpenStreetMap within the Italian Alpine Club</b> <i>Luca Delucchi</i>	<b>From Historical OpenStreetMap data to customized training samples for geospatial machine learning</b> <i>Zhaoyan Wu, Hao Li, Alexander Zipf</i>
13:45	lunch break	
15:00	<b>How to publish a multi-modal journey app based on OSM with Trufi App</b> <i>Christoph Hanser</i>	<b>Community mapping a means to building resilience</b> <i>Dickson Daniel Chinguwo, Brown Kingsely Mphalo</i>

## Sunday Schedule (continued)

Time (UTC)	Track 1	Track 2
15:45	<b>Earthquakes and OpenStreetMap</b> <i>Danijel Schorlemmer</i>	<b>Examining spatial proximity to health care facilities in an informal urban setting</b> <i>Godwin Yeboah, João Porto de Albuquerque, Olalekan John Taiwo</i>
16:30	<b>What to do when local citizens do not consent? A discussion on how to navigate difficult field scenarios that involve local communities.</b> <i>Shamilah Nassozi</i>	<b>Evolution of humanitarian mapping within the OpenStreetMap Community</b> <i>Marcel Reinmuth, Benjamin Herfort, Jochen Stier, Alina Klerings</i>
17:15	<b>Minutely Extracts: Tools for nimble editing and downloading</b> <i>Brandon Liu</i>	<b>Detecting informal settlements via topological analysis</b> <i>Satej Soman, Cooper Nederhood, Nicholas Marchio, Annie Yang, Anni Beukes, Luis Bettencourt</i>
18:00	<b>Lightning Talks II</b> <i>various</i>	<b>Curious Cases of Corporations in OpenStreetMap</b> <i>Jennings Anderson, Dipto Sarkar</i>
18:45	dinner break	
20:00	<b>Pedestrians First</b> <i>Taylor Reich</i>	<b>Trademarks &amp; OSMF</b> <i>Kathleen Lu</i>
20:45	<b>OSM Quiz</b> <i>SotM Working Group</i>	
21:05	<b>Closing</b> <i>SotM Working Group</i>	

[sponsor content]



ArcGIS includes the latest OpenStreetMap data delivered as vector tiles in multiple map styles, as well as live feature services that can be used freely to create maps and apps.

A free ArcGIS developer account provides access to location services, APIs, and other tools to build location-powered apps.

Use OSM and thousands of other shared open data sources for map visualization and analysis.

SotM voucher code for 1,000 online credits: **SOTM2020**  
(please redeem by July 10, 2020)

Visit [developers.arcgis.com](https://developers.arcgis.com) to get started.





## Saturday Sessions

<i>SotM Working Group</i>	10:00
<b>Opening</b>	Track 1

Welcome to SotM 2020!

<i>Allan Mustard</i>	10:20
<b>Winds of Change in OpenStreetMap</b>	Track 1
<b>The next 15 years</b>	

OSM Foundation board chairperson Allan Mustard offers his personal assessment of challenges facing OSM and how he thinks the community and the OSM Foundation Board could deal with them.

<i>Leigh Lunas</i>	10:45
<b>Drones for Community Mapping</b>	Track 1

Drone technology is an evolving industry used in multi-disciplinary fields ranging from agriculture, marine conservation to real estate and films. There's so much potential and possibilities on what drones could help people making work faster and more efficient. In mapping, aerial imagery uploaded to Open Aerial Map can be used as basemap for OSM editing. Example cases are in Batad Rice Terraces, UNESCO Heritage site for mapping tangible changes in the community over time and create a tourism map and other small urban communities in the Philippines, aerial imagery was used for mapathons and community mapping done in OSM.

<i>Tri Selasa</i>	10:45
<b>4 County OSM Digitization Liberia – Lesson Learned</b>	Track 2

Last year, HOT collaborated with OSM Liberia and iLab Liberia to complete the mapping and perform quality assurance in four counties in Liberia. The objective of this program is to update OpenStreetMap data to assist with a Social Registry data collection in four counties in Liberia: Bomi, Bong, Nimba and Maryland. Buildings and roads are the entities to map for this program.

<i>Yantisa Akhadi</i>	11:30
<b>OSM Routing Evaluation</b>	Track 1

This talk will present an evaluation of different OSM routing software and its impact on the journey. Several popular OSM routing software results will be evaluated on its route-cost (distance

and or time) and different modes of transportation (from walking to motor-vehicle). Additional evaluation on the ground will also evaluate which route is a good (or bad) one and what may cause this impact.

*Sowmya Nayani*

11:30

### **Health Facilities Import**

Track 2

#### **RMSI - India**

The talk is to basically share the experience of working with Imports of Health Facilities in India (OpenGovernmentData). We planned to go briefly through the background of Open GovernmentData and the countries following the OGD, along with the compatibility of ODBL for the datasets they provide to the public.

The main purpose of the import is to provide accessible data of accurate health care information from the Open Government Data directories for Hospitals, Health facilities, Blood banks, Health Centers and Health Clinics information which can be useful for all the people and also the Humanitarian team in India.

The primary focus of the talk is the import process from data preparation to the execution which includes Imports Guidelines , Data Cleanup, Data transformation, Data Execution. The talk shares the detailed stats of the – Indian Health facilities OSM map data coverage before & after Imports and our survey experience for collecting the health facilities records in our region – Telangana.

We also line up with the Survey experience to collect the Health facilities records and conducted OSM awareness programmes. Conclude the session with the future plan and local community support.

*Michael Reichert*

12:15

### **Ranks for Rendering**

Track 1

#### **Adding Missing Ranking to OSM Data for Rule-based Cartography**

Separation of features by their importance is a core technique in cartography. But what happens if features of the same feature class (e.g. train stations) have a varying importance? A manual cartographer can choose the important features based on other knowledge. However, rule based cartography which is dominating in the OpenStreetMap environment cannot work this way. A computer programme rendering a map needs selection rules. Someone has to implement them.

This talk presents some examples showing how to add lacking relevance information if the importance of features within one feature class ranges span between extreme values. It will show how train stations and airports can ranked using other OSM data and external datasets.

*Asish Abraham Joseph* 12:15  
**Economy, Human, and Policy Impact on Mapping in Public Sector** Track 2

This talk is based on the experiences I faced while working with the public sector on mapping and try to identify some of the impacts that made and answering 3 questions which arise:

- \* How much Money should I spend?
- \* How much Accuracy do I need?
- \* How much Human Involvement?

*SotM Working Group* 13:00  
**Lightning Talks I** Track 1

Lightning Talk session.

*Janet Chapman* 13:00  
**Building mapping communities in rural Tanzania – challenges, successes and lessons learnt** Track 2

Crowd2Map Tanzania is a volunteer run crowdsourced project that has been mapping rural Tanzania since 2015. This talk will give an overview of some of the lessons learnt, particularly in building mapping communities in remote rural areas with first time smartphone users.

*Said Turksever* 15:00  
**The Map in 360** Track 1

Mobile mapping is the process of collecting geospatial data from a mobile vehicle using a 360° camera, laser scanner, GPS/IMU positioning system, and other sensors. This is one of the most time and cost effective methods to collect geospatial data, but the required equipment can be expensive. An alternative approach to mobile mapping brings the opportunity to the OpenStreetMap community to "Map in 360" using a wide range of consumer devices compatible with Mapillary. Instead of capturing a frame of street-level imagery in a single direction, a 360° camera can capture the entire scene simultaneously. 360° street-level imagery provides the OpenStreetMap community a more comprehensive understanding of the map space and more accurate machine-generated map data. In this talk, we will review the workflow of data collection with 360° cameras, look at how to upload 360 street-level images to Mapillary, and compare the impact of different 360° camera models in terms of map data extraction accuracy. OpenStreetMap communities can use this knowledge to coordinate their own street-level imagery collection with 360° cameras to contribute to Mapillary and improve local maps.

*Geoffrey Kateregga*

15:00

### **The State of OpenStreetMap in Africa**

Track 2

This talk will present the results of a survey done on the State of the OpenStreetMap, the unique challenges and success of OSM in Africa and how the different communities are working together to grow the map and the community on the continent.

*Danijel Schorlemmer, Felix Delattre*

15:45

### **Buildings are the new Streets**

Track 1

What are the perspectives and challenges around the new wealth of building data in OpenStreetMap?

*Ata Franck Akouete*

15:45

### **Overview on OpenStreetMap Togo Community**

Track 2

Le Togo, l'un des plus petits pays de l'Afrique de l'Ouest abrite depuis 2013 une communauté OpenStreetMap. OSM Togo a mise en œuvre de nombreux projets mais a connu également des difficultés. Cette présentation a pour objectif de faire un aperçu sur la vie de la communauté OpenStreetMap Togo.

*Jorge Martinez*

16:30

### **Mapcampaigner Redesign: The Data Quality Monitor For OSM**

Track 1

Humanitarian Openstreetmap Team (HOT) is an international team focused on humanitarian action and community development through open mapping. Since 2010, the organization has managed activations to attend multiple events such as understanding hazards, public health, refugee response, among others. However, when we think about organizing large-scale efforts it can be complex, due to the necessary logistics, volunteers involved, and also assuring that the data collected is meaningful. MapCampaigner, is a tool which monitors progress, view metrics on the quality and completeness of collected data and users engaged. The goal of this talk is to present the latest features included in the latest update of the tool, the goals that MapCampaigner accomplishes and many humanitarian and non-humanitarian examples through a demo.

*Dina Carabas* 16:30  
**Creating an open data ecosystem for reviews of places and more** Track 2

We built open-source infrastructure that allows the community to integrate open data reviews of POI into the OpenStreetMap ecosystem. This enables any application or website to make use of a reviews layer, and to benefit from the shared data pool that is created by a combined user base of participating applications. We built it to ensure that people all over the world can freely share their insights about things that matter to them without being confined to proprietary data silos.

*Frederik Ramm* 17:15  
**There might have been a misunderstanding...  
Common misconceptions about OpenStreetMap** Track 1

When people come to OpenStreetMap for the first time, their expectations are sometimes at odds with what the OpenStreetMap community is doing. If you have been puzzled by an OSMer telling you that OpenStreetMap is not a map, that [openstreetmap.org](http://openstreetmap.org) is not aiming to compete with Google Maps, or by their stubborn refusal to remove a private trail from the map, then this talk is for you. It will explain the basic tenets of the OpenStreetMap community and how they apply in practice.

*Stathis G. Arapostathis* 17:15  
**OSM data assessment in the area of Athens – Greece** Track 2

Current presentation aspires to contribute to an overall assessment of the OSM map in Athens, Greece. The OSM content is assessed in terms of completeness and precision. Various official mapping sources and ground truth data are employed in order to measure the current state of the map.

*Mikel Maron* 18:00  
**An Incomplete History of Companies and Professionals in Open-StreetMap** Track 1

This talk will survey the bright and dark history of companies and professional involvement in OpenStreetMap, lay out the challenges that we face now, and chart steps forward to figuring this out together. I want to reset the vision of the position of companies in OSM, starting by connecting back in time to when it was all more fluid in our community. Only later did some draw a sharp distinction between volunteer and professional activities in our project. The reality of the relationship of companies and professionals in OpenStreetMap from the very

earliest days until today is ... complicated. There's incredible mutual benefit and purpose. There are super hard issues to address when large amounts of resources are mustered, among the constellation of many kinds of actors and motivations in OpenStreetMap. The reality is that OpenStreetMap is transformative, and that companies in OSM first come for the data, may fumble along the way, and stay for the shared mission to change how maps are made in the open.

*Can Ünen, Orkut Murat Yılmaz*

18:00

**Turkish Law on National Geospatial Data and Its Implications Regarding OSM and the Community**

Track 2

The talk will focus on the Turkish law regulating the acquisition, collection, dissemination and trading of spatial data falling within the responsibility matrix of Turkish National Geographic Information System, effective since February 20, 2020. With the law, acquisition, collection, dissemination and trading of spatial data which is defined within the National Spatial Data Responsibility Matrix by third party individuals or legal entities are subject to prior application fees and approval of the Ministry of Environmental and Urban Affairs. The talk will reflect and report the developments in Turkey after the law, effects and implications drawn focusing on the national spatial sector, OSM, and the Turkish OSM community.

*Bernardo Loureiro*

20:00

**Visualizing Gender of Street Names in Brazil**

Track 1

How I used OSM data to visualize gender disparity in street names for all of Brazil. The result shows how women are underrepresented in street names in the country, and raises questions on who is chosen to be commemorated in street names.

*Erica Hagen, Lucy Fondo*

20:00

**Participatory Budgeting & Mapping with citizens and government**

Track 2

Map Kibera has been working for the past two years with some of Kenya's county governments to create maps of their primary features and funded projects. After implementing a Participatory Budgeting process, these counties realized that without good maps it was difficult for people to not only allocate resources, but to work with citizens to identify needs and prioritize funds. Map Kibera has been assisting counties to map key features and projects in OSM by working with youth from the local communities. The maps not only serve to connect citizens to the budgeting process and hold county government accountable for the funded projects, but, they

have also become central to county functions in all areas. This talk will share all about the process used and outcomes.

*Ilya Zverev*

20:45

**Send me a Postcard**

Track 1

Want a postcard? Looking for somebody to send a postcard to? Me too! Let's discuss how people in OpenStreetMap come together, which pleasant and otherwise experiences we had meeting other mappers, and how to express gratitude and make people feel a bit closer to each other — with postcards.

*Erica Hagen*

20:45

**Sustainability and OSM for Development**

Track 2

**Research Outcomes with Open Cities Africa and GFDRR**

We have seen an explosion of OSM mapping in the last few years around maps for development and humanitarian uses, particularly in Africa. During this time it has also become clear that sustaining this essential mapping work, and keeping maps up to date, was going to be a primary concern. Building a healthy mapping ecosystem around mapping for development will not necessarily be able to follow the same model as it has in more developed countries. In this talk, I will share the culmination of my research on sustainability with the World Bank's Global Facility for Disaster Reduction and Recovery and their Open Cities Africa project, and some ways that we can best support mappers and grow a healthier global OSM ecosystem.

*Maggie Cawley*

21:30

**Building Stronger Communities Together – the Local Chapters & Community Working Group**

Track 1

Do you get together with other mappers in your town? Would your group benefit from a bit more support? In this talk you will learn about the newly reformed Local Chapters & Communities Working group and our effort to support mapping groups all over the world.

*Regina Campos Cc.*

21:30

**MapImpact: Mapping and social researchs by students in Cusco, Perú**

Track 2

In Cusco, Peru, during the last 2 years, GAL Center worked with students using OSM and associated tools, such as Kobo as educational tools, mainly for research into social problems that the

students themselves identify in their locality. Projects such as "Sexist advertising mapping", "Sexual health" and "Garbage mapping in Larapa" were the result of this work.

This year, MapImpact is one of the HOT Microgrants and we will work with high school students and YouthMappers Chapters that we help to create in universities. In this talk, I will tell you more about how we work MapImpact in GAL: our objectives, our methodology, our results and why we would like it to be replicated in other places.

*Gregory Marler*

22:15

**Meet an OpenStreetMapper**

Track 1

**Getting to know the people that make OpenStreetMap**

OpenStreetMappers are a diverse group of people. This short segment will introduce you to another person that makes the project what it is.

[sponsor content]

# facebook



## Sunday Sessions

<i>Mikko Tamura</i>	10:00
<b>MAPBEKS: Mapping of HIV Facilities and LGBT spaces in the Philippines on OpenStreetMap</b>	Track 1

The Philippines is to be considered one of the most-LGBT friendly countries in the World. In 2019, it was able to host the largest pride celebration in Asia. Amidst all this, crimes against LGBTQ+, discrimination, and bullying is still rampant in the country.

The Sexual Orientation and Gender Identity Expression (SOGIE) Bill is still continuously being delayed. It is intended to prevent various economic and public accommodation-related acts of discrimination against people based on their sexual orientation, gender identity or expression. Despite of being tolerated, the LGBT community is still far from being accepted by society.

Evidence of our community have been written on books, told in stories, presented in movies and yet the community has not left its mark in data. Spreadsheets, research, books have identified spaces where community activities happen but this are not shown on any map online. Our spaces are mere descriptions or addresses on tables and paragraphs.

This talk would be about how we would be more represented on OpenStreetMap so as to provide emphasis on being on the map.

<i>Filip Biljecki</i>	10:00
<b>Assessing Global OpenStreetMap building completeness to generate large-scale 3D city models</b>	Track 2

This presentation describes the ongoing work at the Urban Analytics Lab at the National University of Singapore, developing novel methods to assess building completeness at a multi-country scale, as part of a broader project of generating 3D city models on a large-scale using OpenStreetMap.

<i>Dwi Fanny Wulandari</i>	10:45
<b>OSM Deep Facts in Developing Country: Indonesia case study</b>	Track 1

The number of OSM contributors every year tends to increase. But not all are sustainable contributors. For example in Indonesia, there is a lot of OSM training and Mapathon but it is suspected that there are not many local contributors of all time. For this reason, extracting information from OSM accounts that have been registered since a few years ago that classified as a rare mapper. The method is by recording the top 500 accounts in Indonesia, identifying local accounts based on profiles and heatmaps, sending questionnaires, and summarizing

them. The results can be used by the Indonesian OSM community to increase the sustainability of the contribution of local people in OSM.

*Ardie Orden*

10:45

**Measuring OpenStreetMap building footprint completeness using human settlement layers**

Track 2

Non-government organizations and local government units use geographic data from OpenStreetMap (OSM) to target humanitarian aid and public services. As more people start to depend on OSM, it is important to study data completeness in order to identify unmapped regions so that OSM volunteers can focus their attention on these areas. In this study, we propose a method to measure the data completeness of OSM building footprints using human settlements data.

*Zainab Ramadhanis*

11:30

**Gender Performance in OSM Mapping, Does It Matter?**

Track 1

Plenty of research about behavioural differences between men and women for years ago. According to a scientific article in 2013 by Lewis, on average women may have better verbal memory and social cognition, whereas men may have better motor and spatial skills. Moreover, spatial skill is really needed for mapping, especially as a mapper volunteer in OSM that everyone can make their own map. It also has been known that male mappers more dominate OSM mapping than female mappers. Nevertheless, in some mapper communities, the number of female mappers more than male mappers, for example in Humanitarian OpenStreetMap Team Indonesia. 19 from 30 mappers in HOT Indonesia are female, yet does it affect the performance and quality of mapping in OpenStreetMap?

*Aphiwe Madubedube*

11:30

**Towards understanding the quality of OpenStreetMap contributions: Results of an intrinsic quality assessment of data for Mozambique**

Track 2

Contributors of OpenStreetMap data for Mozambique, a country in Southern Africa, were classified into four distinct groups. The most active group included 25% of all contributors, most of them long-term contributors, and most features were last edited by members of this group. One can therefore conclude that the quality of the data is likely to be good, however, it lacks in completeness and the number of edits per feature is low. Even though no absolute statements about data quality can be made, the analysis provides valuable insight into the quality and can inform efforts to further improve the quality.

*Evan Hossain*

12:15

### **Identify map problems in OSM by connectivity check**

Track 1

In an ideal map, every point is reachable to another. However, in OSM data for instance, only 98.59% of Singapore's nodes are reachable to each other by a path. In this talk, we identify OSM map problems by checking the connectivity of the road network using strongly connected component algorithms and introduce a creative visualisation to help map ops pinpoint the fix effortlessly. Using this approach, we have fixed thousands of map problems in SEA.

*Susanne Schröder-Bergen*

12:15

### **Analyzing the localness of OSM data**

Track 2

The "localness" of data is often described as a major factor for the authenticity of (geo-) information in OpenStreetMap. However, the exact meaning and relevance of "localness" remain controversial. We compare proposals made for the "measurement", i.e. for the empirical operationalization, of "localness". Based on this, two convincing operationalizations were selected and implemented in order to contrast regional differences in "localness". Our analysis allows the identification of regions in which exceptionally high proportions of data are mapped remotely – mostly regions in the Global South. Bearing this in mind, we discuss how "localness" is negotiated in the OSM community.

*Luca Delucchi*

13:00

### **The use of OpenStreetMap within the Italian Alpine Club**

Track 1

The collaboration between the Italian Alpine Club (CAI) and OpenStreetMap (OSM) officially began with the signing of an agreement between CAI and Wikimedia Italia, the Italian chapter of the OSM Foundation, in 2016.

The first activity was to define a standard to be used for CAI objects to be mapped using the wiki, and this started the mapping.

Three years after that signature much has been done with a surge in the last year also thanks to the funding of CAI through the project "CONTRACT FOR THE DATA IMPLEMENTATION SERVICE IN THE INFOMONT SYSTEM". This financed one person to carry out different activities:

- the data entry in OSM with the procedure used and the situation region by region
- the development of software released under a FOSS license able to obtain CAI data from OSM and carry out some conversion and reporting operations
- training activities in the different sections of the CAI

During the presentation will be made a history of the activities of the CAI with OSM, the results obtained so far and the various features of the software developed.

*Hao Li, Zhaoyan Wu* 13:00  
**From Historical OpenStreetMap data to customized training samples for geospatial machine learning** Track 2

Recently, OpenStreetMap (OSM) shows great potentials in providing massive and freely accessible training samples to further empower geospatial machine learning activities. We developed a flexible framework to automatically generate customized training samples from historical OSM data, which in the meantime provide the OSM intrinsic quality measurements as an additional feature. Moreover, different satellite imagery APIs and machine learning tasks are supported within the framework.

*Christoph Hanser* 15:00  
**How to publish a multi-modal journey app based on OSM with Trufi App** Track 1  
**Use Trufi app to make your city's public transport better**

Trufi Association NGO offers an open-source journey planner app for formal and informal transport, based on public transport mapped in OpenStreetMap. In this extended talk, I would like to explain, how the participants can be customize the app to their own city, region, and country.

*Dickson Chinguwo* 15:00  
**Community mapping a means to building resilience** Track 2

The study contributes towards some best practices of carrying out community mapping exercise and, distribution of results freely on OSM and spatial data portal like MASDAP for further studies or decision making. Thus the study focused on preparing for mapping – what to map, how to map and how to record the data; the mapping exercise itself; downloading and digitizing of data in map production; and how to use the maps to aid in decision making.

*Danijel Schorlemmer* 15:45  
**Earthquakes and OpenStreetMap** Track 1

To assess the possible human and financial losses of earthquakes and to estimate the long-term earthquake risk that many people on Earth are exposed to, detailed knowledge of buildings is paramount. This encompasses not only the position, size, and type of buildings, but also the reconstruction value and the number of people inside the building at any time. Using OpenStreetMap data and further open data, we are implementing an open, global, dynamic, purely algorithmic, and reproducible exposure model for the probabilistic description of the

aforementioned parameters for every building on Earth, growing and changing with every edit in OpenStreetMap.

*Godwin Yeboah*

15:45

**Examining spatial proximity to health care facilities in an informal urban setting**

Track 2

This study explores the following research questions using OpenStreetMap-based mapping approach and healthcare facility survey from one of seven slums being studied in Africa and Asia. What are the differentials of spatial proximity to health care providers in informal settlements like slum? What are some of the lessons learnt from using OpenStreetMap-based mapping approach for slum health research? Preliminary findings suggest that residents can access four categories of healthcare facilities (Clinics/Maternity Centres; Patent Medicine Stores; Traditional/Faith Healers; Eye Health Centre) within a walking distance (under 1km) where Clinics and Maternity Centres are farthest from most residents.

*Shamilah Nassozi*

16:30

**What to do when local citizens do not consent? A discussion on how to navigate difficult field scenarios that involve local communities.**

Track 1

Most field program managers have their go-to field preparation checklist – this often includes a data model, their preferred data collection tools, field survey timeline, to name a few. We are often cautioned about the importance of community entry, and it is right, you will not be able to just enter the community and start mapping as people will get curious, ask questions and possibly become suspicious or hesitant to accept your data collection activities. At HOT, we employ participatory mapping methods and encourage local people to map their communities. However, sometimes with even all the correct steps followed, your activities can be hindered due to factors outside of your control. In this session, we will explore one of HOT's field mapping projects implemented in Kampala in collaboration with the Kampala Capital City Authority that aimed to map community-level flood risk in a local suburb along the Nakamiro Channel catchment area. Despite all the correct steps taken, community entry in a specific jurisdiction felt impossible and field mapping could not be carried out. In this session, our aim is to first discuss what went wrong and how our field team approached this situation and later invite participants/attendees to share similar challenges experienced in the field and how these situations were overcome or addressed.

*Marcel Reinmuth* 16:30  
**Evolution of humanitarian mapping within the OpenStreetMap Community** Track 2

Since 2010 organized humanitarian mapping has evolved as a constant and growing element of the global OpenStreetMap (OSM) community. We analyse the history of humanitarian mapping using OpenStreetMap History and OSM Tasking Manager (tasks.hotosm.org) data. We conduct a comprehensive quantitative analysis on a global scale and long term perspective to depict more than just snapshots of individual events. Results show that in regard to edits, users, projects, geographic diversity, almost all of these have experienced linear growth. But regarding user commitment and validation efforts we conclude that the humanitarian mapping community still faces huge challenges to achieve sustainability.

*Brandon Liu* 17:15  
**Minutely Extracts: Tools for nimble editing and downloading** Track 1

OSM is more fun and useful with quicker access to fresh data. New web services, tools and file formats enable mappers to download and use edited data within minutes.

*Anni Beukes* 17:15  
**Detecting informal settlements via topological analysis** Track 2

We outline methods for a) extracting the geometry of street blocks in urban centres using OSM and remote sensing data, b) generating approximate cadastral maps of a block given contained building footprints, and c) quantifying residents' ability to navigate within blocks through topological analysis of cadastral maps. This topological metric, termed "spatial accessibility" and denoted  $k = 1, 2, 3, \dots$ , determines whether areas of a city are informal settlements, as blocks where  $k > 2$  contain cadastral parcels without direct access to formal road networks. We analysed 1 terabyte of OpenStreetMap data for 120 low and middle income (LMIC) countries.

*SotM Working Group* 18:00  
**Lightning Talks II** Track 1

Lightning Talk session

*Jennings Anderson, Dipto Sarkar* 18:00  
**Curious Cases of Corporations in OpenStreetMap** Track 2

Today, nearly 17% of the global road network was last edited by a corporate data-team member. We further investigate unique editing patterns among three corporations that have specific, localized impacts on the map.

*Taylor Reich* 20:00  
**Pedestrians First** Track 1  
**Measuring walkability in cities worldwide**

Walkability is the foundation for urban life that is sustainable, inclusive, healthy, and dignified. Pedestrians First is a new open-source suite of tools for using OSM data to measure indicators of urban walkability. During this talk, we will examine the nature of walkable and unwalkable cities, we will discuss the opportunities and limitations of using OSM to measure walkability, and we will consider possible avenues for extending Pedestrians First in the future.

*Kathleen Lu* 20:00  
**Trademarks & OSMF** Track 2  
**Everything You Wish You Knew About Trademarks But Were Afraid to Ask™**

A summary of trademark law basics and an explanation of the OSMF Trademark Policy and how it applies.

*SotM Working Group* 20:45  
**OSM Quiz** Track 1

Surprise, surprise!

*SotM Working Group* 21:05  
**Closing** Track 1

Maps!

[sponsor content]

# Build experiences for exploring the world





## Thanks

### **SotM Working Group and Local Team**

Christine Karch (chairwoman)  
Gregory Marler  
Martin Raifer  
Marco Minghini  
Mikel Maron  
Bernelle Verster  
Graham Inggs  
Reuben Honigwachs  
Michael Graaf  
Grant Slater  
Gertrude Namitala  
Geoffrey Kateregga  
Edson Nicolai  
Craig Allan  
Enock Seth Nyamador  
Kyle Robbertze

### **Programme Committee**

Christine Karch (chairwoman)  
Sarah Hoffmann  
Manfred Stock  
Ilya Zverev  
Séverin Menard  
Arun Ganesh  
Mats'eliso Thobei  
Jennings Anderson  
Bernelle Verster

Gregory Marler  
Benoît Fournier  
Sidorela Uku  
Satoshi Iida  
Miriam Gonzalez

### **Academic Track Programme Committee**

Marco Minghini  
Serena Coetzee  
Yair Grinberger  
Godwin Yeboah  
Levente Juhász  
Peter Mooney

### **Scholarship Committee**

Mikel Maron  
Dorothea Kazazi  
Sidorela Uku  
Laura Mugeha  
Getrudi Hope  
Geoffrey Kateregga  
Graham Inggs

### **Video Team**

Kyle Robbertze  
Andreas Hubel  
Manfred Stock  
derchris  
Jonas Meier

## Sponsors

### Gold

ESRI  
Facebook  
Mapbox

### Silver

Geotab  
Grab

### Bronze

Kaart

### Supporters

Geofabrik  
Nextbillion.AI

[sponsor content]



[sponsor content]

# DRIVING SOUTHEAST ASIA FORWARD

Proud to be a part of the OpenStreetMap Community



Grab

## Legal Notice and Credits

State of the Map 2020 is organised by the OpenStreetMap Foundation



**OpenStreetMap  
Foundation**

Responsible for the content:  
OpenStreetMap Foundation  
St John's Innovation Centre  
Cowley Road  
Cambridge  
CB4 0WS  
United Kingdom

This booklet has been prepared using Lua<sup>A</sup>TeX and other free and open-source software.

Content: State of the Map Working Group

Typesetting and layout: Michael Reichert (<https://github.com/osmfoundation/sotm2019-booklet>), Martin Raifer (2020 adaptations)

Icons in the schedules: OpenStreetMap Carto developers

OpenStreetMap logo: Ken Vermette, CC-BY-SA 2.0



This booklet may be re-used under the Creative Commons Attribution Share-Alike 3.0 license. This does not apply to advertisements and logos.

[sponsor content]

# Proactive fleet tools for a changing world

Control costs, stay agile and increase the productivity of your fleet with our leading platform.



**GEOTAB**<sup>®</sup>

Find out how Geotab can support your business

[www.geotab.com](http://www.geotab.com)

© 2020 Geotab Inc. All Rights Reserved.