

Introduction to Mapping Public Transport in OpenStreetMap

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AccraMobile3, Summer 2017

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Who is here?



OpenStreetMap (OSM)

global, open and collaborative spatial database and community started in **2004** by **Steve Coast**

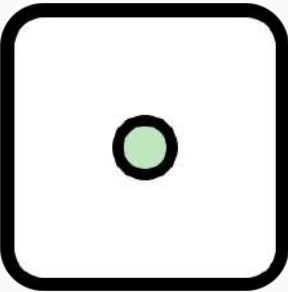


Source: Unknown

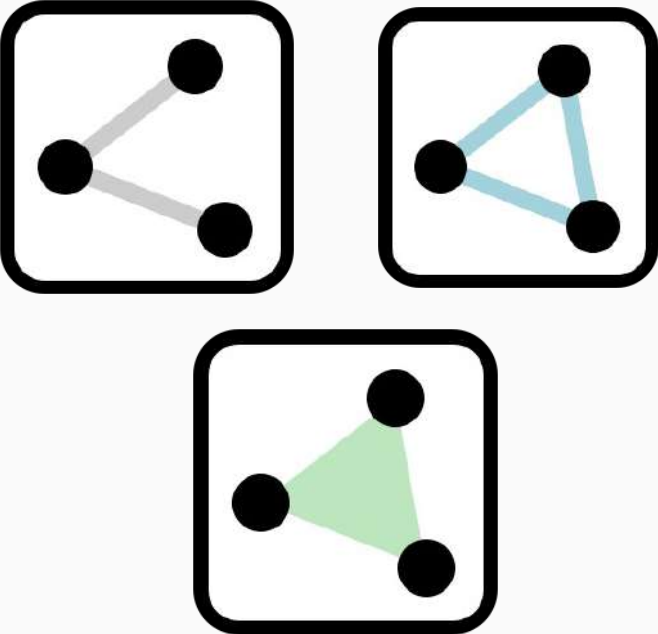


Elements

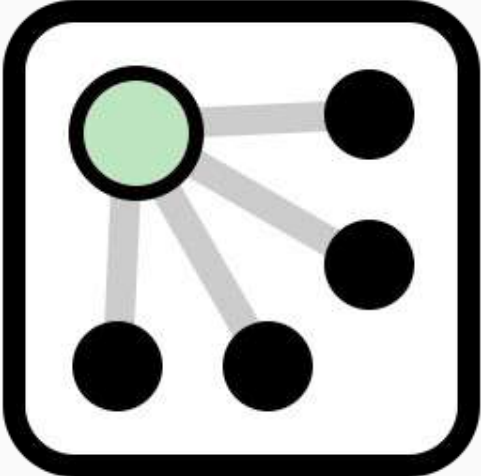
Nodes



Ways

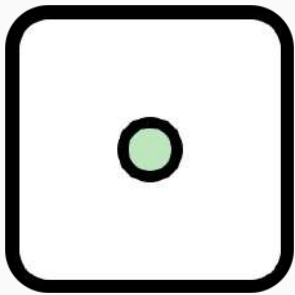


Relations



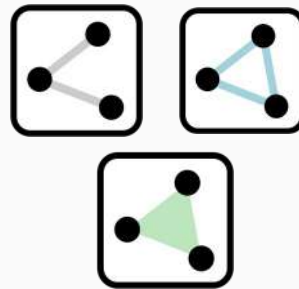
Tags

Nodes



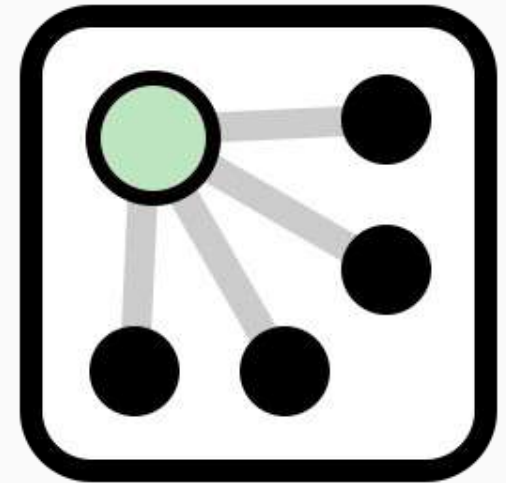
`amenity=*`

Ways



`highway=*`

Relations



`type=*`

Public Transport in Africa



Elodie Ouelo, CC BY-SA 4.0, via Wikimedia Commons

Preparing for data collection and mapping

ISTC TUDU BUS MOVEMENT & SCHEDULES					
	DESTINATION		FARE (CNY)	REPORTING TIME	DEPARTURE TIME
TUDU	AFLAO	EXPRESS	25.00	3am - 5pm	
TUDU	HO	EXPRESS	22.00		
TUDU	Hohoe		32.00	12:00pm	1:00pm
TUDU	KAJEBI		36.00	"	"
TUDU	JASIKAN		36.00	"	"
TUDU	NKWANTA		40.00	"	"
TUDU	TAKORADI		25.00	"	"
TUDU	TARKWA		40.00	"	"
TUDU	Lagos		120.00	"	"

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In the terminals/stations, local government, local knowledge, partners, etc

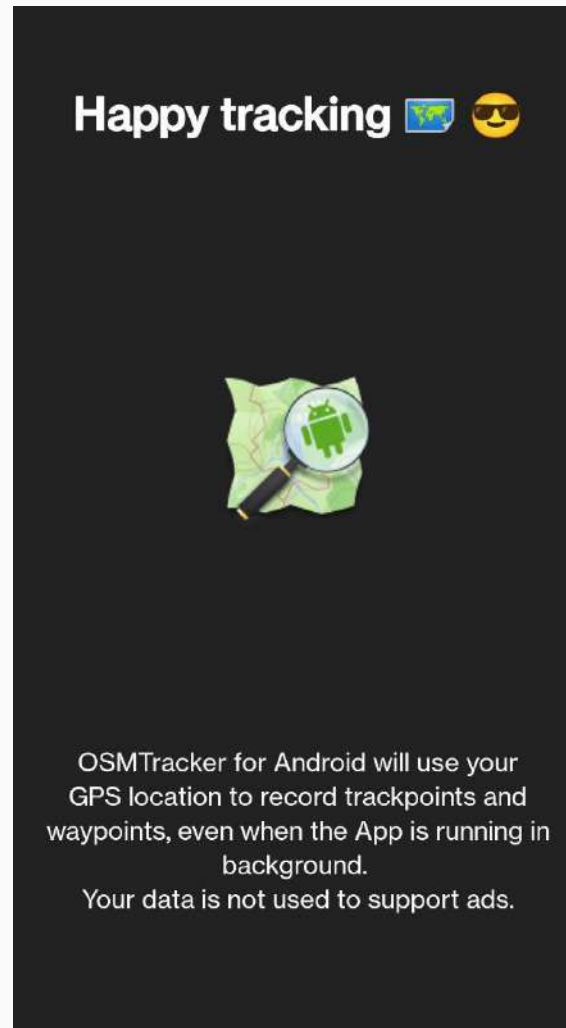
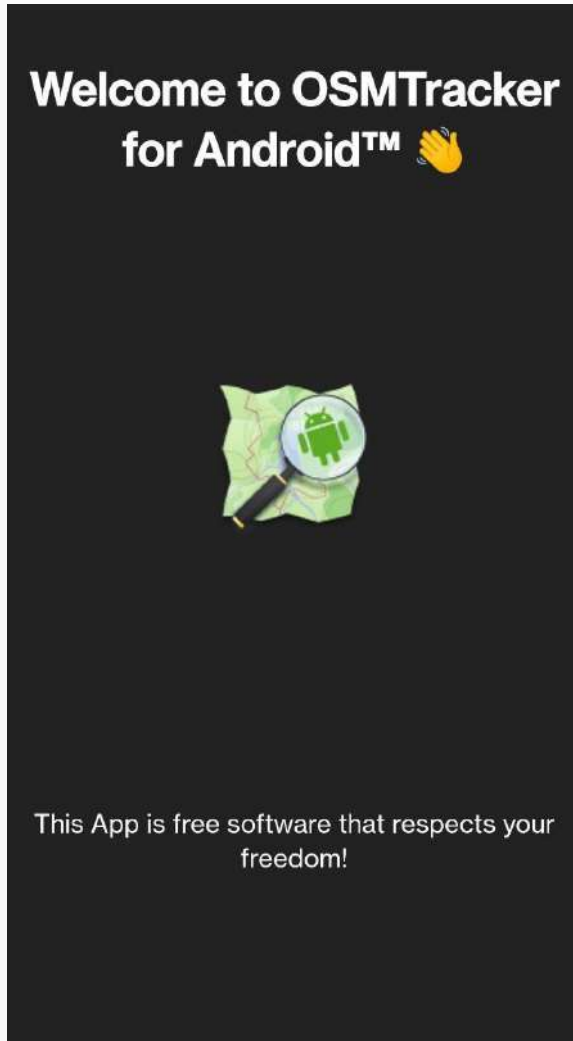
Putting together for the next steps....

Lines	Uploaded	From	To	Operator
2	HK	37 Lorry Park	Osu (37 Station)	Osu Trotro Branch of GPRTU
3	AP	37 Lorry Park	Tse Addo	La YMCA Branch of GPRTU
4	RO	Abeka Lapaz	Ashaiman Main Station	Abeka Lapaz Highway (GPRTU)
5	JQ	Abeka Lapaz	Ashalaja	Abeka Lapaz Highway (GPRTU)
6	EA	Abeka Lapaz	Sakumono Estate	Abeka Lapaz Highway (GPRTU)
7	AP	Abeka Lapaz	Taifa	Abeka Lapaz Highway (GPRTU)
8	EA	Abeka Lapaz	Tema Community One Market	Abeka Lapaz Highway (GPRTU)
9	HK	Abeka Lapaz	Adeyman	Lapaz Asofan Amasaman Branch of G.P.R.T.U.
10	DQ	Abeka Lapaz	Amasaman	Lapaz Asofan Amasaman Branch of G.P.R.T.U.
11	HK	Abeka Lapaz	Circle Accra	Abeka Lapaz Circle Accra Local of Abeka Branch of G.P.R.T.U
15	RO	Abeka Lapaz	Dome Kwabenya	Lapaz Asofan Amasaman Branch of G.P.R.T.U.
16	HK	Abeka Lapaz	Sapeiman	Lapaz Asofan Amasaman Branch of G.P.R.T.U.
17	HK	Abeka Lapaz	Kasoa	Tiger Transport Services Association, Lapaz Branch
18	DQ	Abeka Lapaz	Kasoa	Lapaz Branch of Tiger Transport Services Association

Source: AccraMobile3

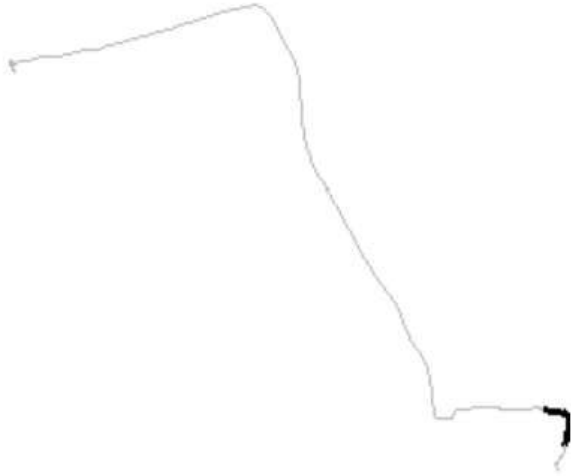
Defines your project

Data Collection



Highly customizable

Sharing GPS traces



Filename: 030_A_HK_2017_08_15_08_35_33.gpx ([download](#))

Uploaded: 15 August 2017 at 11:13

Points: 295

Start coordinate: 5.60777; -0.245347 ([map](#) / [edit](#))

Owner: [accramobileghana1](#)

Description: AM3

Tags: *None*

Visibility: Identifiable (shown in trace list and as identifiable, ordered points with timestamps)

Naming conventions, Use Tags ^^

Bus Stops

Key	Value	Mandatory	Comment
public_transport	platform	yes	This is a waiting area
highway	bus_stop	yes	This is a bus stop
bus	yes	yes	This is about bus
name	*	yes	The name of the bus stop
official_status	unofficial	no	For an implicit bus stop with no written mention at all
shelter	no	no	For a bus stop with only a pole
shelter	yes	no	For a bus stop with a shelter

https://wiki.openstreetmap.org/wiki/AccraMobile3#Tro_tro_stop

Mapping Routes

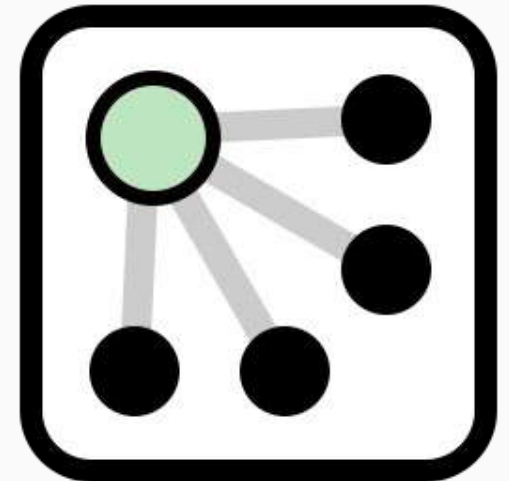
2 Relations for:

- $A \rightarrow B$
- $B \rightarrow A$

1 Relation for:

- Route Master A B

<https://wiki.openstreetmap.org/wiki/Buses>



Routes from A → B and B → A

Key	Value	Mandatory	Comment
type	route	yes	This is a transport relation
route	bus	yes	This is about bus
name	* e.g. “Trotro 003 : Tse Addo → 37 Lorry Park”	yes	The name of line mentioning its reference number, its 1st and last stop
bus	unofficial	yes	For a Tro tro line
operator	*	yes	Name of the company that operates the service
ref	* e.g. “003”	yes	The number of the line
from	*	yes	The name of the first bus stop
to	*	yes	The name of the last bus stop
travel_time	* e.g. “49”	yes	The time (in min) to travel from the first to the last stop (computed from the GPX track)
roundtrip	yes;no	no	Whether or not the route start and ends at the same place

https://wiki.openstreetmap.org/wiki/AccraMobile3#Tro_tro_line

Route Master A B

Key	Value	Mandatory	Comment
type	route_master	yes	This is a meta relation
route_master	bus	yes	This is about bus
name	* e.g. "Tro tro 003 : 37 Lorry Park Tse Addo"	yes	The name of line mentioning its reference number, its 1st and last stop
bus	unofficial	yes	Always used for a Tro tro line
operator	*	yes	Name of the company that operates the service
ref	"* e.g. "003"	yes	The number of the line (always 3 digits)
frequency	* e.g. "7"	yes	Approximate frequency of Tro tro traffic during traffic peak time (in min)
charge	*GHS e.g. "2.1GHS"	yes	Fare of the line

Conclusion

- Collect some observation data
- Create and Wiki page for your projects; Documentation
- Inform your country / region mailing list <Talk-TZ>
- **ONE** OpenStreetMap !

 - Test Offline/Use test servers/review, validate, maintain
- Follow best practices and use good changeset comments
 - #tanzaniapublictransportmapping
 - #kumasimapping
 - Add something
- Reuse data
- Teach others... keep learning.. b

Thank you! Akpe! Merci! Danke!

Questions!

If you want to map, go out with your smartphone or paper. Collect some data, come home and map ^^

See - https://wiki.openstreetmap.org/wiki/Mapping_techniques