Mapping Freetown's water network using OSM data

Lightning talk

Alexandre Duclaux, July, 29th 2018
About us

Based in Rabat, Morocco
Since 2012
6 people
International team and customers

www.sige.ma
Physical Mapping, Distribution System Condition Assessment and Hydraulic Modeling for Guma Valley Water Company (GVWC)
Context
Mission

Mapping

- >100mm pipes
- All Network components
- <100mm and spaghetti pipes as Offtake points
- Encroaching structures
Means

100% Opensource software architecture

- Open source data collection software
- QField
  - Edit data
- QField Sync
  - Export
  - Import
  - Syncro

Postgres/PostGIS Database

GIS software

- Connection to database
- Configure styles for layers
- Setup forms

Superior accuracy GNSS devices

Up to 11 mappers at the same time
Using Openstreetmap data
Using Openstreetmap data

- As basemap for Data collection
- To map encroaching structures
Using Openstreetmap data

To map encroaching structures from:

- Mapped encroachments
- Crossing pipe VS OSM entities
Using Openstreetmap data

OSM data to be improved
Using Openstreetmap data

Hired 2 youth mappers
Using Openstreetmap data

1. verifying encroachments and updating OSM data

QField - GIS DB

Encroachments
Pipes

QGIS
Mapped encroachments & pipes
OSM data

Potential encroachments

OSM DB

Buildings Private gardens Schools Hospitals Industrials.

Verified encroachments

JOSM
Mapping encroaching structures Qualifying encroachments

Updated encroaching structures
Using Openstreetmap data

2. Import encroaching structures to the GIS database
Youth mappers:
• Jacob Farna
• Joseph Sorieson Kamara

Trained on JOSM

Created buildings: **6602**
Modified buildings: **2173**
Retrieved encroaching structures: **3847**
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Thank you for your attention!

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