
Locus

A location based pub/sub middleware for
mobile advertising

Scenario 1

Consumer: You are driving from Irvine to San Francisco.

It's 2PM and you are hungry.

You have little money and are hoping that there are some deals on food along the way (“.. a 6in sub free on a 6in sub?..”).

Wouldn't it be nice if you could get instant notifications on your phone based on your location, driving direction and the stores around you?

Scenario 2

A shop: You own a small general store on freeway I-5.

You are so tiny that people passing at speeds of 65mph hardly ever spot you!

You've tried printing posters with awesome deals to grab people's attention and bring them to your store, but it's been burning a hole in your pocket.

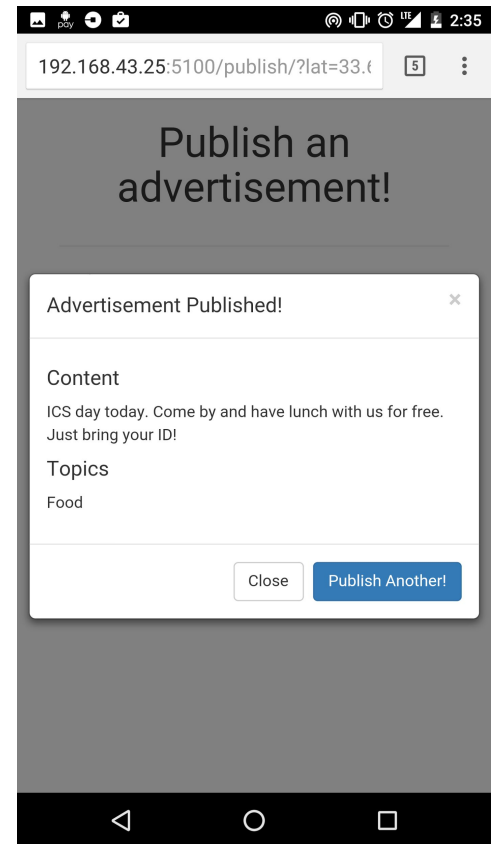
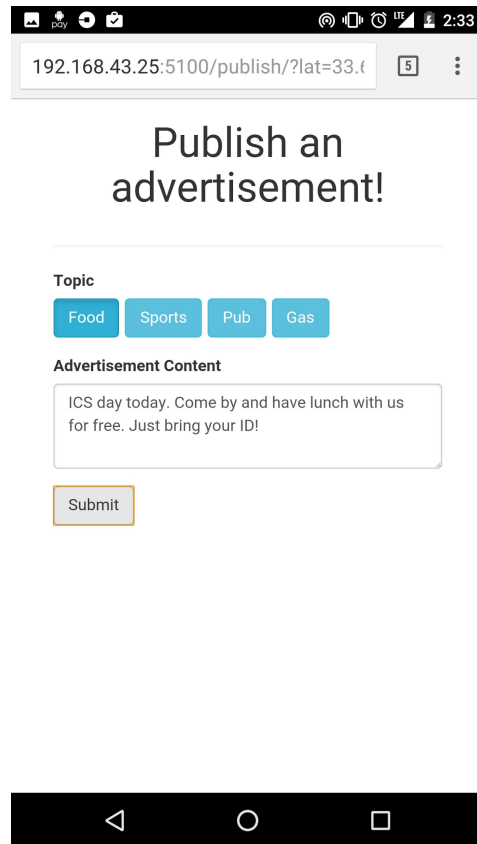
Wouldn't it be nice if you could somehow inform everyone approaching towards your store on the freeway about your free/awesome deals on their phones directly?

We implemented a prototype

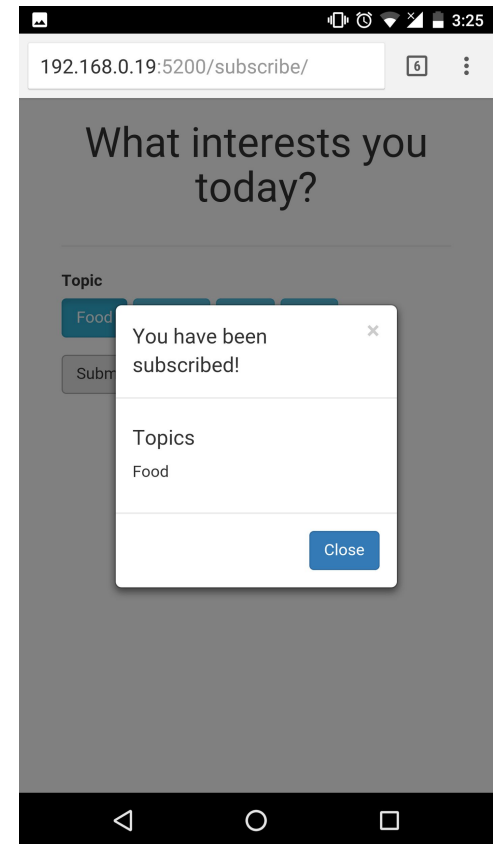
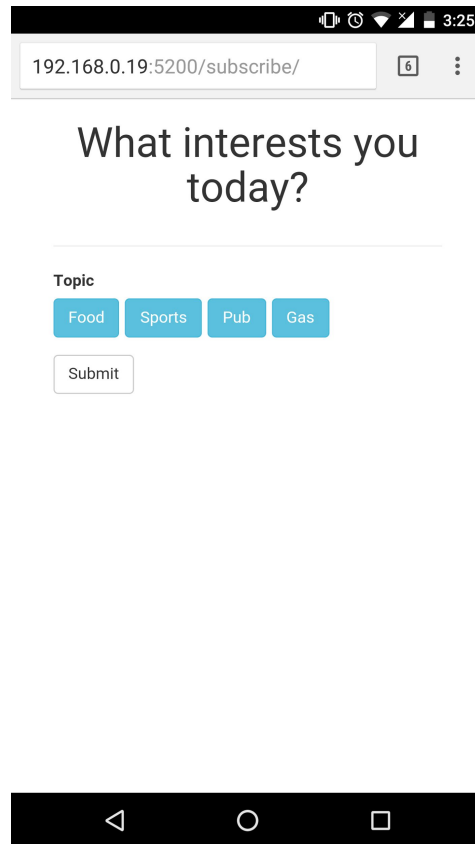
Shiladitya Sen (48565650)

Uday Mittal (70969866)

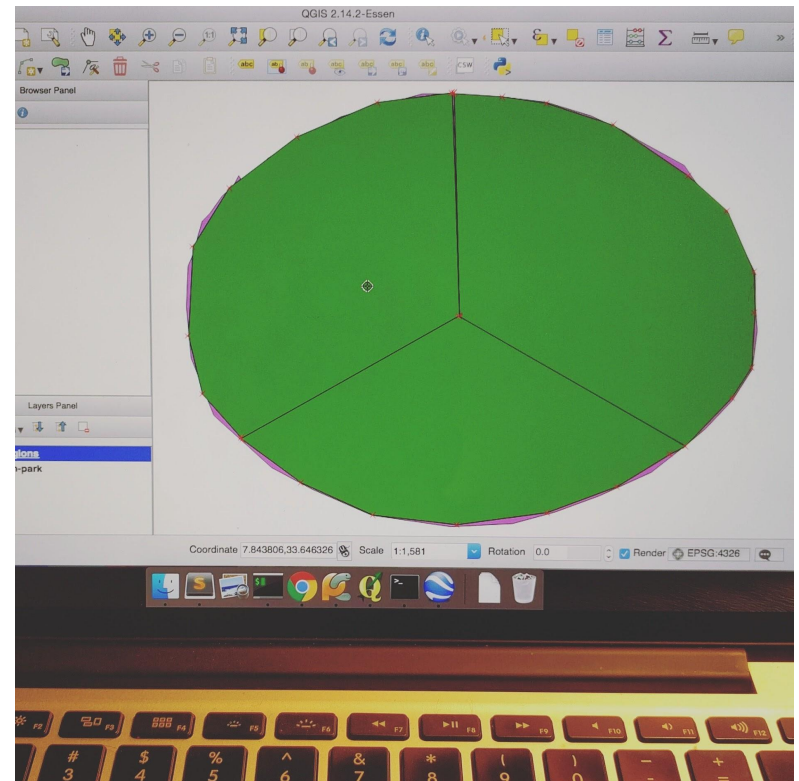
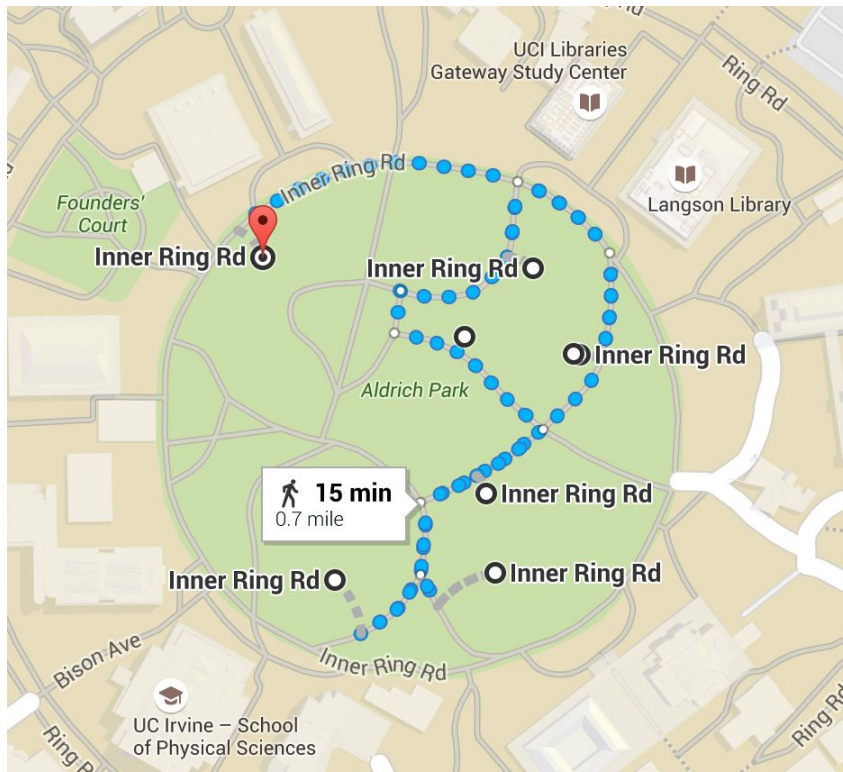
A publisher



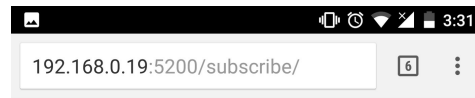
A subscriber: interest selection



Simulation



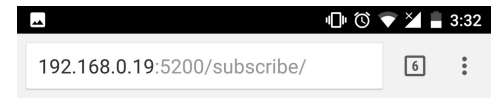
A subscriber: notifications



Here's something interesting!

Free bagels on Tuesday's at Phoenix food court! Come grab yours! ×

Java city is offering 10% off to anyone who had a final today! ×



Here's something interesting!

Jamba juice is offering 10% off to graduate students today! ×

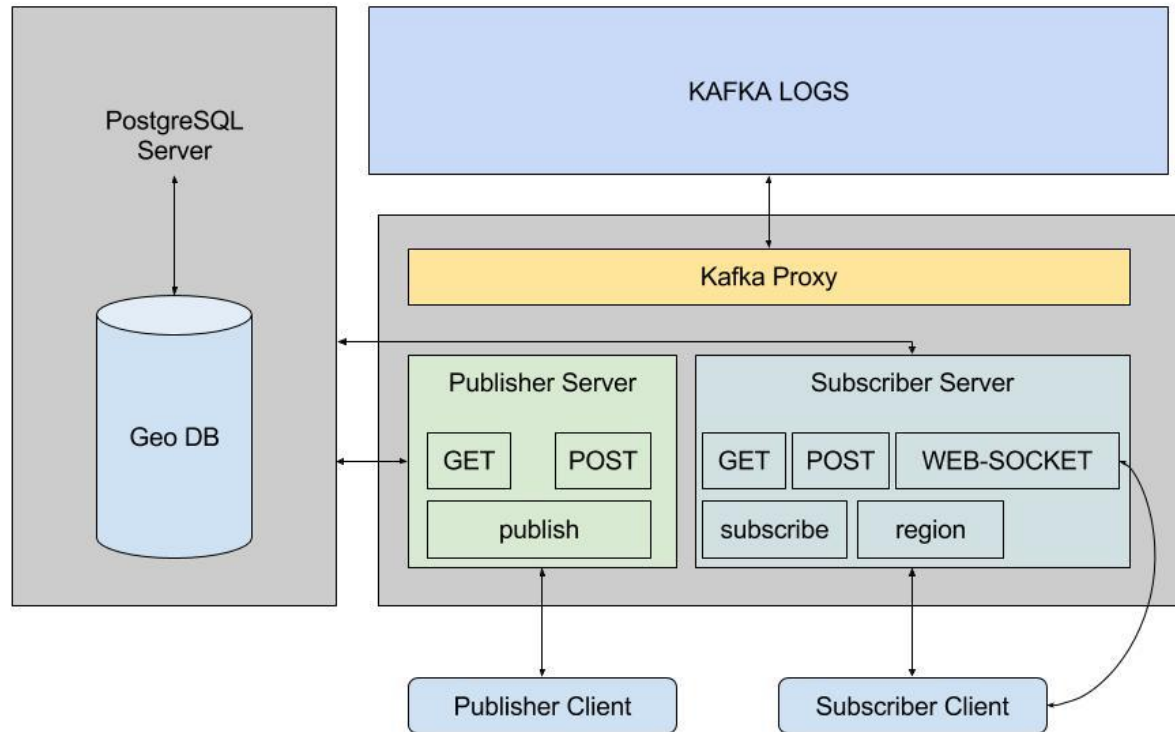
Free bagels on Tuesday's at Phoenix food court! Come grab yours! ×

Java city is offering 10% off to anyone who had a final today! ×



Architecture & Stack

Overall Architecture



Tech Stack

Message Store

PostgreSQL + PostGIS

Publisher/Subscriber Client

HTML, JS, CSS, Jinja2, Bootstrap

Publisher/Subscriber Server

Python, Flask, SocketIO, SQLAlchemy, GeoAlchemy2

Geo Support

Google earth, Quantum GIS

Pub/Sub Backend

Kafka, Python

Message Passing

JSON

Thank you

You can watch a short 1 minute demo [here!](#)
Get the code [on Github!](#)
