FindMyBike

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Why FindMyBIke?

- Bike theft is a big problem.
- Most project members have had their bikes stolen.
- Want to use current technology to easily track your bike
- The system is something that we think is high in demand.
- FindMyBike is a product that we all could see ourselves using.

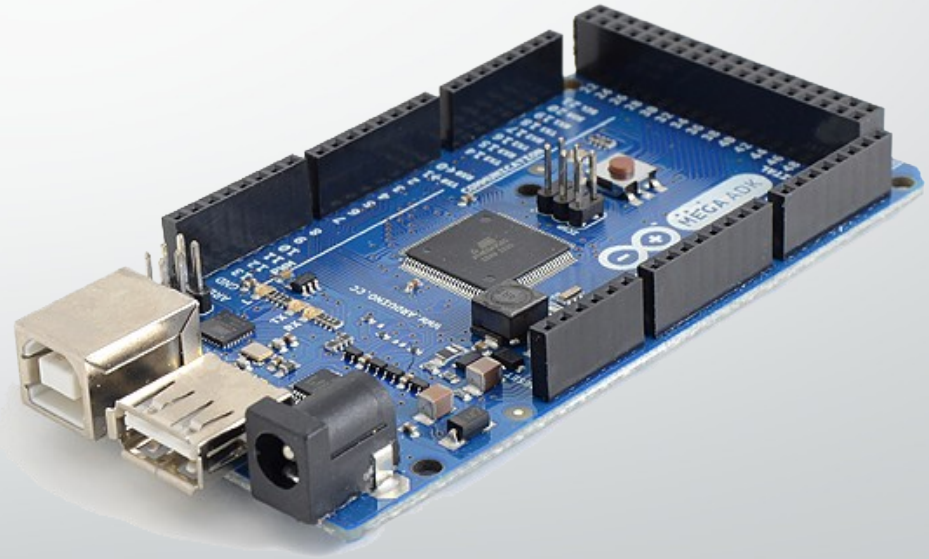
Components and devices used for FMB®

- JAVA Server
- Android Device
- Arduino MEGA ADK board
- 3G + GPS Shield for Arduino
- SIM Card
- GPS Antenna
- GPRS Antenna
- Battery for Arudino Board

How we built FindMyBike

Arduino MEGA ADK

We used the Mega to install our tracking program and process the data from the **3G GPS** Shield



How we built FindMyBike

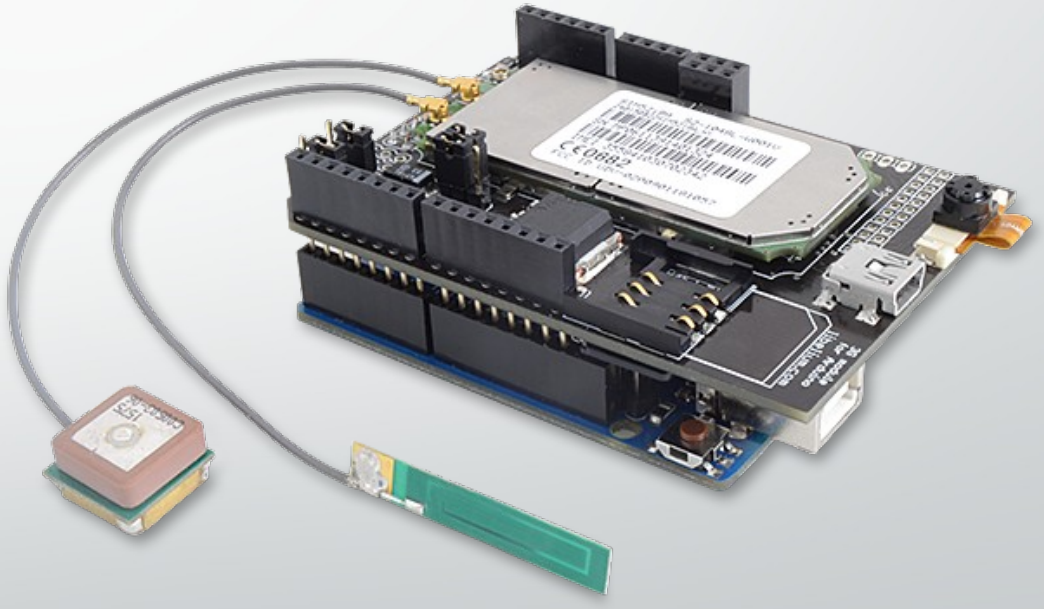
3G + GPS Shield for Arduino

The 3G shield for Arduino enables the connectivity to high speed WCDMA and HSPA cellular networks in order to make it possible for the system to receive and send data.

How we built FindMyBike

Components for the GSM Shield:

- Telia SIM card is used to connect to the Telia‘s 3G network to allow connection from the Arduino board to our server
- GPRS Antenna for Network Connectivity
- GPS Antenna for detecting the systems coordinates.

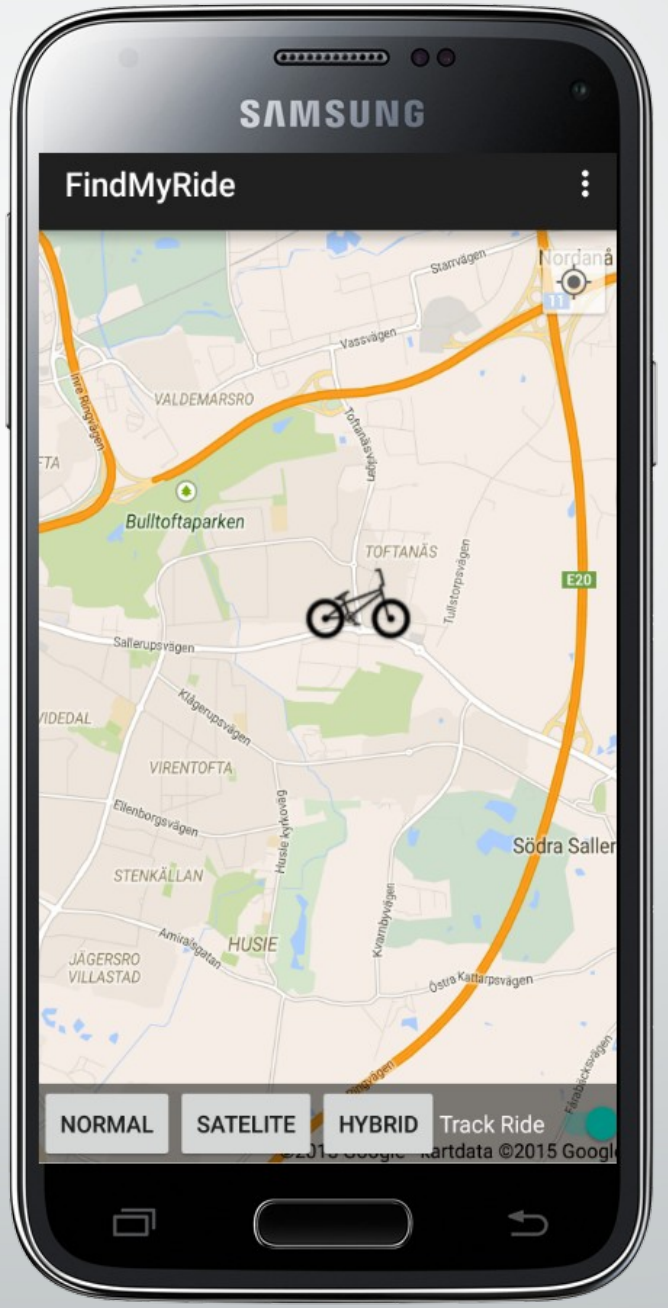


Android Application

The application is where the magic happens.

By pressing the Track Ride button you are connected to a JAVA server which then requests the location from the FindMyBike system.

The server sends back the location to the Android Application and then displays the coordinates on the Android Application. The user can from there get an

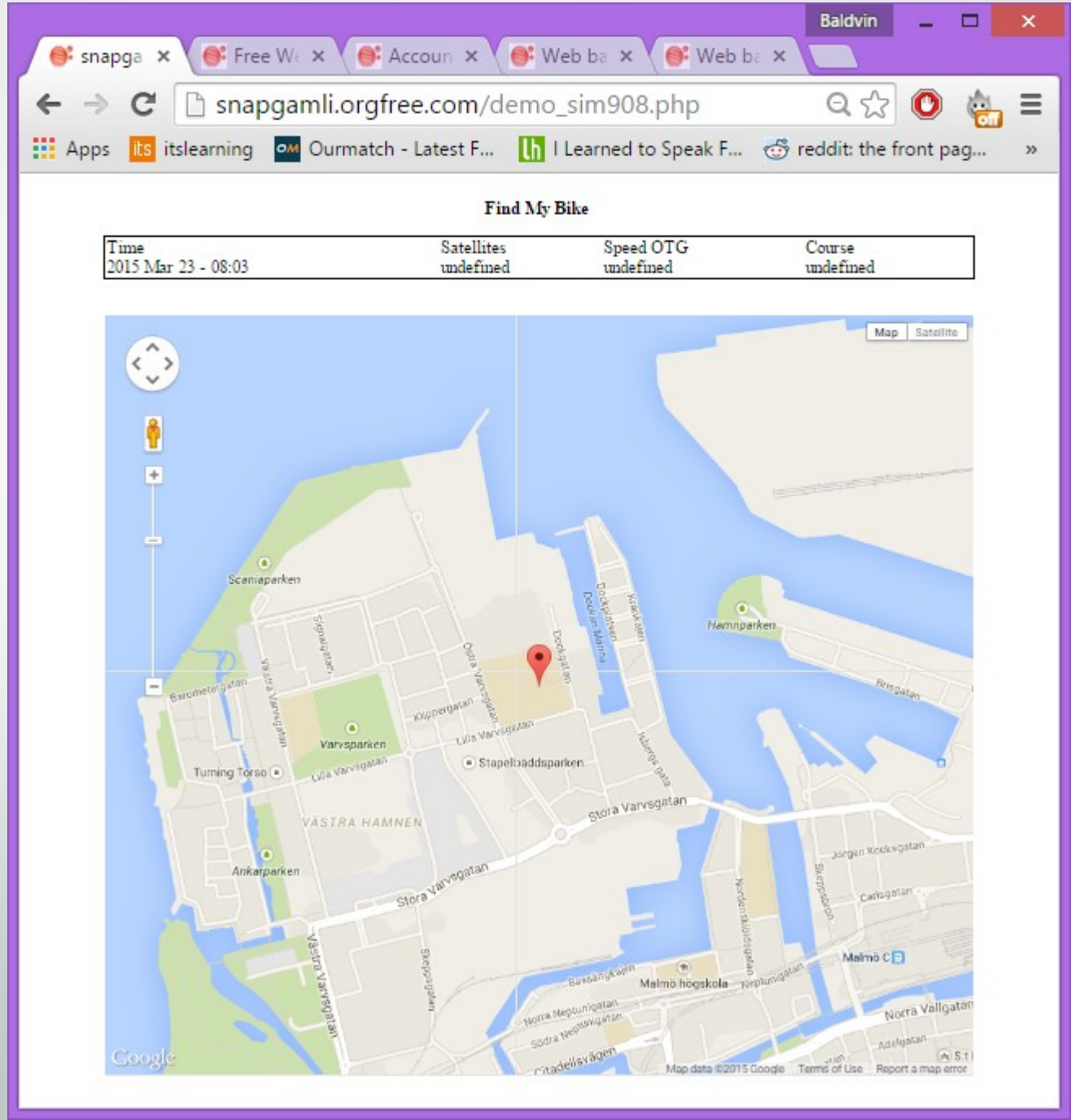


Online Functionality

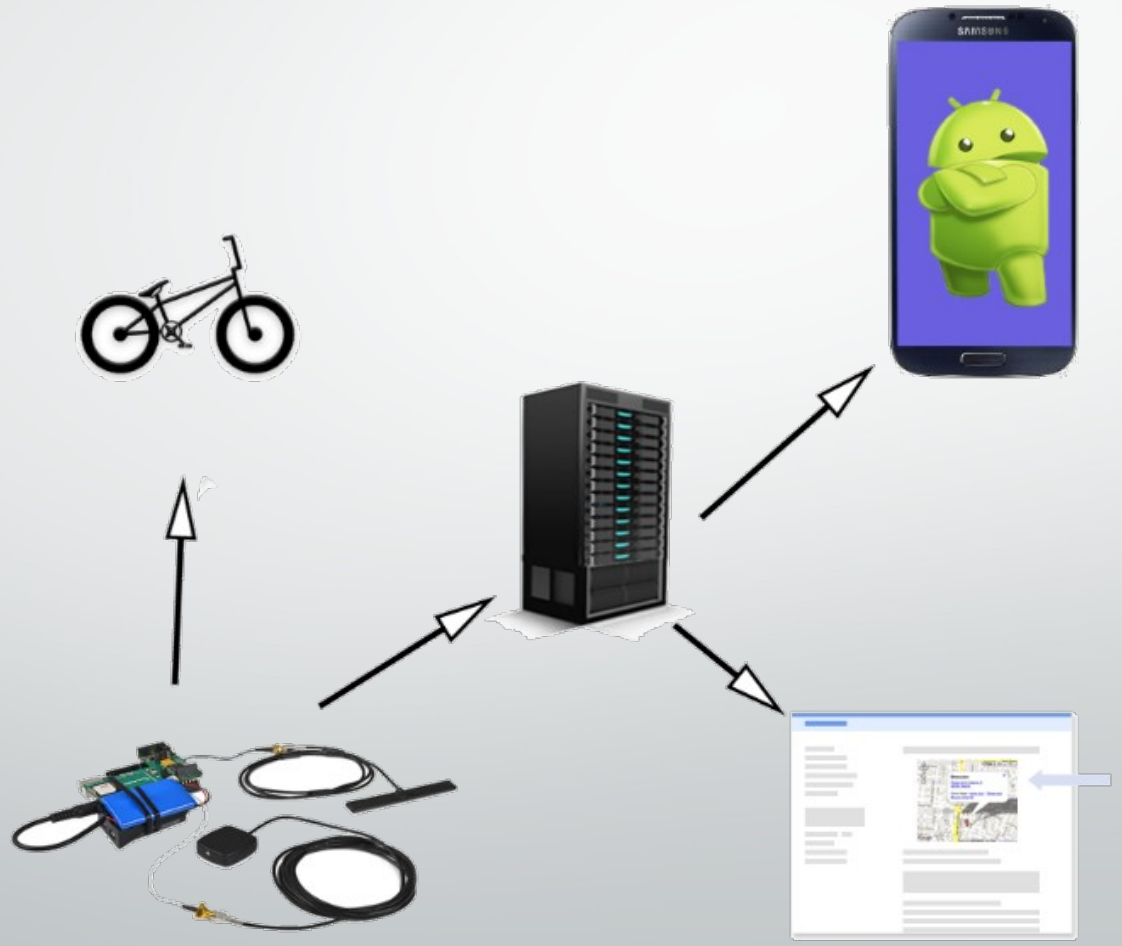
Users can also locate their bikes using the systems webpage.

User can login to the systems webpage with their user credentials they receive with the product

This comes in handy if a user has lost his Android device or has no access to it.



System Overview



Problems?

- Faulty GPS Antenna
- GPS delay might be a bit less
- Coordinates from GPS antenna was different format.
- Change format so Google Maps could read location.
- Installing the JAVA server on the Ubuntu Host Server

Expectations vs Reality

- Our final prototype exceeded our expectations by a mile
- In our initial project idea our thought was that we would receive a text message with the systems location to our Android Device
- Instead we created an Android App that receives real-time location on request.
- We added server connection for easier communication from the Android Device to the Arduino Board

Demo...

Questions?