Fremont SiBike Proof of Concept

A Smarter Way to Detect Cyclists

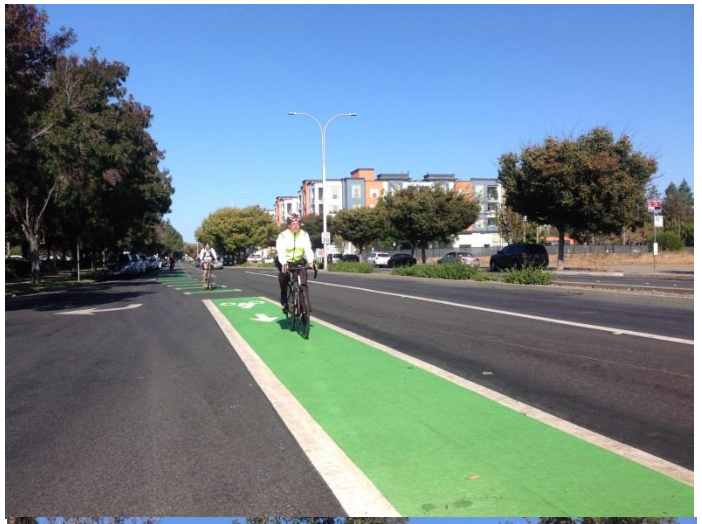
City of Fremont and Siemens Mobility Inc – City of Fremont Bicycle Pedestrian Technical Advisory Committee April 17, 2019

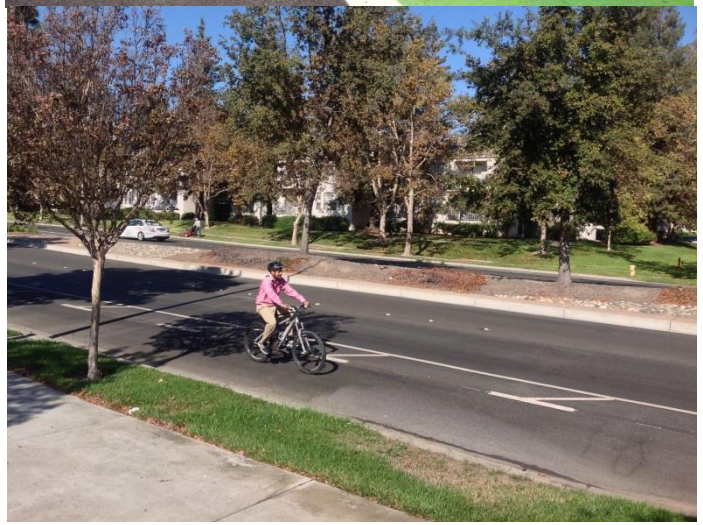
Need For Bicycle Detection

Significant Bicycle Usage
Vocal Bicycle Advocates
Lack of Bicycle Detection
Installing Video Detection at a Rate of 2-3 per Year
Disadvantages of Installing Loops for Bicycle Detection

- Construction projects damage the loops
- Bike loops and vehicle loops are both spliced to same channel
- No differentiation for bicyclist or vehicles
- Older intersections have full conduits

Increase Bicycle Ridership with Bike Share Program

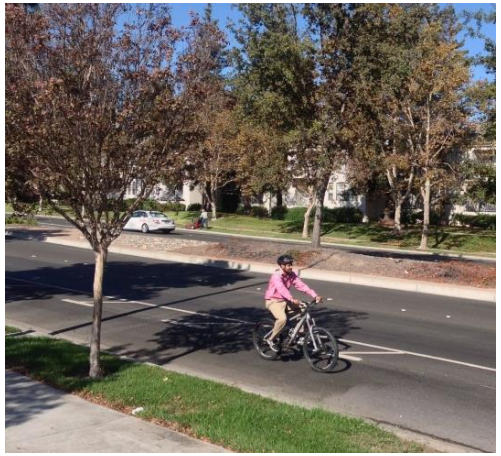




Bike Share Overview

- Smart Bike System (“dockless”)
- Suite of Mobility Options
- Min 150 Bicycles
- E-bikes and Scooters
- TBD Price ($1 + $.15/min)

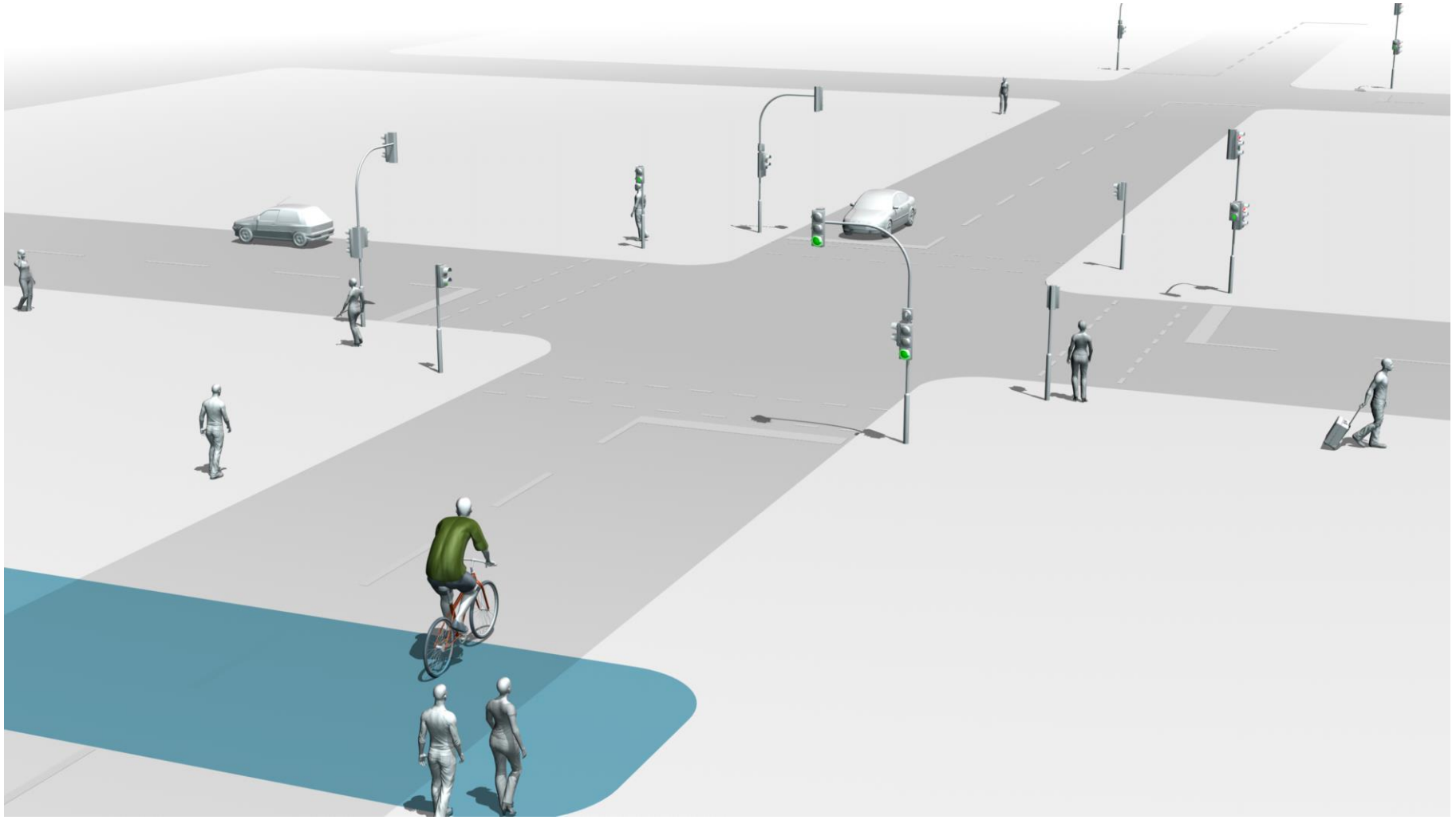
Pedal Bikes!



E-scooters!

E-bikes!

Pilot Project – Bicycle to Traffic Signal

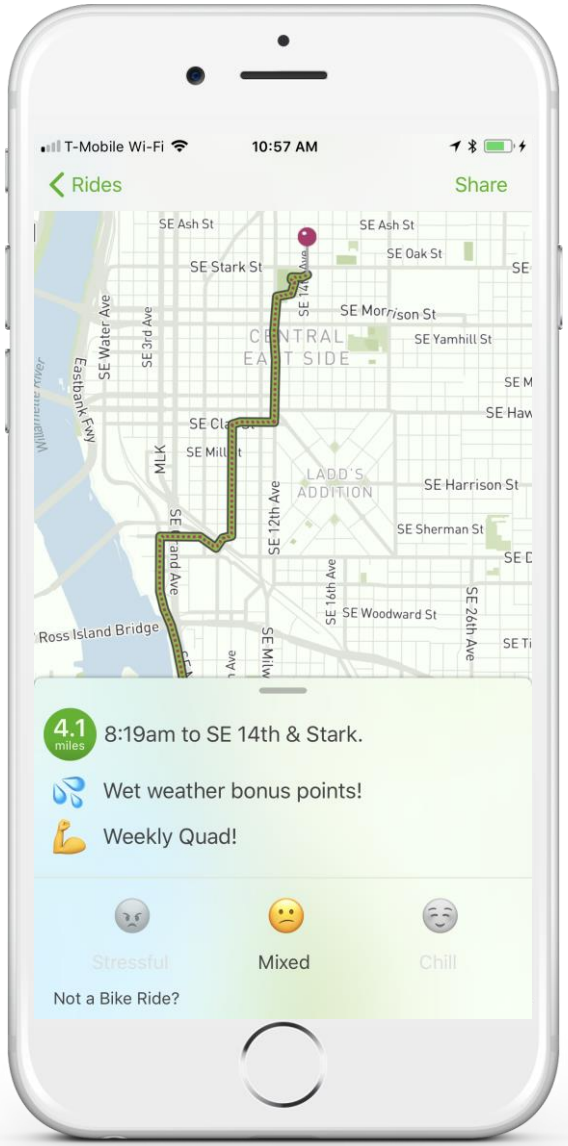


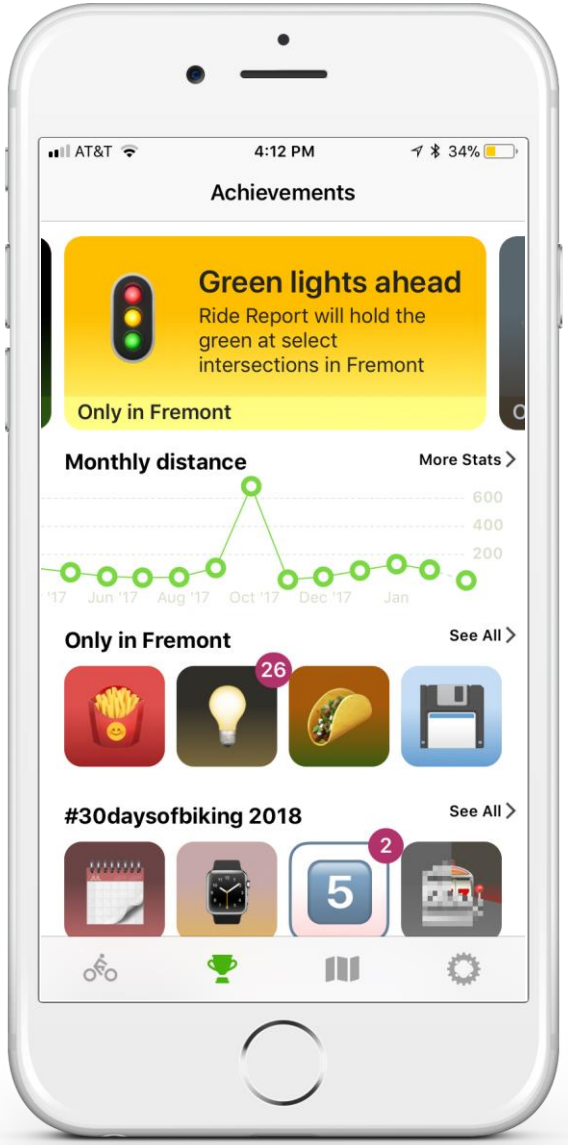
Ride Report Partnership

Partnership with Ride Report: the bike app that logs your rides automatically.

FREE FOR USERS!

Install it and forget it. It will magically map your rides and track your stats to reach your goals to bike more often.





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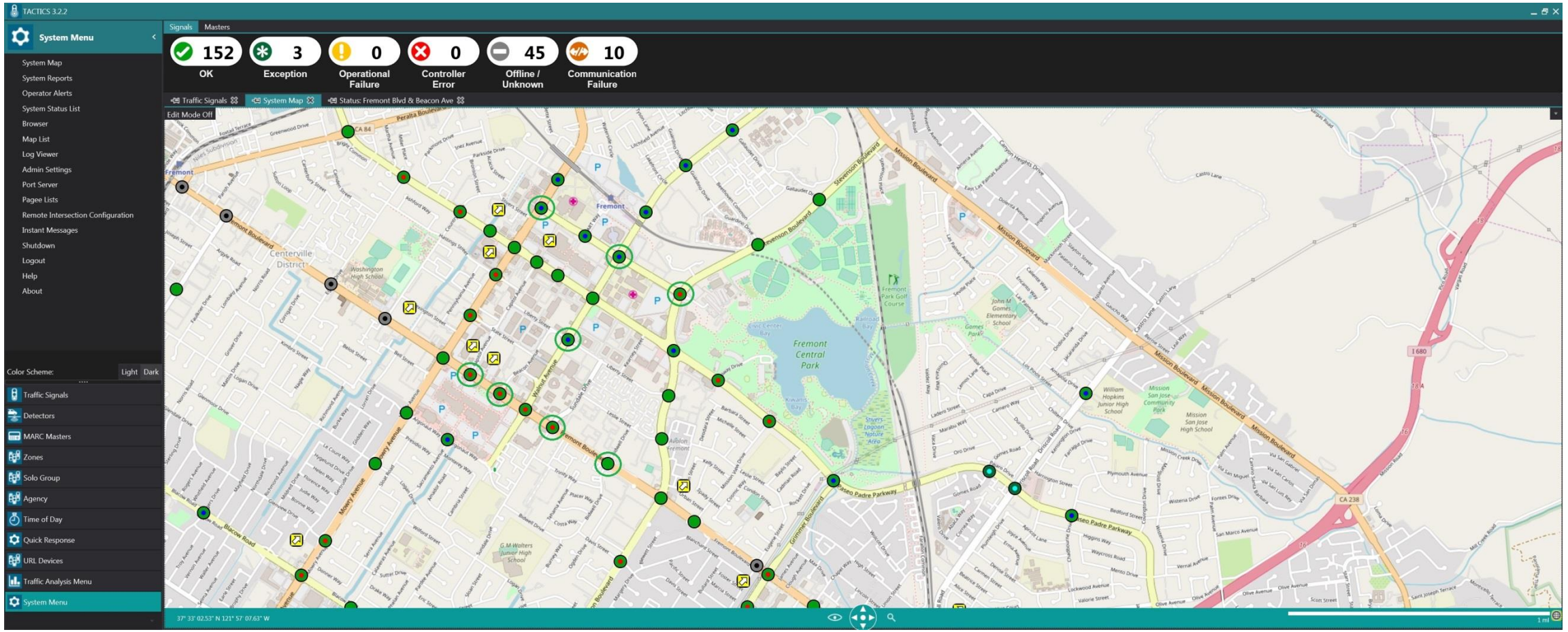
Sibike Proof of Concept Project Locations



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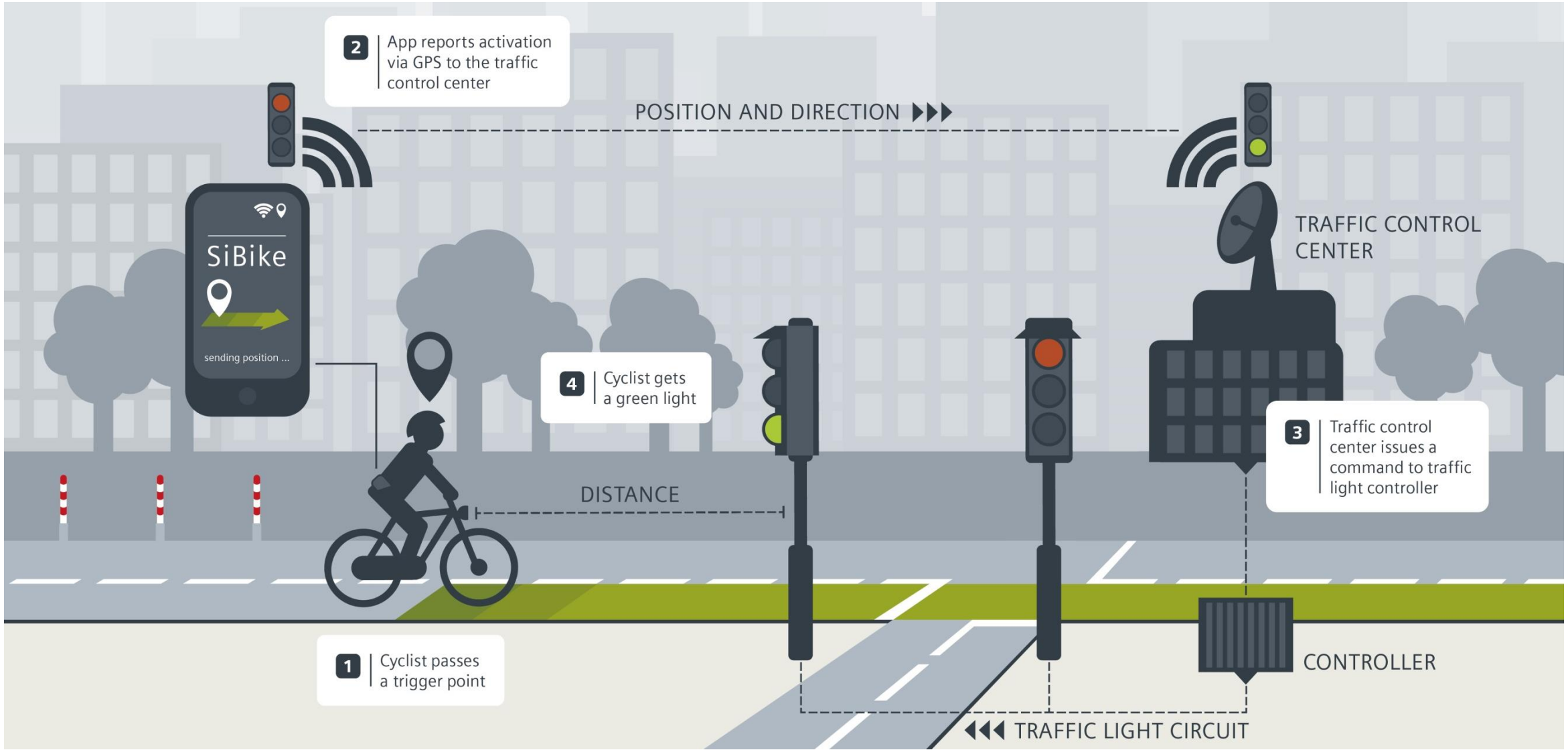
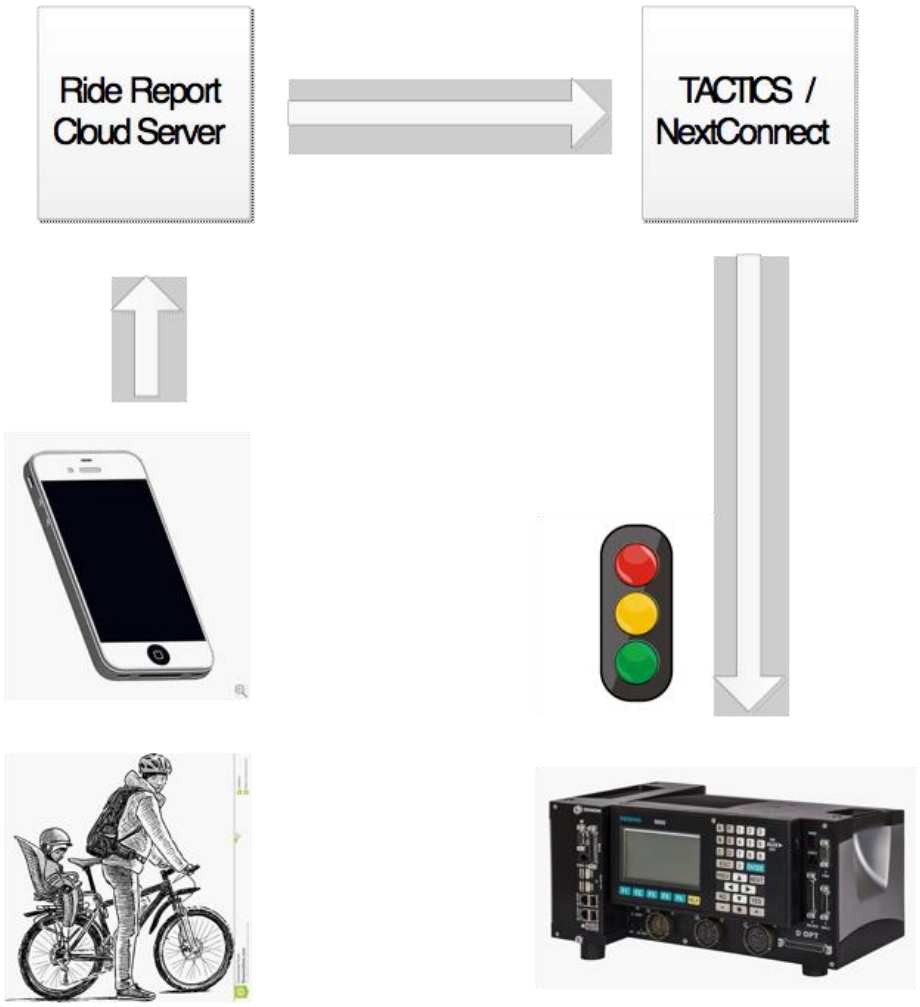
SiBike Detects Cyclists Through Center-to-Center interface

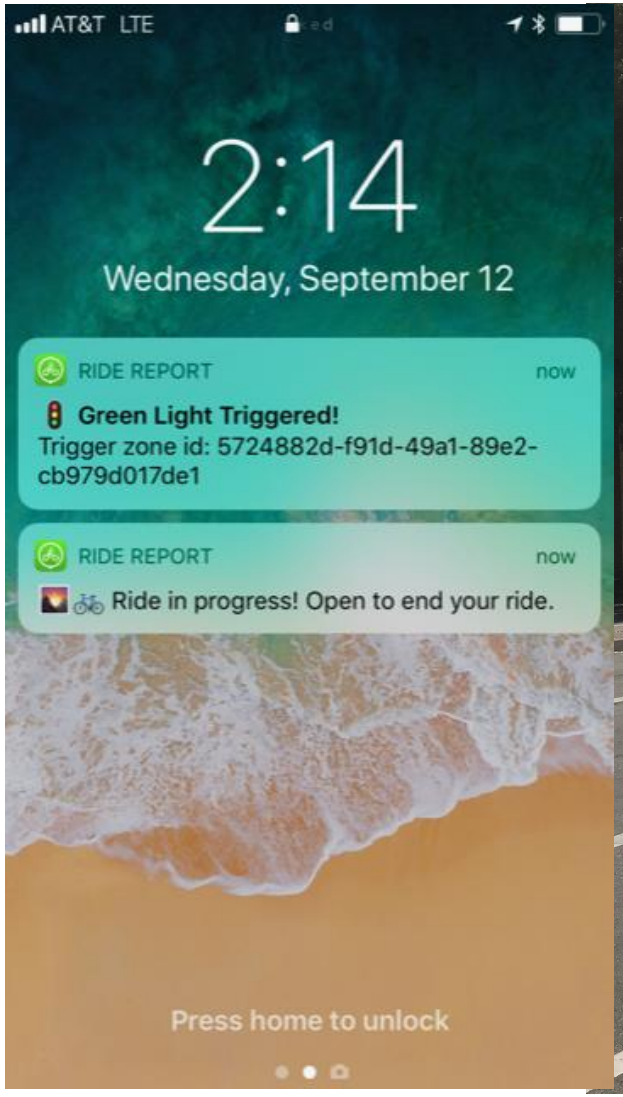


Technology is the Best of Both Worlds

1) Ride Report automatically detects when a bike trip begins and sends message to server
2) Ride Report server sends message to SiBike server
3) SiBike server sends message to signal controller
4) Signal holds green to allow cyclist to pass through
5) Overall Latency of .25 to .50 Second

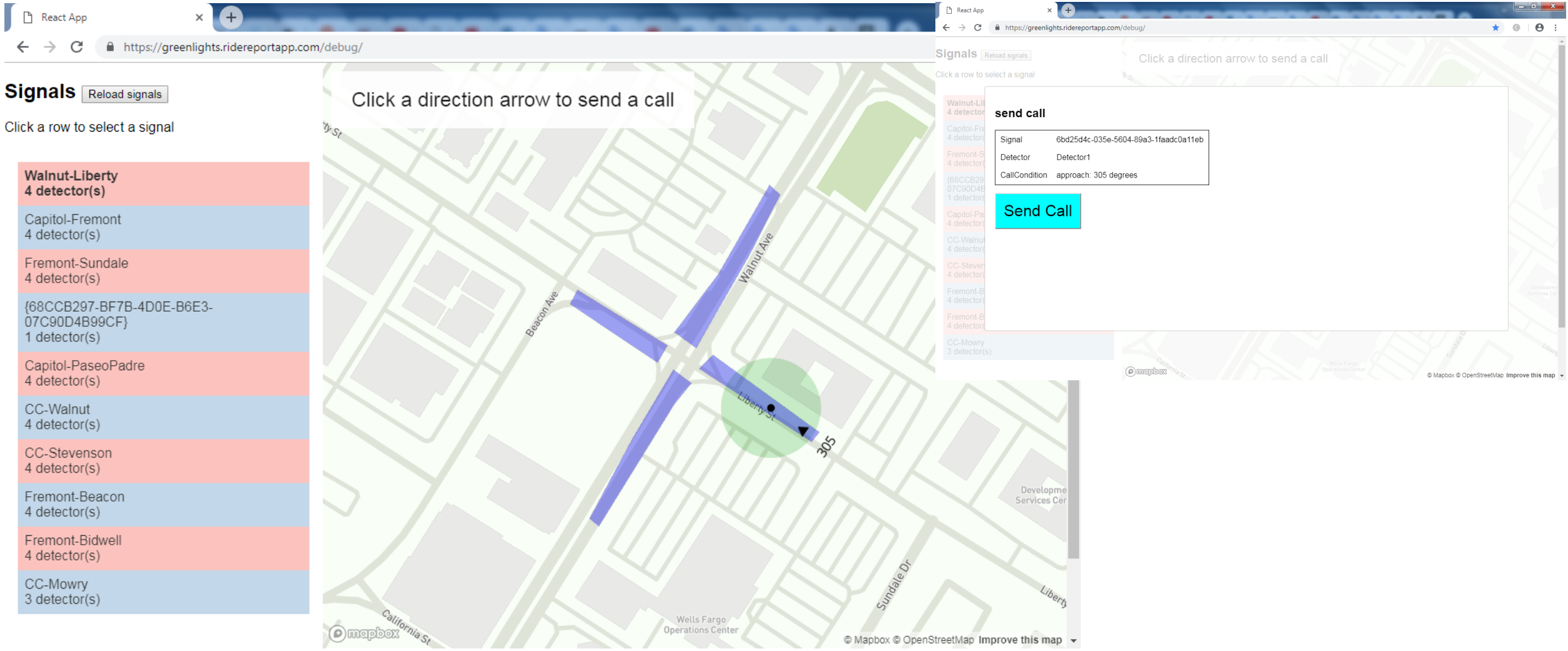


Testing on First Intersection – Walnut Ave and Liberty St



City Staff Engaged in Testing the New Technology

Testing of Sibike Using The Ride App testing Website



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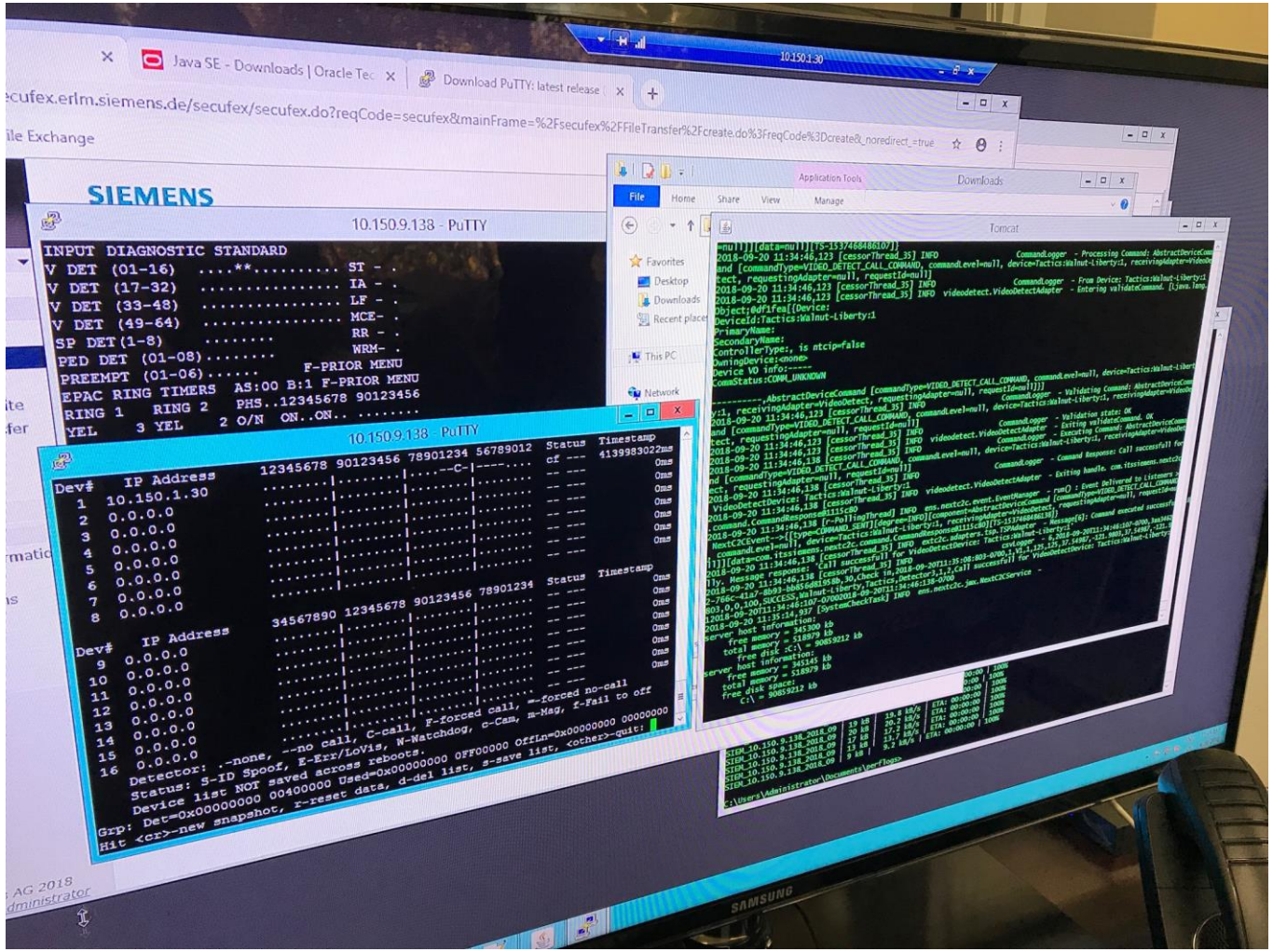
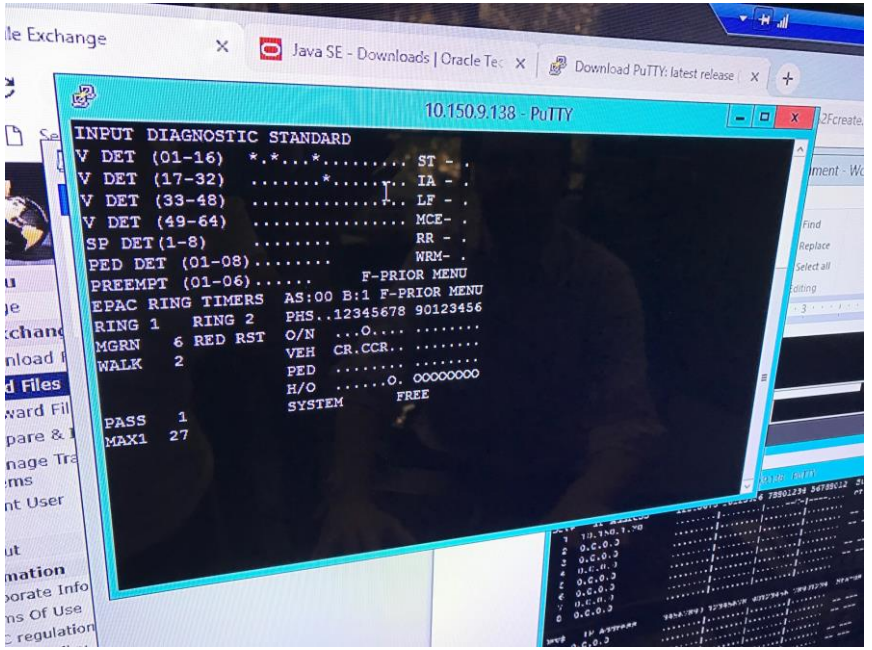
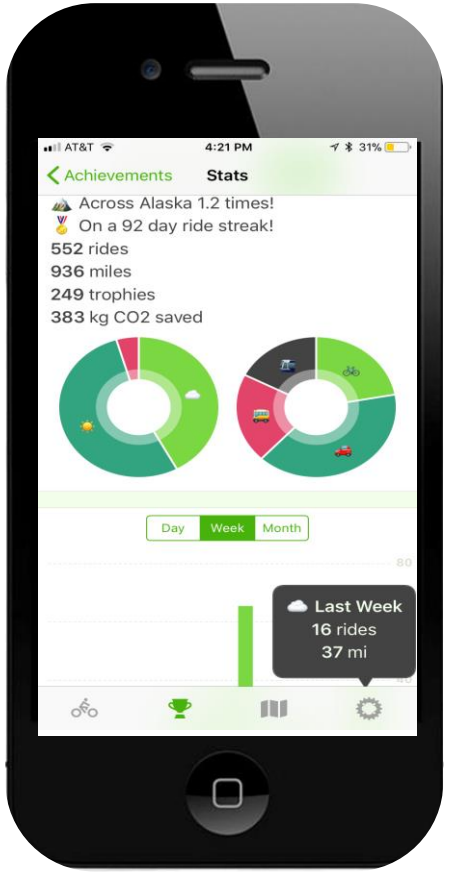
Detector Calls Trough Next Connect





Measuring Performance is Key to Determining Further Deployment



Proposed Items to look at when there is more data :
Ridership goal : 500+ Rides

- Average wait time at signals
- How often are bike users re-using the facility?
- Amount of biking done (before/after)
- Bicycle route preferences (before/after)
- Amount of biking done (including trip types and times of day)
- Average travel time over similar origin & destinations

Contact

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Download Ride Report App

Sibike Locations:
Walnut/Civic Center
Walnut/Liberty
Fremont/Bidwell
Fremont/Sundale
Fremont/Beacon
Fremont/Capitol
Stevenson/Civic Center
Mowry/Civic Center

Proposed Locations:
Fremont/Mowry
Mowry/Parkside
Mowry/Paseo Padre
Mowry/Hastings
Mowry/State
Civic Center/BART
Paseo Padre/Capitol
Paseo Padre/Raley's Driveway
Paseo Padre/Walnut