



THE
HUMANITARIAN
FOSS PROJECT

Building Free Open Source Software for Society

Summer Institute 2009 @ Trinity College

POSIT Project

Weekly Status Update – June 26, 2009

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Our Mission

- To build out POSIT into a more ROBUST, user-friendly application



Our Mission

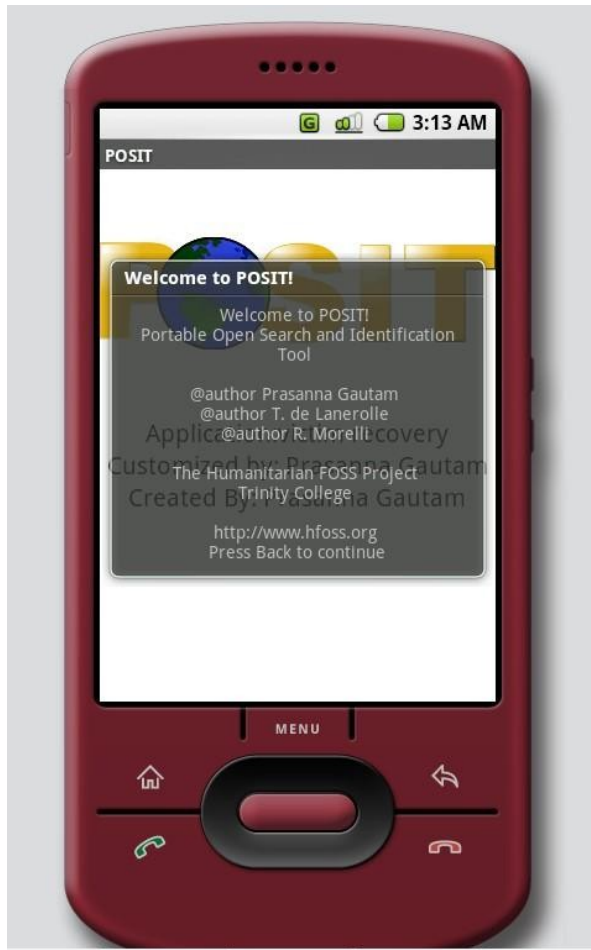
- To build out POSIT into a more ROBUST, user-friendly application



Refresher: What is Android?

- Mobile Application Platform
- Java based
- Different applications based on Activity class
- Applications run in own Unix process in own virtual machine

About POSIT:



- Portable Open Search and Identification Tool
- Built on the Google Android platform
- Written by Prasanna Gautam, Trishan deLanerolle and Professor Ralph Morelli

Our Main Goals

- Build out POSIT and turn it into a Robust Application
- Build a better interface with the server
- Allow the phone to synchronize well with the server
- Build a more user-friendly interface
- Implement interface of ad hoc network

Tasks Completed

- Improvements to POSIT
 - Interface improvements
 - Audio and Video file support
 - Complete server rewrite
 - Allows for basic syncing
- Ad-Hoc Networking
 - Tested basic third party applications
- From last week: Coverage Tracking

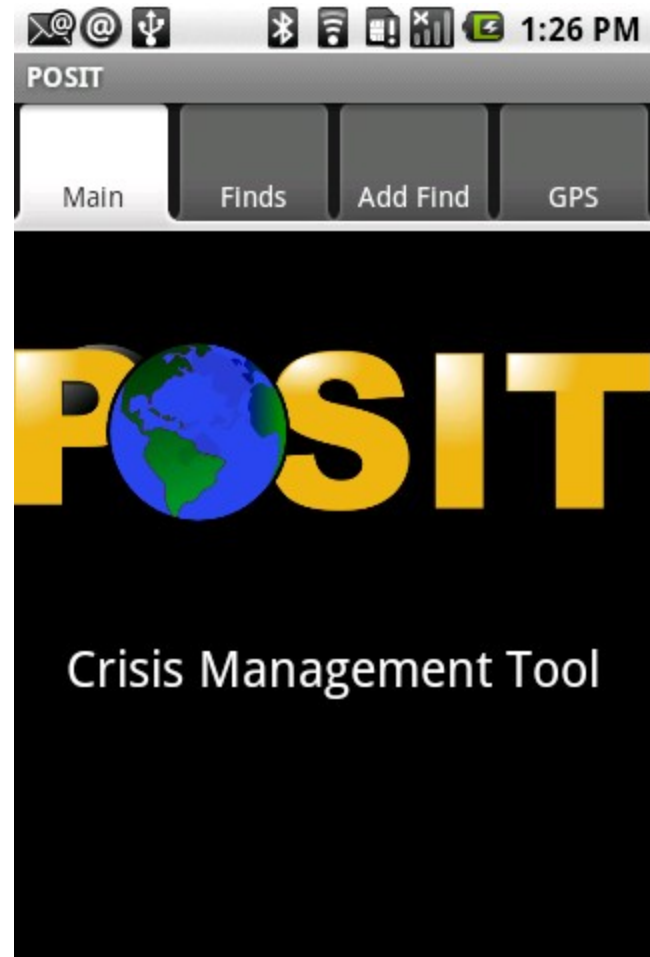
New Teammates

- POSIT development team almost doubled in size
- Three Connecticut College students
 - Phil Fritzsche, Khanh Pham, James Jackson
- Bring new skills and ideas to the team

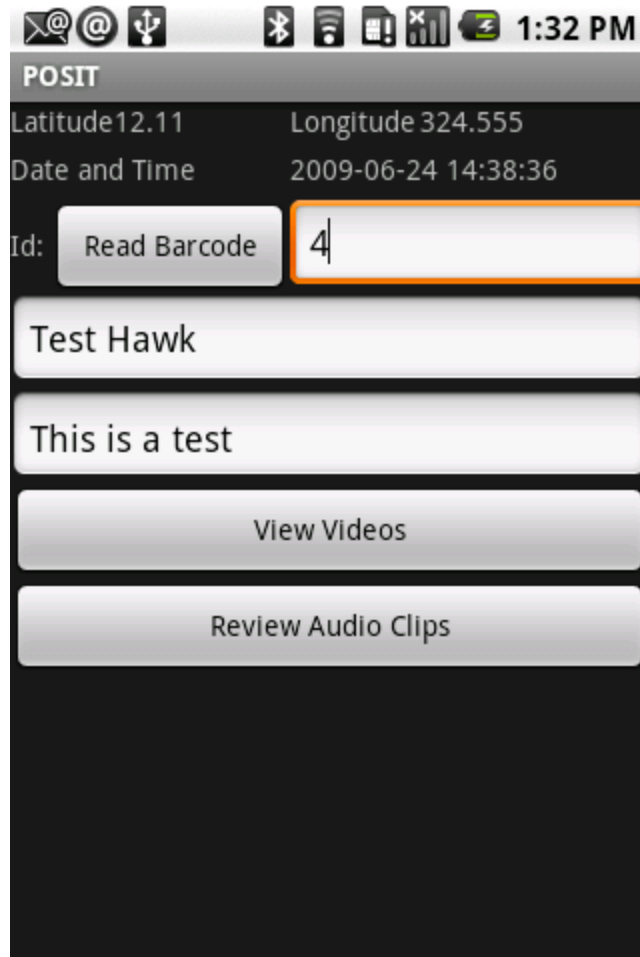


Tab Based Interface

- Revamped interface based on tabs
- Allows for a cleaner look and is much easier to quickly navigate
- A new idea for our team, so it's still a bit buggy



Audio and Video Support



- Before: images were the only form of media that could be associated with a find
- Now: videos and audio files can now be attached as well

POSIT Web Server

- Existing web server was jumbled and not well structured
- We implemented a new web server to store finds and data sent from the phone
- Server allows for phone registration to ensure authentic and authorized data is sent



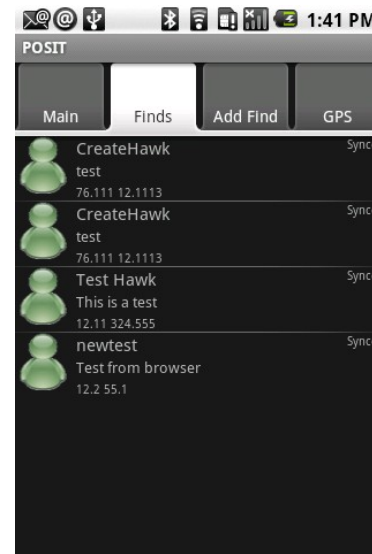
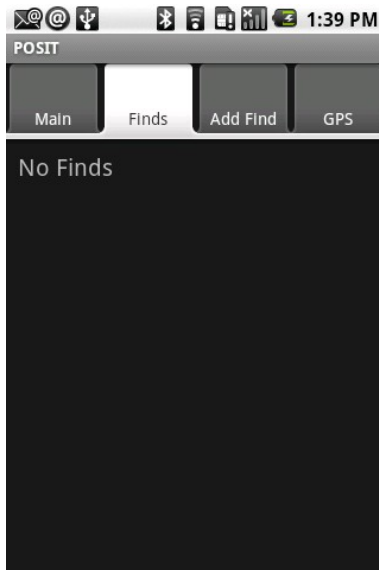
Settings

Devices			
Name	IMEI	Added	Actions
--	351677030043228	Jun 26, 2009	[X]

[Register a device](#)

Syncing and Server Communication

- Development of the server allows for syncing between it and the phone
- Very basic syncing
 - Phone can pull data and finds from the server
 - Phone can register itself through generated QR code

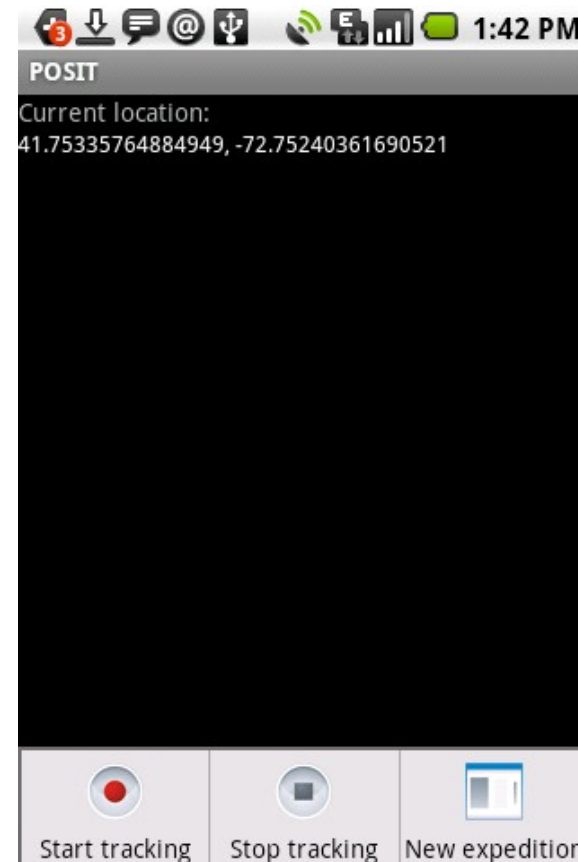


Ad-Hoc Networking

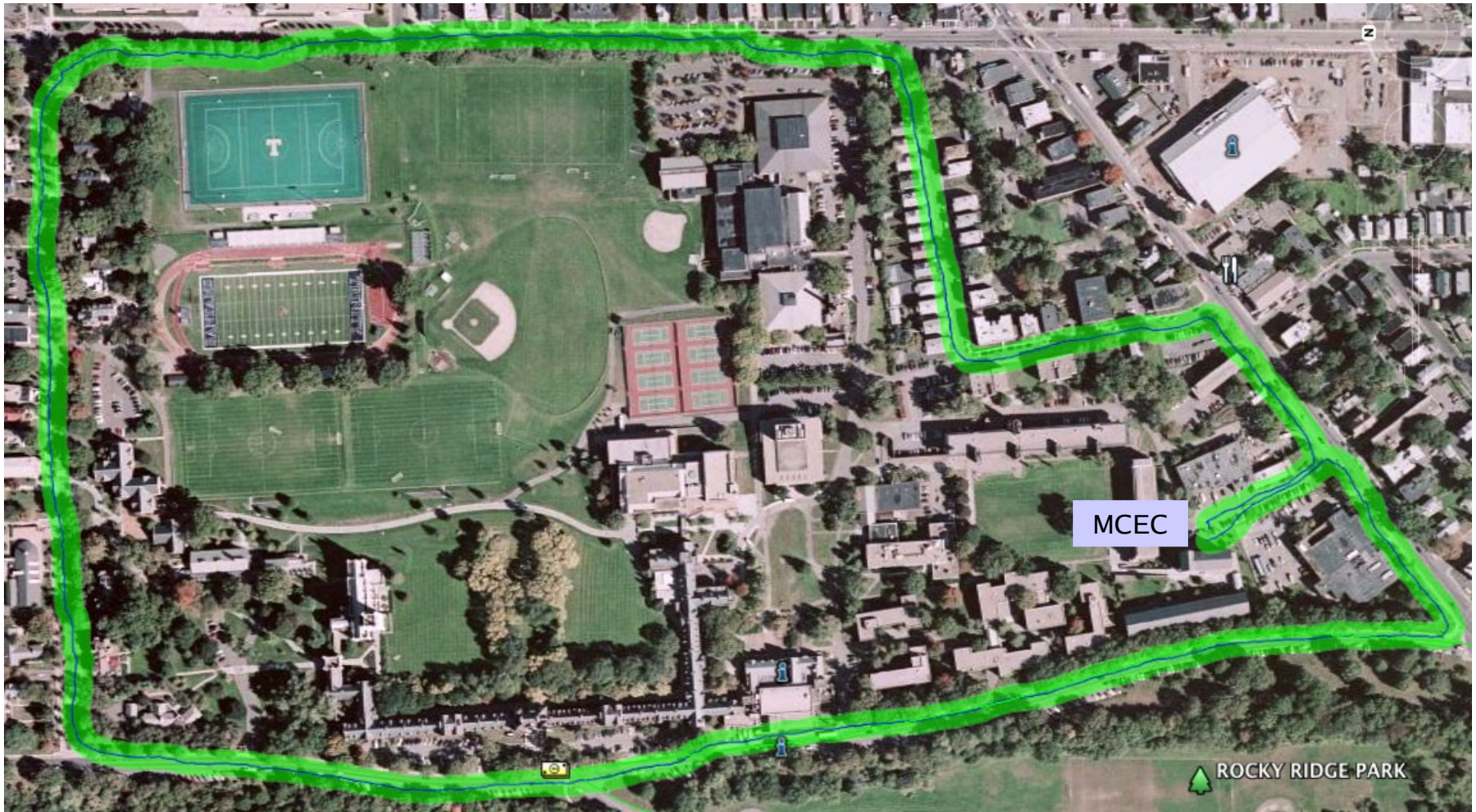
- Used a wireless tethering application and an Ad-Hoc application by an NCSU grad student
- Technology used in these applications will hopefully be implemented in POSIT
- Field tested (quad tested) with Profs. Morelli and Miyazaki
- Test saw positive results

Coverage Tracking

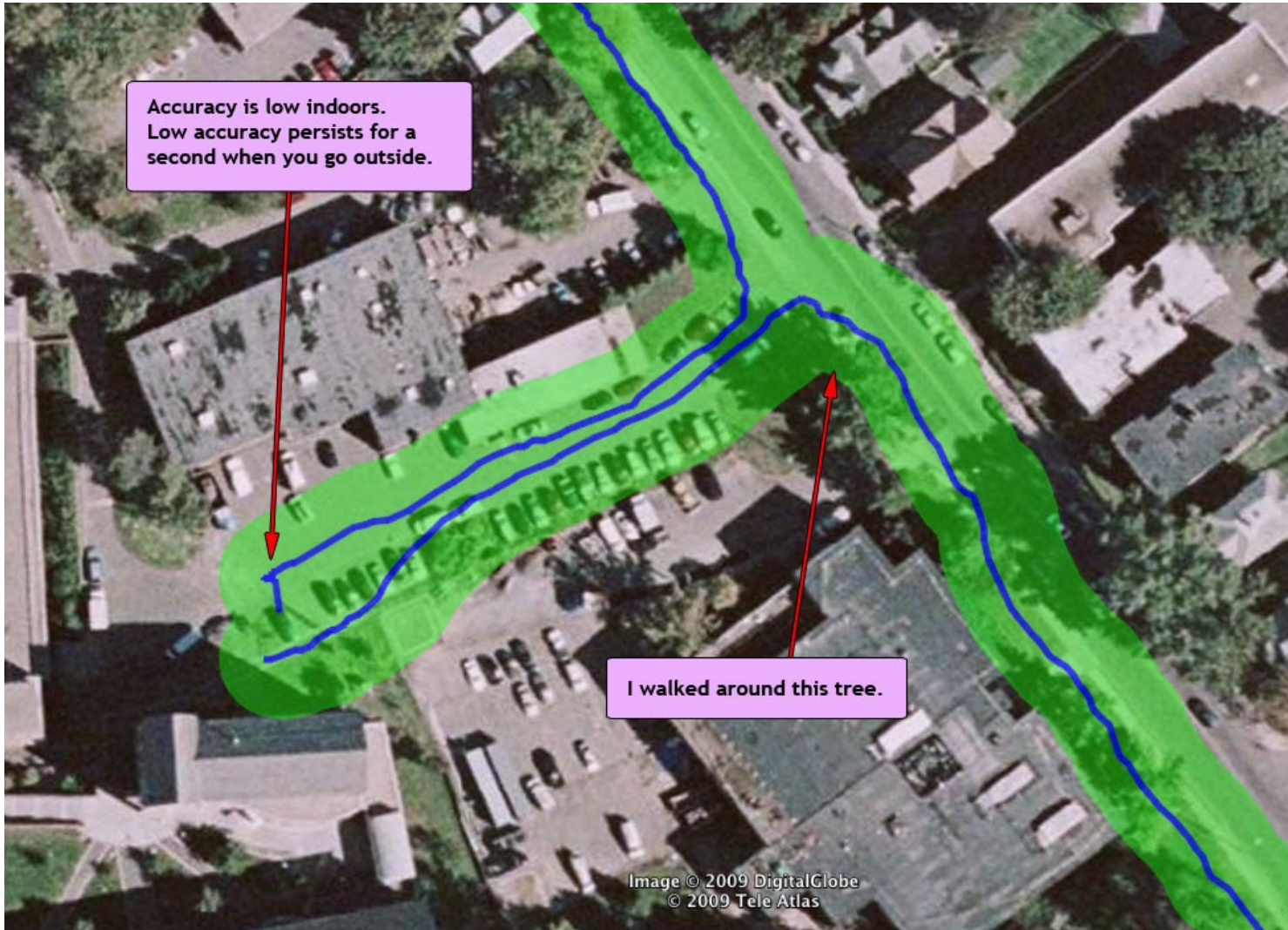
- Track areas searchers have covered
- Poll GPS sensor for location
- Draw line-of-sight overlay
 - Uses pixels currently



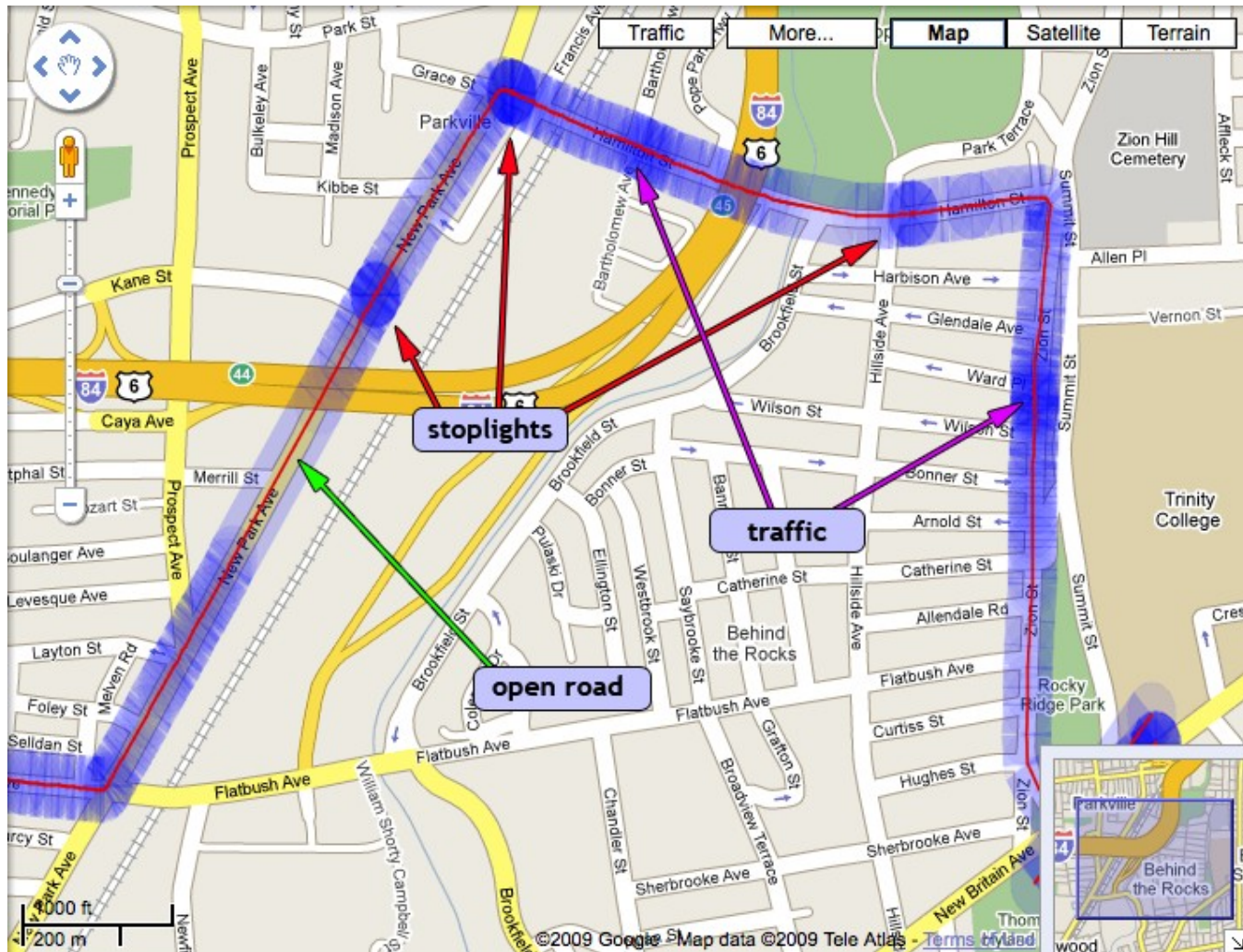
A walk around campus



GPS fix accuracy



Sample density map



Next Week / Future Goals

- Work on syncing, server, and communication
- Coverage Tracking:
 - Clean up code
 - Use sensor accuracy, altitude data
 - Make line of sight distance adjustable
 - specify in meters, not pixels
 - Real time updates
 - Plot multiple devices
- Continue research on implementation of ad-hoc network



An early test plot.

The Humanitarian FOSS Project

www.hfoss.org



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