

21 January 2014

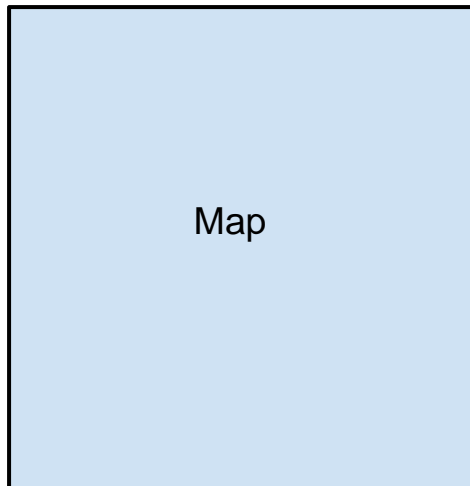
Brainstorm

- LED Crosswalk (red?)
- Mass Transit Policies (tax deduction)
- Bike Lanes
- Motion activated pedestrian safety
- Smart power grid
- Traffic light protocol
- Drains
- electronic bike storage
- online bike parking
- bike theft zone warning

Bike Track

- Monitor/submit parking
- danger/theft areas
- availability
- pictures (area details)
- traffic averaging
- Data points - theft? covered?
- bike areas (available spots)
- Guide riders to a spot
- time table for the availability of the spot
- resources for new bikers
-

Mockups



lead to information on a specific pin

Parking Pin information:

- Picture
- Theft
- Covered
- Availability

Next Steps

Survey bikers, show off the app and get feedback

Goals:

- Comprehensive list of the types of data that we want to collect.
- Prioritized list of the functionality we want to build.

Useful Resources:

[Covered Bike Parking](#)

[Bike Lockers](#)

4 February 2015

Meeting goals:

- Begin Drafting proposal.
- Showcase Richard's new arduino parking sensor.

Attendance: Alex, Cory, Richard, Konan, Sarah, Aubrey

Today was successful, unfortunately the parking sensor could not be fully showcased, so this will be done again next time. We decided to meet a PSU transportation engineer who has had experience with deploying these types of systems in the field, hopefully next Wednesday to discuss our ideas. Cory and Sarah have begun drafting the intro and features of the Proposal.

Assignments for the next week:

- Finish any additional work on a draft of the proposal, not completed in class.
- Richard: Continue to work on pressure sensor.

Feb 11

Field Trip to PSU

We met with Alex Bigazzi, John MacArthur, and Sirisha Kothuri

Learned about Alex's prototype of a product that monitors air pollution and humidity throughout a biker's trip.

Talked about monitoring pedestrian and bike traffic through motion sensors and pneumatic counters. The pneumatic counters only counted the bikes because only bikes could trigger the tubes with the correct timing and pressure, no matter how hard we tried to trick them.

We learned about the induction circles that detect when cars or bikes are waiting at a stoplight, and the technology required for the walking signals, as well as the boxes on top of buses that alert lights to hold the green or shorten the red when they are running late.

Feb 18

Goals for today's meeting:

- finalize the proposal
- continue working on pressure sensor prototype

We have BikeDetector 2.0!! Now partially wireless!

We are currently working on problem shooting to allow the data from the BikeDetector to integrate with the website, which is coming along nicely.

More photos have been uploaded to the collection, but we are still waiting for everyone to finish uploading or to gain access to the folder in which to add the photos.

Our proposal now has an introduction, body paragraphs, and Conan is working on writing up the conclusion. Edits are being made continually.

February 28th:

Outdoor Saturday meeting with no mentors. With this meeting, we discussed the feedback given to us on our submitted proposal. Based on the feedback, we have concluded that our solution and technology is in good shape, but our problem needs more development.

March 4th Notes:

Today we began by discussing various methods of storing the bike data in an electronic database such as SQL or MariaDB. Organized what needs to get done by what dates:

- Figure out completely what our problem is and how to explain it.
- Finish all the prototypes on both ends.
- PowerPoint/Prezi + Display of our app and website.
- Develop a speech
- Posterboard???

The Problem: The rising population of Portland and urbanization will cause higher and higher amounts of traffic as the population moves about the city. This will mean a higher concentration of cars, more crowded public transit, more cyclists, and more pedestrians in general. We are designing this system as a means of encouraging the general public and those new to cycling or new to the city to bike as oppose to driving a vehicle. The system will make cycling safer, and

more time efficient by providing the end user with the exact location of available and known parking racks. Fewer cars on the road will reduce pollution, congestion, and an increase in the biking population will cause cars to become more aware of the bikers sharing the road with them. And within a large city such as Portland, theft is another worry of potential bikers. Using a system such as the one we are developing, people can easily input when bikes are stolen into our database, allowing other bikers to see which locations have a higher risk of theft.

Richard is creating a lovely drawing of how the real-time parking sensor would look when installed on a bike rack, including the details of the components and materials of the system. Aubrey has captured some of the meeting on audio and will be adding that and a picture of Richard's drawing to the folder in the near future, although the recording mysteriously cut off after six minutes. Alex has found a mapping platform that would be perfect for our purposes. Our problem has now been written out and developed, although there is still plenty of room for improvement.

March 7, Hollywood Library, Quiet Room B

Today, the focus is on the development of the poster and speech

Sections to be included:

- Introduction
- Problem
- Data collected
- Solution
- Future plans/conclusion

Presentation:

- Speech -- Sarah is currently working on what pieces should be included, conveniently
- Walk through of website
- Walk through of app by prerecorded video or live on a video camera
- Demonstrations of Richard's prototype using a video and bringing the actual product to the presentation

Cory will be working on developing the problem, Sarah is the main person developing the speech, Richard is going to draw up a presentation ready picture of his prototype and the writing to go with it, Alex, is working on the website and app, Aubrey is working on the layout of the poster and starting construction of the map, and Konan is working on preparing everyone for any and all questions that the judges and audience might ask.

March 11 Notes:

Today was a work day. Konan wrote a list of possible questions that the judges could ask us, which will help us prepare for our presentation. Richard worked out the physics behind the bike sensor in order to figure out a material that will be ideal. Alex worked on the website and the mobile application. We also worked on a survey to find how many people would use our app if it were to become a reality.

March 14 Notes, Hollywood Library, Quiet Room A:

Cory and Richard worked on a draft for the poster, which now has been uploaded to the folder. Sarah worked on the speech, which also might be used in pieces on the poster. The tasks assigned in earlier weeks still apply. Everyone, keep up the good work!

March 18 Notes:

In attendance:

No mentors, Konan, Richard, Alex.

Today, Konan is looking through the results of the survey that we distributed, locating and notating any significant trends in responses. Alex is working on server and database communication code for the data collection system. Richard is trying to work on the pages document for the poster. He is also developing ways to refine and improve the hardware prototype such as powering it with a battery.

To do:

Alex - Get code to a state where it can retrieve data from the raspberry pi and output it to the website/app.

Konan- Continue to analyze and notate trends in the survey data.

Aubrey - Web development and raspberry pi integration.

Cory - Continue to build and layout digital poster on Pages.

Sarah - Continue to write speech outline and individual speech components.

Richard - Refine and make the prototype more functional and pretty.

March 25th notes:

In attendance:

Just Richard.

Goal: Create a timeline that outlines everything that needs to be done and when it needs to be done in order to achieve victory at the presentation:

Calendar Administrator's Link:

<http://teamup.com/ks3b1d0ca204e8aeb0/>

There are still a few poster pieces that need writing, although they can be adapted from the speech.

April 4th:

In attendance:

Aubrey, Alex, Richard, Cory, Sarah

Tasks/Goals:

Consolidate and finish poster, journal, and finalize writing elements for project.

We already have a strong, attractive poster outline, now the layout must be finalized and key images and writing sections must be inserted. We are well on our way, and will soon be done!!!!