Team Name: Smart Park

Date of Submission: 09/19/21

Meeting Date & Time: 09/19/21

Meeting Location: John Bardo 262

Meeting Duration: 60 mins

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| --- | --- | --- |
| Team Members | X = Present | Notes |
| Martin Kariuki | x | Physical attendance |
| Alexander Chiem | x | Physical attendance |
| Max Burrell | x | Physical attendance |
| Damian Avery | x | Physical attendance |
|  |  |  |

Progress:

During our previous meeting we recognized several sensor packages that would be appropriate for our goal. Since different sensors fit our criteria, we assigned each EE team member a sensor package to research. The criterion specifically outlined for our sensors is that they are durable and dependable for extreme weather conditions. After a week we all concluded that a magnetometer sensor package would be most suitable for the scale of the project. The reason we chose this sensor specifically is because of low power usage and the small size of the sensor. This means that our sensors can be wireless and battery powered simplifying the installation. The sensor does not have to be exposed as it can be deployed underground and still provide vehicle detection, limiting weather exposure.

Our overall team consists of a CS and EE component with a total of 9 people. Going forward starting 09/26 we will begin to submit weekly minutes as one large group. We have communicated with the CS side of the team what sensor choice has been made and why. We also explained how we are going to send a signal to the Lorawan network for app integration. We briefly discussed what we can realistically expect to have by the end of the semester and where we will take it next semester. This meeting was very productive and broke ground for actual purchases that will need to be made to begin integrating a prototype magnetometer.

Damian Avery:

After researching I agreed with Martin that the magnetometer is the superior option for this project and Alex also came to the same consensus. I find it exciting that we have made traction on our sensor choice and we can now hone in on specifics. We have recognized that a prototype will need to be configured rather quickly for testing and learning.

Martin Kariuki:

The magnetometer that I had researched became the best option for our smart park network going forward. We as a group decided we will focus on a packaging for that sensor and begin to provide a signal for the app integration. I already personally own a magnetometer IC and I brought it to the meeting to physically show the size of the device.

Alexander Chiem:

I did research on applicable packaging of the magnetometer sensor and suggested that we use an Arduino to send signals to the Lorwan network. I found and provided some options for an Arduino transceiver and other sensor components that could be configured rather quickly for testing purposes. I recognized the importance of considering the best product to integrate into our project for the CS group to be able to program and work with.

Max Burrell:

I agreed with all project assignments and will be able to tie in with my CS background for Arduino code and integration.

Project Tracking (current work): Assignments and activities are to be tracked until completed.

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| --- | --- | --- | --- |
| Team Member | Assignment | Due Date | % Complete |
| All members | Create Prototype | 10/08/21 | 0% |
| All members | Purchase Gateway | 10/08/21 | 0% |

Plan (future work):

|  |  |
| --- | --- |
| Assignment | Due Date |
| Project planning paper | 09/26/21 |
| Project Presentation Midterm | 10/08/21 |
| Test Prototype. Send signals for app integration | 10/15/21 |

Issues:

No issues at this time.

Include the schedule for the next meeting:

Meeting Date & Time: 09/26/2021 5:00pm

Meeting Location: John Bardo 262