

EE/CprE/SE 491 WEEKLY REPORT 3

Date Span:

Feb 22th - March 1st

Team:

sddec19 - 17

Project:

Goose Chaperone

Client/Advisor:

Dr. Randall Geiger

Team Members:

Johnson Phan

Weston Berg

Alec Morris

Woodrow Scott

Zhihao Cao

Summary

This week continued research into respective components, technologies and other areas. This included discussions on alternative methods, and further insight into a more fulfilled vision of the final design.

Accomplishments

- Johnson Phan: Found several detailed methods of connecting motors to Beaglebone. Found detailed method of connecting sensors to Beaglebone. Found an incomplete connection for Camera to Beaglebone.
- Weston Berg: Researched DC motors: geared and brushed
Researched wheels
Continued research into robotics platforms to meet our specs
- Alec Morris: Looked more into “arms” as well as some preliminary GPS modules that would be compatible with the beagleboard.
- Woodrow Scott: Continued research into the MSP430 board and RAM limitations and possible solutions. I’ve determined that this board is not suitable for this project as there is no model or extension capable of useful image processing. I recommend the beagleboard, as it is a popular development board for small robots and other projects similar to ours.

Zhihao Cao: found a thermal sensor which could do a line scan to detect temperature of the object, but consider the prices is too expensive, I give it up and try to find a cheaper sensor.

Time Contributions

Team Member	Hours Contributed	Cumulative Hours Spent
Johnson Phan	4	12
Weston Berg	6	18
Alec Morris	4	13
Woodrow Scott	4	13
Zhihao Cao	4	8

Client Meeting

The client meeting entailed continued discussion on the team's research and which directions the client is most interested in exploring.

Future State

Johnson Phan: Converting motor and sensor information into understandable documents. Continue researching Camera connection to Beaglebone. Look up more information on Beaglebone pins, uses, etc.

Weston Berg: Research larger platforms that would be able to resist a goose's weight
Decide on final choice for the robot platform

Alec Morris: Will continue looking into compatible GPS modules and also begin researching how to interface our project.

Woodrow Scott: Will narrow down candidate boards and continue to research low-power operating systems, if necessary, for it to run. Will also continue to

research Tensorflow and plan to begin testing the software.

Zhihao Cao:

will focus on find a new sensor which has a acceptable prices and research on the connection to Beaglebone.