WEEKLY REPORT and MEETING AGENDA

Report #:1	Project Name:	Open Source LiDAR	
Date: 01.29.2022	Prepared by:	Gaurav Bhalla and Paul Roy	

Agenda for the weekly meeting

- 1. Ask about the budget for the capstone project.
- 2. Also, ask about the requirements for the LIDAr system (do we need to make the Lidar sensor module?).

Accomplishments during this period

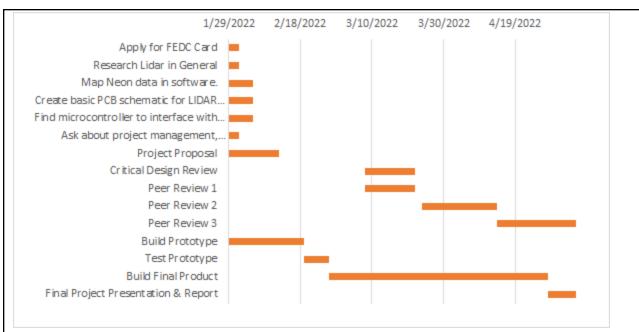
- Most of the week was spent researching the principle of time of flight used in Lidar sensors. We now have a comprehensive understanding of what is expected of us regarding the project.
- We created a basic plan of how to approach the project. We quickly identified several open source projects which we can use to springboard from and develop. We have also identified several parts including sensors, microcomputers and others to create our custom Lidar system.

Plans for next period

- 1. We have done some preliminary research on the material and have determined the best course of action is to continue preparing to build the Lidar sensor; asking questions regarding expectations, finance and other important features going forward.
- 2. Furthermore we have delegated the team into two halves. One section focusing on researching the hardware components in order to collect sensor data. While the other works on preparing for the software segment, by researching various programs and libraries which can be used to create a topographic map of the sensor data.
- 3. In the long-term we have decided to begin by creating the basic Lidar sensor, visualizing the data and then finally finding some application that we can use to add to the project.
- 4. Moreover, if we have time after meeting our long-term goal, we thought of having 3 sensors rotate in a spherical fashion to achieve a 3d topographic map of the local area.

Project management status

1. Schedule and milestones - We have weekly meetings for worksessions on Tuesdays 9-11 a.m in EABA 118. Then, we have update meetings with the professor and TA on 10:30 - 10:50 on Thursdays in EABA 118. Moreover, we have our update stand up meetings on Saturdays from 2 - 2:30 p.m through Zoom for writing weekly reports and preparation for the week's work session.



- Teamwork Aamhish and Gaurav will work together to develop the Lidar sensor PCB and the 3D printed platform to hold it. Paul and Allen will work together to effectively create a topographic map from the data. Possibly, after doing this, they can find a path of least resistance through the area, and maybe highlight the speed of moving objects in the vicinity.
 - Aamhish practice 3d printing for 3d printed platform
 - Gaurav make PCB for sensor with Opensource Lidar. Work with Aamhish.
 - Allen work with Paul and use software for mapping out Lidar data with Neon database for ins
 - Paul work with Allen use software for mapping out Lidar data with Neon database for instance
 - Everyone apply for fedc membership.
- 3. Purchases we need to manufacture the OpenTOF PCB with the specific components. Also, we need to buy a microcontroller and wireless module (E.g. Zigbee) to send the point cloud data sampled to a computer system so that it can be mapped.

Minutes from previous meeting			
This was our first meeting for the Open source Lidar capstone project, so there are no previous meeting notes.			