<u>Individual Lab Report – 3</u>

Progress Review 2

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<u>Team F – Falcon Eye</u>

Team Members:
Danendra Singh
Pulkit Goyal
Rahul Ramakrishnan
Yuchi wang

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Individual Progress

I was primarily responsible for power distribution board for different components like mini PC of Husky, Velodyne LIDAR,GPS and IMU .We have designed this board so we can separately power above mentioned components and keep the power source of motors of Husky separate.
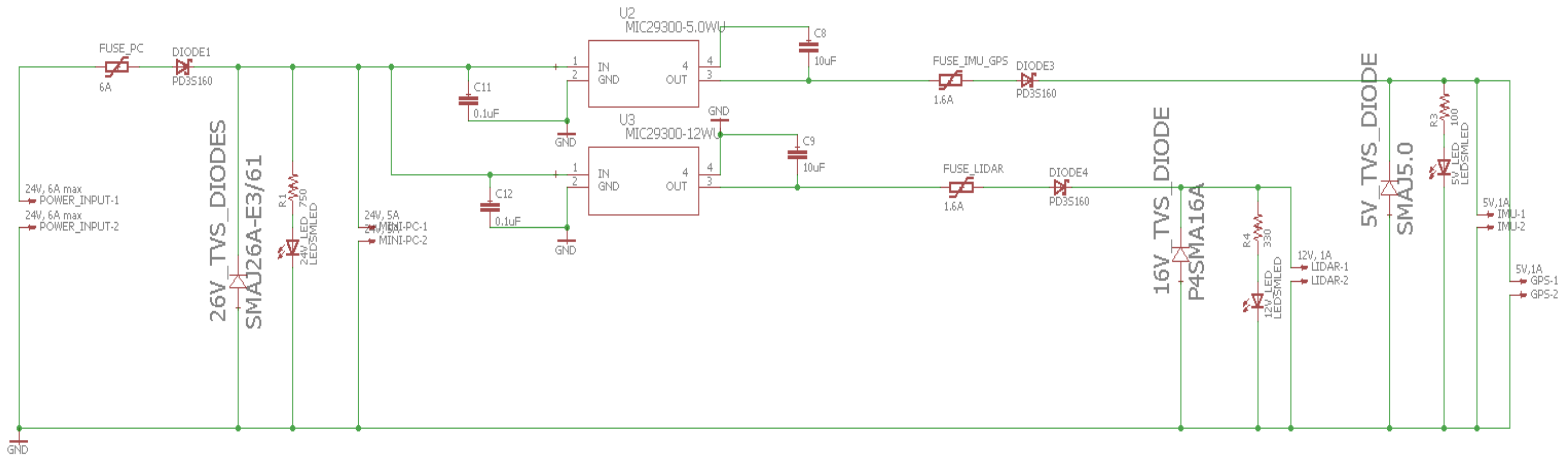
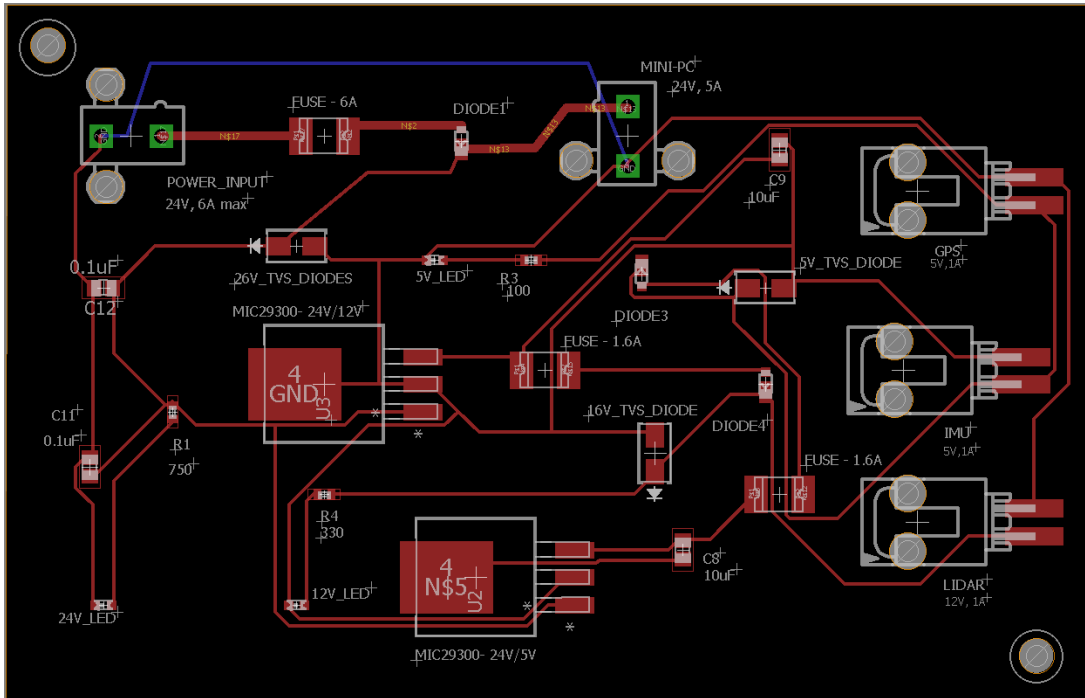Fig1 : Schematic of Power Distribution Board

Fig2: Power Distribution Board

In this I have modified the power distribution we submitted earlier, as there were some problems in the board, like routing was not proper, distance between wires was not apt, we had missed naming of some components etc. So, we customized the previous board as per new components. Danendra helped me in schematic and calculations pertaining to desired width and efficiency of components of the board. In addition to that, I worked with Pulkit on running Husky through Tele-op, giving commands from the PC.

Challenges Faced

Time devoted towards the project got divided among the assignments of computer vision and programming familiarization. Three assignments were due sequentially before review, that's why I feel my contribution was less in previous week.

Team Work

Yuchi Wang:	Controlling the Bebop2 with gamepad and getting GPS data.
Pulkit Goyal:	Designing CAD model of complete system and running Husky through tele-op (giving commands through PC).
Danendra Singh:	Controlling Bebop2 with gamepad and PCB design.
Rahul Ramakrishnan:	Building velodyne driver to view pcap files on Rviz and CAD model of complete system

Team members worked together, that's why in one task one person was primarily responsible and one more team member supported in completing the task. Everybody worked hard to meet PR2 goals, though we modified our goals in midway. The team sat down and divided the task among members and framed a detailed plan, so that we can achieve the deliverables in time and perform well. We could have completed more than what we promised but four of the team members are taking computer vision and time devoted towards project got reduced because of overwhelming assignments.

MRSD Project Progress and Future Plans

I will continue to work on Husky primarily. Pulkit and I will try to check GPS accuracy and get the GPS and encoders data on Husky node.

Pulkit and Rahul will continue to work on CAD and will complete the CAD design for whole system.

Rahul will work on Velodyne, to detect obstacles.

Yuchi and Danedra will continue to work on Bebop2, for higher level control of UAV and flying it to desired location. In addition to that they will work on GPS data and April tags.