**Week 5 Group 22 Journal**

**Date: 21/10/18**

1. **Action items from last week**

On Monday (15/10/18), we had a group meeting straight after supervisors meeting and we came to following conclusions:

* Subhi will go to the sensor’s lab along with Osama and Aarambh on Thursday (18/10/18).
* Abdullah will go to the 2nd force measurement (ramp) experiment.

Group had another meeting on Tuesday (16/10/18), where they worked on the first draft of the Gantt chart, and Marlon was given the responsibility of finishing it.

We met again on Wednesday (17/10/18) in C34 where we worked on building the sensor circuit and tested it to find suitable resisters, for LED and detector, by measuring the voltage and current using myDAQ.

Sensors lab on Thursday was successfully completed by Aarambh, Osama and Subhi. The force measurements session was also successfully completed by Abdullah.

We had a final group meeting on Friday (19/10/18) where we discussed our progress and reached following conclusions:

* First draft of DR1 report should be ready by Monday.
* Subhi will review Marlon’s final Gantt chart and will make necessary changes, so it is ready for submission by Monday.
* We will test the remaining LEDs and transistors next week; therefore, we will go through their datasheets and make relevant notes about their characteristics.

1. **Project Status and statement of progress**

The group has completed the sensors lab and got sensible results and will soon start working on the DR2 report. The first draft of DR1 report is close to its completion and should be ready by Monday (22/10/18). Final version of Gantt chart is ready for submission. Everyone is aware of their responsibilities and are in the process of completing their tasks. All team members attended the 3/4 group meetings this week (Monday 15th, Wednesday 17th and Friday 19th). However, Abdullah could not attend the meeting on Tuesday, as he had a job interview, but was informed about the outcome of the meeting by WhatsApp.

1. **Individual Student Contributions**

**Aarambh Sinha:**

* Created and maintained a comprehensive spreadsheet for the sensor’s lab. The calculations and graphs were introspectively completed and generated. This allowed the group to see the plots instantly as we entered in the data.
* I soldered and made the testing circuit on the stripboard (with the help of Osama). I also put together 2 of the sensor pairs (TCRT5000 and OPE5685/SFH203) to prepare for further testing.
* I attended the sensor’s lab on the 18th of October with Subhi and Osama, we successfully took down results and were able to achieve results we were expecting for all the tests (except for not completing the last one)
* After the lab, I am working on now generating the required graphs and planning on how to analyse that data.
* Half way through my section of the DR1 report that I am working on, with Marlon.

**Abdullah Ahmed Akhtar:**

* Prepared for the force measurement experiment by going through pages 37 and 38 in technical hand book, highlighting information that I would require while doing the lab and created a table to record my results, before I went to the lab.
* Completed the ramp experiment on Thursday and managed to get all the results required.
* After the experiment I did the necessary calculation, using my results. (calculated four different friction coefficients).
* I’ve been working on the introduction of the DR1 report and aiming to finish it by Monday.
* Helped the group with pre-sensors lab work in C34 by testing the sensor circuit using myDAQ.
* This week I took the responsibility of writing the weekly journal.

**Marlon Guanoluisa:**

* I have created the first version of the Gantt chart, estimating as good as I could all the dates and the tasks that need to be done.
* I was present in the pre-lab for sensors with all my group trying to find the best combination possible between the resistors for the sensors’ measurement.
* I have been adding more content to the motor characterisation, hopefully, it will be ready by Monday.

**Osama Othman:**

* Created the circuit for the TCRT5000 on multisim that we used in the lab and sent it DropBox group
* Tested the TCRT5000 circuit to find suitable resistors for LED and detector by measuring their voltage and current using different resistors with group and soldered the DIL network on Wednesday
* Went to sensors Lab on Thursday and collected results that described the nature of sensor and successfully confirmed that TCRT5000 works well with certain resistors
* Read the datasheet for the OPE5685 IR emitting diode and made relevant notes on their electric characteristics. I also collected the datasheets and shared them to the Dropbox group
* Almost Finished draft of DR1 motors report

**Subhi Alsous:**

* Prepared for Lab 2 by drawing sensor circuit diagrams and choosing suitable resistor values for the TCRT5000
* In C34, helped the group test the sensor circuit we built using our breadboard and myDAQ.
* Completed and finished up the latest version of the gantt chart which is ready for submission.
* Attended the sensors lab along with Osama and Aarambh where we attempted almost all the required exercises and achieved understandable and sensible results.
* Regarding my part of the DR1, I’m halfway through writing it up and just waiting for confirmation if our torque results are good enough to finish up the gearbox selection.
* Read a couple of datasheets for the remaining leds and transistors that we’re aiming to test next week.