MTRL 467 Week 10 - Meeting Minutes

Date: March 20, 2020

Room: Online

Leader: Aleisha

Secretary: Sofia

Attendance:

Individual	In Attendance
Catherine Greenwood	Y
Jenna Moledina	Y
Clement Asiedu-Antwi	Y
Isabela Taketa	Y
Aleisha Cerny	Y
Sofia McGurk	Y

Agenda:

1. Status Update
2. Final presentation/video clarification

A: How will this work? If all of us are in different places?
Daan: Video- need to consider what kind of video we want to make… script it out. Static presentation and voice over. Have videos of different parts of the setup working or demonstrating that they work (do separately and join them).
A: So it is totally up to us how we format.
Daan: Ping Jon and say what are the parameters? What are the guidelines? Timeline? Where to upload? When is it due? For the Video…

3. Hardware setup and updates
    a. How the parts/setup should be tested

C: Haven't done much since the last meeting- we returned all stuff to Frank. We can't really test but we have pictures of everything. Start writing a report and elaborate on what we would have done.
Daan: Do not want us working together in person… but he can arrange to get us the hardware. Definitely work together as a team but over facetime.
J: Do we have access to the printer? Or just grab stuff and go?
Daan: We could grab stuff and go but that includes the printer.

MTRL 467 Week 10 - Meeting Minutes

C: We will have a quick discussion about whether or not we will grab the printer. (Answer= we will not as most of us are out of province/ country and going home).

4. Software setup and updates

Cat: Daan mentioned that we could write tests to show that our software works even if they aren't all together. Image of the 500 um feeler gauge. Finished the expected height software and Isabela finished the edge detection. Clement made STL of the feeler gauge so they could test the image with the STL file. Error larger than expected but might be due to the fact that we don't have the exact angle or the higher quality laser. Had issues with the field of view. Took an image of the ruler last semester (determined the area of each pixel) but was almost half as much as it should have been. Changed the number in the file and it works.
Cat: First issue was to straighten out the laser- script for that was finding the slope looking at the first and last value. Moved up values by the average value of the line. Works well.
J: Looks really good!
Cat: Changed plateau to be half as long
Cat: Last one the error was added- gets fuzzy so we need to account for that. If this was actual we would not have found an error which was good because there isn't one!
Cat: can we use this as a test that 2 softwares works together.
Daan: yes but we also need to show the condition where an error is found!
Cat: Took image last semester of the shield with the defect- same set up. Need that STL and then we can do it on that… This is the UBC Crest STL from Will.
Daan: Using a measurement that might be a lil off, what happens if we use the image we got but change angle can we assess if that changes accuracy.
Cat: green line is what we should get.. Then it changes. Would the average work? I think it's more of a we need more sig figs on the angle.
Daan: Don't think that the angle will have a difference on the sides.
Cat: Should scale the picture.
Daan: Sensitivity of the angle won't affect what we got there. More likely an issue with the laser or something. Or variation in color or? Generally this works and it is within the error we hoped so just prove that we can find a defect and then this will work.
Cat: replicate with one with defects and it should be good.

5. Feasibility study alternative

A: Emailed 3 manufacturers and 2 print studios. Thinking of doing something else: brochure of product?
Daan: Find a number to call? Or maker shops in Vancouver - set up to use equipment. Can give you an indication if they would find that useful.
A: 3 studios I will call them but if they don't answer what to do?
Daan: Don't think a manual could replace the socioeconomic/ LCA section.
Daan: Think of writing the report as a design report… What is the goal, what variables did we change to achieve that goal? Analysis completed to say that this is the set of parameters used to achieve that goal. Adapt what we do to meet the goals and fulfill the requirements.

MTRL 467 Week 10 - Meeting Minutes

Daan: Choose route to the solution: laser analysis and conversion but then along the road to implementing the solution you move from quantitative to “I tried this and it didn’t work to I tried this and it did”. Don't have to write it the way it occured. Rewrite history by saying we want to achieve this goal and this is the justification for choosing the variables we have. Put together an outline and high level point so we have a framework with which to write the whole report. Daan is happy to look at the report.
Cat: Showing test works for printcore- can we say we tested it and it worked? We have nothing recorded.
Daan: Yes we can do this. We can show in the video but with the press of a button it stops. In the report just say it works.

Action Items:

	Item	Assigned To
1.	Run the software with the failed shield	Isa & Cat
2.	Call print studios to see if they would find this useful?	Aleisha
3.	Create an outline of the final report to send to Daan	All
4.	Start writing the final report	All
5.	Email Will to ask for UBC crest file	Sofia
6.	Email Jon with Questions: Final Prez & Report	Jen
7.	Confirm with Daan that we do not need printer due to circumstances.	Clement

Next Meeting Time: March 26th @ 11 am (Online)

Separate Group Discussion:
Final Report Outline

Preface (optional)
Mention the fact that the work was incomplete because of RONA and that we have most of our peeps from out of province/ country (CLEMENT AND ISA)...
Objective was not complete because of circumstances…

Exec Sum (Aleisha)

MTRL 467 Week 10 - Meeting Minutes

Prob Definition (Jen*)
Same as Middy

Tech Review (Sof*)
Same as middy
Mention python wrapper, and give brief explanation

Project Objectives and quantitative goals (Jen*)
Same as Middy

Design Options (Clement & Cat)
Same as Middy?
Discuss how we are going to do things?

Detailed design and implementation (Sofia, Clement, Cat, Isabela)
Hardware: Sofia & Clement
Software: Cat & Isabela

Economic Assessment (Feasibility Study TBD) (Aleisha & Jen)

Recommendations & Conclusion (Everyone write a sentence or 2!!)
Propose new actions- sequential numbered points… each one includes:
The main purpose of an Engineering Recommendation Report is to propose new actions or changes to occur, in the form of the form of the Recommendations section of the report.
Recommendations are expressed in parallel format using sequential numbers with one recommendation for each numbered point.
Recommendations must be specific about why the action is suggested, how it should be done, and what is the expected outcome.
Recommendations should be phrased as clearly and completely as possible, so that the reader does not have to consult the body of the report to determine how to interpret them.

Project Work Summary (Sofia)
Look @ last terms work
Hardware composition
Software composition - more software focused

References (ALL)

Questions for Jon:
1. Can we get feedback from the midterm report? (Mainly the design options section)
2. Video presentation via PPT with audio on each slide, is that okay?
3. Can we do the (feasibility study with instructional guide) manual to replace the economic assessment ?