MTRL 467 Week 5 - Meeting Minutes

Date: February 3rd 2020

Room: FF 313

Leader: N/A

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

February 3rd: Meeting with Chad and Will
W: Arc commands are not generated in slicer
W: Don't program for anything more than G commands (go to…. Command)
W: g-code comment that says the thickness of filament is after it's been melted: ~.45 mm
C: Predicted height is what we have and difference between measurement is what we are looking at… is it ok or not?
C: Detection method is missing some chunks of the solid first layer- is it a pattern (periodic)
  - Will: maybe it is when we go around a corner
  - Each gap is 5 dots and each dot is 40 micron- approx half an extruder width ~200 micron…. Might be an actual gap in the g-code- did the circle pattern
W:G-code viewers online that we can look @ quickly and nicely
Cat: this code is the flrst layer- what is height at all points
W: if this is more than one layer then the gaps are probably present… there should be no max height just one height
C: don't know exactly what the part looks like
C: choose something simpler than this as it is easier to visualize
W: Try a cube, try a bulk object so imagine that it is solid.
Cat: this is trying to get a predicted height array
W: use a v simple g-code to find where the points are missing and have a g-code visualizer.
Look @ layers from a top down perspective.

C: missing points will show up in one layer
W: python to plot as a black and white image might be easier than excel
C: are we missing points from the g-code? Is the first question we need to answer
W: all lines in g-code or all lines with E after?
Cat: if it had an E value greater than 0… in each layer
W: check each line (not layer) to see if it has extruded- need to account for the times where the extruder moves without extruding.
W: start with simpler g-code and know exactly what it is supposed to look like then go from there.

NC is a g-code viewer- but just google it!

W: printcore establishes communication with the printer and then g-coder actually transmits the g-code. We can write in g-code to control the printer, but we need to get a camera linked to python (as it is currently entirely disconnected).
W: write what you want and it adds it automatically before everylayer or after every layer. Programming cameras must be done in python…
Cat: connect camera to python and python to g-code
W: find where to add that- it might be a part of g-coder. Write in a waiting time so that camera is in the same position for every picture
W: stationary camera, we should add some stiffeners from what he has done!

Agenda:
No Meeting with Sponsor as MT presentations this Week.

Info From Jon Regarding the Report New Sections:
Cat: Jon said that it is great to have a recap, but it's not enough to replace the LCA. He really liked Jen's idea about showing a plan of working with manufacturers. He also suggested we could reach out to manufacturers. However, for the midterm report, it's not expected that this section is complete, only that we've planned how it will be done. So maybe create a rough draft or explain how we will reach out to them.

Action Items:

	Item	Assigned To
1.	Complete and Hand in MT report	All
2.	MT Presentation	All

Next Meeting Time: February 14th at 11 am