Ian Rosado

Team B: Moneybox

Teammates:
Stephanie Chen, Trevor Decker, Ian Hartwig

ILR04

2/26/15

Individual Progress

Since the last ILR, I have worked to finalize the next iteration of our gripping mechanism, and begun machining metal and other parts for the prototype. Figure 1 is a picture of one of the aluminum parts that I have machined so far. We had hoped to finish the prototype for our Wednesday review, but were unable to, so we are continuing to machine and assemble parts. I have also worked with the rest of the team to continue to work out the kinks in our final assembly.

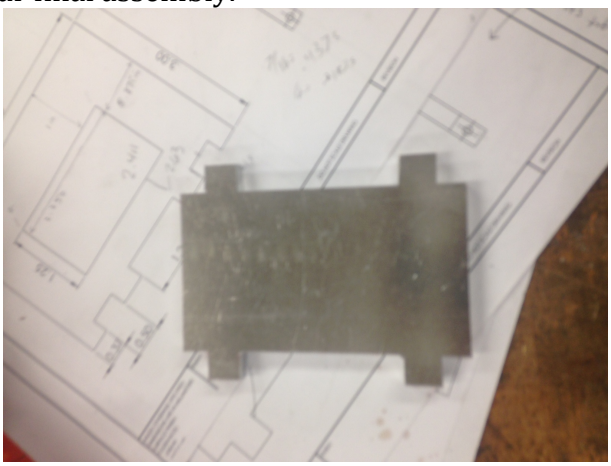

Figure 1: Photo of an unfinished aluminum part, the base plate of our gripper.

Challenges/Issues

One of our largest issues this week has been working around the MechE machine shop hours. Most of our free time is in the evening, but the machine shop closes at 4:30pm most days, so we have had less time than we would like to make parts. A solution to this is to use the RoboClub machine shop, but to do that we need to get certified on all of the tools that we would like to use, which we have not gotten around to.

Also dealing with machining, neither Steph nor I have a lot of experience in the machine shop, so we got off to a relatively slow start, having to ask for help with a lot of things. As we have worked we have a learned a lot though, and we feel more comfortable making the rest of the robot.

Trevor and Ian have had issues with the ARM board that we have chosen to use due to the documentation being somewhat unreliable. They have been able to make progress, however.

Teamwork

Steph and I again worked closely this week, this time machining parts and working out any potential issues that the prototype may have. We have also discussed the process closely with Trevor and Ian, who have helped us with a lot of good input. Ian H. has worked on getting the ARM board that we plan to use up and running, which has proven to be much more of an undertaking than we expected. He was able to create a simple “Hello world” program, and is now working on getting all of the inputs and outputs that we will need up

and running. Trevor Has continued to work on the vision aspect of the project, and is now able to detect pieces of 8-20 in real time. Trevor also made a CAD model of the cleaning unit, so that now we early have an entire CAD model of the robot.

Future Plans

Steph and I will continue to make the next gripper prototype, and will have it completed and tested by our mid semester presentation. If we are able to finish that early, we will begin to start working on the linear sliding beam as well as the gearbox for our high-torque motor. Trevor will continue to improve the vision and will help with machining as well. Ian plans to get the inputs and outputs for the board working, and eventually plans to start implementing our overall control system for the robot.