

2/11/16

TO: Casey Howard

FROM: Ryan Brody, Anthony Caffaro, Ava Mistry

Subject: Milestone 1 Completion – Build Team

As the build team in Green Crew for Milestone 1, team 4 constructed the frame for the 3D bioprinter, as well as the drive assembly for moving the print surface along the y-axis. We ran into two significant difficulties while putting together the frame. First of all, there were several instances where hardware parts were not installed at the right time. This occurred primarily at the beginning of the build process, as we did not put in the appropriate t-nuts for attaching the y-axis assembly early enough, in addition to covering up the access point for tightening the bolts that attach the vertical bars to the base of the frame. This issue regarding proper ordering of construction steps was rectified as we moved forward in the build process by examining the model printer more closely and planning out our process in greater detail.

We also ran into difficulty with the frame due to having printed parts with an incorrect angle, which led to a significant amount strain in the initial construction. The other team had mentioned to us that they also had a misfit of the printed parts, which led us to believe that a discrepancy in the fit of the parts was somewhat normal. After identifying that there was too much stress in the frame, we received the correct parts and rebuilt the frame as needed.

After construction was completed, the other issue that team 4 had to address was communicating with the other team regarding the list of parts used to build the first milestone. We began creating a consistent part-naming convention and an official bill of materials after construction was completed, which meant that the other team was working with a less than complete set of information during the first several class days in Milestone 1. This made the documentation process more vague than it should have been for the other team. We addressed this as a crew by discussing a plan of action for relaying information between the teams as the construction process proceeds, and agreed to use the part-names listed on Canvas to ensure clarity with regard to the .stl and .sldprt files for any 3D printed parts.

Outside of these issues, our team worked very well together and coordinated well with team 3 to achieve our goals as a crew.