**Team Members:**

* Thomas Bock
* Ammar Ahmed
* Tan Hua
* Jan Michael Golez

.

**Group Meeting Minutes:**

● Craft Cube 80% completed

● Web Camera Function Correctly

● Edge Detection Needed

**Summary of Team Tasks Assigned:**

1. Housing/Ventilation System
   1. Design of Mounted Camera Bracket
   2. Enclosure Attached to Craft Cube
2. Stand Alone Management System(***S.A.M.S.)***
   1. Assist finish interfacing Camera
3. Solitary Software System
   1. Altering Camera to ensure edges and dimensions of the objects are recorded during operations
   2. Test Camera Edge Detection
4. Automated/Enhance Camera System
   1. Begin Researching on OpenCV-Python
   2. Research on different microcontrollers that is compatible with OpenCV-Python

**Summary of Team Accomplishments:**

1. Housing/Ventilation System
2. Design of Mounted Camera Bracket Accomplished
3. Stand Alone Management System
4. Assisted with research on making execute edge detection on Webcam
6. Solitary Software Program
7. Octoprint Capable of observing objects during operation
8. Automation/Enhance Camera SystemResearch on OpenCV-Python and installation of the software and libraries needed
9. Raspberry Pi3 was found to be the most compatible for making a connection between camera
10. system and management system

**Tasks Assigned for Next reporting period:**

1. Housing/Ventilation System
2. Final Integration/Final Testing
3. Stand Alone Management System
4. Final Integration/Final Testing
5. Solitary Software Program
6. Final Integration/Final Testing
8. Automation/Enhance Camera System
9. Final Integration/Final Testing

**Issues:**

1. Algorithm for Laser and Camera Integration Causing Complication

**Individual Summary (cont.)**

**Name:** Thomas Bock

**Tasks Assigned for this reporting period:**

1. Design of Mounted Camera Bracket
2. Enclosure Attached to Craft Cube

**Accomplishments this reporting period:**

1. Design of Mounted Camera Bracket Accomplished

**Issues:**

1. Mounting of Camera Bracket Needs Precise Location for better angle of Camera

**Tasks Assigned for Next reporting period:**

1. Final Integration/Final Testing

**Individual Summary (cont.)**

**Name:** Jan Michael Golez

**Tasks Assigned for this reporting period:**

1. Assist finishing interfacing Camera

2.

**Accomplishments this reporting period:**

1. Assisted with research on making execute edge detection on webcam

2.

**Issues:**

1. None

**Tasks Assigned for Next reporting period:**

1. Final Integration/Final Testing

2.

**Individual Summary (cont.)**

**Name:** Tan Hua

**Tasks Assigned for this reporting period:**

1. Altering the Camera to ensure the edges and dimensions of the objects are recorded during operation
2. Test Camera Edge Detection.

**Accomplishments this reporting period:**

1. Octoprint capable of observing objects during operation

**Issues:**

1. Algorithm for Laser and Camera Integration Causing Complication

**Tasks Assigned for Next reporting period:**

1. Final Integration/Final Testing

**Individual Summary (cont.)**

**Name:** Ammar Ahmed

**Tasks Assigned for this reporting period:**

1. Continue calibrating camera
2. Start on image processing algorithm to detect object.

**Accomplishments this reporting period:**

1. Camera calibration was accomplished and extrinsic and intrinsic matrix of the camera parameters has been extracted.
2. The image processing algorithm is in progress. At the mean time, the code is able to capture image, transform image into binary, and perform edge detection and some noise filtration.

**Issues:**

1. The extrinsic and intrinsic parameters of the camera might not be accurate. This could be resolved by mounting the camera at fixed point and taking several pictures of the checkerboard for calibration.

**Tasks Assigned for Next reporting period:**

1. Continue on image processing algorithm to detect object.