**Team Members:**

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

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**Group Meeting Minutes:**

● Craft Cube 80% completed

● U.I. Interfacing on Craft Cube enables motion core movements

● Functioning camera for edge detection.

**Summary of Team Tasks Assigned:**

1. Housing/Ventilation System
   1. Machined/Constructed Materials for enclosure on Craft Cube
2. Stand Alone Management System(***S.A.M.S.)***
   1. Assist with Octoprint interfacing with Camera for Edge Detection
3. Solitary Software System
   1. Alter reference programming to edit web browsing into edge detecting on Raspi Camera
   2. Test Camera Detecting along with Octoprint
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. Craft Cube Enclosure built.
3. Stand Alone Management System
4. Assisted with research on Web Camera
6. Solitary Software Program
7. Altering Reference Programming requires thorough examination for perfect application
8. No Test on Camera was done yet
9. Automation/Enhance Camera SystemResearch on OpenCV-Python and installation of the software and libraries needed
10. Raspberry Pi3 was found to be the most compatible for making a connection between camera
11. 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. Applying Open CV on octoprint becomes an issue. Questioning Camera Compatibility

**Individual Summary (cont.)**

**Name:** Thomas Bock

**Tasks Assigned for this reporting period:**

1. Machined/Constructed Materials for enclosure on Craft Cube

**Accomplishments this reporting period:**

1. Craft Cube Enclosure built

**Issues:**

1. None

**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 with Octorpint interfacing with Camera for Edge Detection

2.

**Accomplishments this reporting period:**

1. Assisted with research on Web Camera

2.

**Issues:**

1.

2.

**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. Alter Reference Programming to edit Web browsing into edge detection on Raspi Camera
2. Test Camera Detecting along with Octoprint

**Accomplishments this reporting period:**

1. Octoprint integration with camera will begin
2. Octoprint integration with Laser Web will begin

**Issues:**

1. Web Camera Interfacing for RasPi complicated

**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.