**Team Members:** Thomas Bock, Ammar Ahmed, Tan Hua, Jan Michael Golez

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**Group Meeting Minutes:**

* Testing CNC Laser.
* Attach Camera
* Complete Software Integration
* Documentation Discussed
* Assign parts that are towards each member
* Talk For Future Plans toward the project

**Summary of Team Tasks Assigned:**

1. Mechanics
2. Design and Assemble Camera mounting
3. Laser Diode
   1. Discuss Possible Solution concerning Laser
4. Software
5. Improving rasterizing process.
6. Computer Vision
   1. Work on algorithm for edge detection( needed for dimension detection)

**Summary of Team Accomplishments:**

1. Mechanics
2. Design and Assemble Camera mounting
3. Laser Diode
4. CNC Laser was successfully tested
5. Software
6. Rasterizing process has improved.
7. Computer Vision
8. An algorithm was found for filling circular objects but still working on the drawing box around the detected object.

**Tasks Assigned for Next reporting period:**

1. Mechanics
   1. Design and Build Camera mount
2. Laser Diode
3. Discuss whether new Laser Module would be needed. Considering circumstances concerning the laser
4. Software
5. Rasterizing mechanism needs to fixed and improved more.
6. Computer Vision
   1. Resolve the issue by finding the algorithm for filling the gaps or drawing a box around the detected object

**Issues:**

1. Test Laser was misplaced or lost, discussion whether new laser will be bought or detaching the laser from the project itself.

**Individual Summary (cont.)**

**Name:** Thomas Bock

**Tasks Assigned for this reporting period:**

1. Integrate camera into rest of system.

**Accomplishments this reporting period:**

1. Integrate camera into rest of system.

**Issues:**

1. Issues with sizing mount properly to hold camera tight, but was taken care of.
2. Also helped on trying to figure out laser engraving. Still have the issue of laser power not varying properly, but did make some headway on getting the motion correct for engraving. After some more collaboration with Tan on this issue I think it can be resolved.

**Tasks Assigned for Next reporting period:**

1. Testing of complete device
2. Sort out any bugs with software
3. Sort out any bugs in camera system

**Individual Summary (cont.)**

**Name:** Jan Michael Golez

**Tasks Assigned for this reporting period:**

1. Continue Documentation

**Accomplishments this reporting period:**

1. CNC laser was tested

**Issues:**

1. Testing Laser was lost

**Tasks Assigned for Next reporting period:**

1. Locate and purchase a test laser/ or discuss other solutions.

**Individual Summary (cont.)**

**Name:** Tan Hua

**Tasks Assigned for this reporting period:**

1. Make improvements in engraving function

2. Do more testing with different design to improve performance.

**Accomplishments this reporting period:**

1. Some calculations in rasterizing process have been changed and tested.

**Issues:**

1. The system has not located properly when rasterizing yet.

**Tasks Assigned for Next reporting period:**

1. Complete rasterizing process.
2. Do more testing along to enhance engraving performance

**Individual Summary (cont.)**

**Name:** Ammar Ahmed

**Tasks Assigned for this reporting period:**

1. Continue calibrating the camera to get the exact dimensions in real world unit.

**Accomplishments this reporting period:**

1. Calibration is still in progress. The error in getting the dimensions has been reduced from to .

**Issues:**

1. Shadows causes an issue for the camera vision. After talking with Tom, we will be having a light all around to limit shadows.
2. The camera vision vision can not detect white papers because of the white background. For now, we will be using any colored object other than white and the algorithm will be improved in the future

**Tasks Assigned for Next reporting period:**

1. Putting light all around the working space