

## ***Positioning device for ophthalmic scanning laser systems***

### ***Team: “Ocular Imaging” Team***

*Client: Carol Rasmussen*

*Advisor: Professor Tom Yen*

*Team Members: Daniel Frost (Team Leader, BWIG)*

*William Stanford (Communicator, BSAC)*

*April 17 to April 23*

#### **Last Week’s Goals**

- Set up RC equipment if it arrives.
- Couple motor to table.
- Work on mounting motors.

#### **Summary of Accomplishments**

- Welded couplers.
- Order worm gear equipment.
- Tried connecting motors.

#### **This Week’s Goals**

- Receive and set up all ordered parts.
- Prepare final presentation.
- Give final presentation.

#### **Project Difficulties**

- none

#### **Activities**

- 4/21 – Ordered parts, had machinist weld couplers. ~2 hr. each
- 4/22 – Worked on setting up system. ~1 hr. each

## Project Schedule

Preliminary Project Schedule	
Dates	Activities
Jan. 23-30	Form team roles and contact client. Individual research on mechanizing design.
Jan. 31 – Feb. 5	Client meeting. Contacted McMaster-Carr about motor/joystick and planned experiment.
Feb. 6 – Feb. 12	Got information on joystick and came up with initial plan for rotating mechanism.
Feb. 13-Feb. 19	Found more suitable motors and joystick.
Feb. 20-Feb. 26	Found motors powerful enough to work and ordered them. Also ordered motor controllers and mounting brackets.
Feb. 27-Mar. 5	Decided to wait on joystick until motors are working. Midsemester preparation.
Mar. 6 – Mar. 12	Midsemester presentation and paper.
Mar. 13 – Mar. 26	Motor assembly and troubleshooting.
Mar. 27 – Apr. 2	Motor/controller configuration, research on voltage to frequency conversion circuit.
Apr. 3 – Apr. 9	Voltage to frequency circuit, mounting materials.
Apr. 10 – Apr. 16	Ordered RC equipment.
Apr. 17 – Apr. 23	Ordered worm gear equipment. Welded couplers.

## **Expenses**

- **Motors Trossen Robotics MP-36016-385 \$37.50 x3 - \$112.50**
- **Motor Mounts Trossen Robotics M-800-PB-S3751-BB \$10.00 x3 - \$30.00**
- **Motor Controllers Trossen Robotics C-100-DC-BB-0518 \$46.50 x3 - \$139.50**

**Total - \$282.00**