

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)

May 1 – May 7

Last Week’s Goals

- Final presentation.
- Final paper.
- Deliver device to client.
- Send faulty RC equipment back to be replaced.

Summary of Accomplishments

- Wrote final paper.
- Will deliver device on Monday 5-11-09.
- Arranged to have RC equipment replaced.

Project Difficulties

- Faulty RC equipment

Activities

- 5/1 – Final poster presentation. ~3 hr. each
- 5/7 – Final paper. ~2 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.
Apr. 24 – Apr. 30.	Final poster presentation preparation.

May 1 – May 7	Final paper and device finalization.
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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**
- **RC equipment**
- **Rotation gear and worm drive**
- **Gears for other motors**