

Development of an ultrasound probe holder for arterial function testing (Probe Holder)

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Team: Leon Corbeille (BWIG)

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Lein Ma (BSAC)

Progress Report for Week 7: March 6 – March 12

Problem Statement:

To aid in the ultrasonography of arterial reactivity, a simple, stable, adjustable probe holder is needed. The stabilization provided by such a holder could potentially improve probe imaging quality and diagnostic effectiveness. The device should be able to be finely adjusted with 6 degrees of freedom, and free the hands of the technician for the duration of the study.

Last Week's Goals:

- Write mid-semester design paper
- Refine positioning and holding ideas for rotational control
- Identify need for micropositioning
- Begin identifying raw material sources for construction of prototype (e.g. arm cradle, mounting table)

Summary of Accomplishments

- Prepared and presented Mid-Semester presentation to class on March 6th. Slides are available online
- Wrote and edited Mid-Semester Design Report for submission on March 10th. Full report is available online
- Continued to refine probe mounting design.
 - Identified possible avenue for achieving all DOFs with relative simplicity. More details to follow.
- Started to identify potential materials for construction of prototype.

This Week's Goals

- Finalize design concepts and dimensions
- Continue selecting and ordering raw materials for construction

Project Difficulties:

None to report

Team Activities

Members	Activity	Time Spent	Total
Team	Presentation preparation, Report writing	5.00 hr.	20.00 hr.
Lein	Independent Paper writing	1.00 hr	10.00 hr.
Leon	Product Research, Notebook updating	1.00 hr	8.00 hr.
Peter	Progress Report, Product Research, Notebook updating	1.50 hr	10.00 hr.
Neal	Communications, Notebook updating	2.00 hr	8.75 hr.

Project Timeline

Task	Jan.		February				March				April				May	
	23	30	6	13	20	27	6	13	20	27	3	10	17	24	1	8
Project Development																
Brainstorm/Design Development																
Finalize Design																
Prototyping																
Deliverables																
Progress Reports																
Mid-semester Paper																
Mid-semester Presentation																
Final Paper																
Final Poster																
Meetings																
Client																
Advisor																
Website																

Budget/Expenses

Pending information.