

Microscope Slide Scanner

Date: 10/10/24

Client: Teri Stewart

Advisor: Dr. James Trevathan

Team: Lia Lejonvarn (Team Leader)

Amanda Kothe (Communicator and BSAC)

Hamad AIDhaheeri (BPAG)

Xavier Snider (BWIG)

Problem statement

The team has been tasked with finding a more efficient way to scan microscope slides using digital scanning. The client's department already has a scanner but it takes a while to scan one slide and the images are not of the best quality. Therefore, we must find a way to enhance the user quality of their digital scanner as well as the images themselves. The department has also asked our team to create software capable of housing the images. This project will benefit multiple labs who send in slides for processing including the primate lab and SMPH.

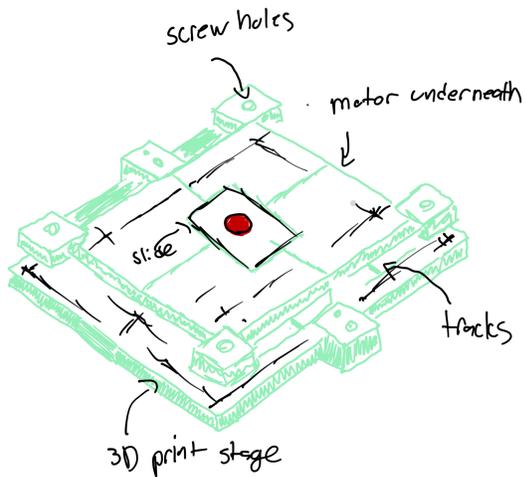
Brief status update

The team has completed their preliminary presentation complete with preliminary and final designs as well as diagrams and flowcharts.

Difficulties / advice requests

The team would like advice on their materials list.

Current design: Slide Glider



Materials and expenses

Item	Description	Manufacturer	Mft Pt#	Vendor	Vendor Cat#	Date	#	Cost Each	Total	Link
Category 1										
									\$0.00	
									\$0.00	
Category 2										
									\$0.00	
									\$0.00	
								TOTAL:	\$0.00	

Major team goals for the next week

1. Create materials list
2. Order materials
3. Design microscope base in SolidWorks

Next week's individual goals

- Amanda:
 - Create materials list
 - Gather more information from client about specifications for product design

- Research competing designs for moving microscope stages
- Lia:
 - Finalize materials list
 - Create circuit diagram
- Xavier:
 - Take dimensions of microscope
 - Begin CAD for the 3d printed stage
- Hamad:
 - Determine the prices of the components used for our design
 - Determine how to effectively maximize the design potential while minimizing cost.

Timeline

Task	Sep			Oct				Nov				Dec		
	13	20	27	4	11	18	25	1	8	15	22	29	6	11
Project R&D														
Empathize														
Background...														
Prototyping														
Testings														
Deliverables														
Progress Reports	X	X	X	X										
Prelim presentation				X										
Final Poster														
Meetings														
Client	X	X		X										
Advisor	X	X	X	X										
Website														
Update	X	X	X	X										

Filled boxes = projected timeline

X = task was worked on or completed

Previous week's goals and accomplishments

- Amanda:
 - Start research on similar designs (including past BME projects)
 - Continue communicating with client and advisor
 - Start determining what we will need for our design
- Lia:
 - Start making a materials list for the final design
 - Continue to research similar designs

- Xavier:
 - Research designs for motorized stage
 - Understand feasibility or replacing a stage
- Hamad:
 - Explore the old microscope slide scanner
 - Research more regarding how to implement the slide glider
 - Determine an cost estimate for the slide glider

Activities

Name	Date	Activity	Time (h)	Week Total (h)	Sem. Total (h)
Amanda	9/26/2024	Preliminary Presentation	2	2	7
Lia	9/26/2024	Preliminary Presentation	2	2	7
Xavier	9/26/2024	Preliminary Presentation	2	2	7
Hamad	9/26/2024	Preliminary Presentation	2	2	6