

Dual Handheld and video otoscopy unit

Date: 10/25/2024

Client: Dr. Lara Tomich & Dr. Amy Nechelason

Advisor: Professor Paul Campagnola

Team:

Sam Tan — Leader

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Problem statement:

The current designs of handheld otoscopes for animal practice do not allow video transfer to a distant view compared to a video otoscope, which is practiced differently in simulations. The goal is to design a handheld otoscope with video capabilities to allow student-performed examinations to be visualized to the faculty for assessments.

Brief status update

- Most materials are ordered/arrived. Starting to evaluate and build 3D models

Difficulties / advice requests

- Light source. Our current approach is using an iPhone flashlight. We would need some help investigating how to power that flashlight using a 9V battery.

Current design:

- Optical Fiber design

Materials and expenses

To be updated once some order receipt and amazon information is finalized on our end.

Item	Description	Manufac-turer	Mft Pt#	Vendo r	Vendor Cat#	Date	#	Cost Each	Total	Link
Electrical Component										
Camera Components										
MakerSpace Hardwares + 3D Prints										
Current Total								Total		

Major team goals for the next week

1. 3D models
2. Flashlight power and evaluation
3. Test some materials ordered

Next week's individual goals

- Sam
 - Start 3D modeling and test some components
- Aaron
 - Begin planning otoscope body design
- Bobby
 - Help with 3D printing and work on design for attachment of the optic fiber
 - Look for fiber cutting options
- Andy
 - Ordering new light source. Begin CAD model of microscope for later fabrication.

Timeline

Task	September	October	November	December
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	13	20	27	4	11	18	25	1	8	15	22	25	6	13
Project R&D	X	X	X											
Empathize														
Background	X													
Prototyping														
Testings														
Deliverables														
Progress Reports	X	X	X	X		X								
PDS		X	X	X		X								
Prelim presentation				X										
Final Poster														
Meetings														
Client														
Advisor	X	X	X	X		X								
Website	X													
Update	X	X	X	X		X								

Filled boxes = projected timeline

X = task was worked on or completed

Previous week's goals and accomplishments

- Sam previous goal
 - Material research and order
- Bobby previous goal
 - Design, testing
- Aaron previous goal
 - Material research
- Andy previous goal
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- Team previous goal 6
 - Material Research and order

Activities

Name	Date	Activity	Time (h)	Week Total (h)	Sem. Total (h)
Sam		Lighting lux testing, 3D modeling	2	2	10
Bobby		Lighting lux testing	2	2	8.5
Aaron	10/25/2024	Material Research	0.5	0.5	4.5

Andy					
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