Dual Handheld and video otoscopy unit

Date: 11/1/2024

Client: Dr. Lara Tomich & Dr. Amy Nechelason

Advisor: Professor Paul Campagnola

Team:

Sam Tan — Leader stan68@wisc.edu

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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

3D modeling started

Difficulties / advice requests

Create light path

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-	Mft	Vendo	Vendor	Date	#	Cost	Total	Link
item		turer	Pt#	r	Cat#	Date	#	Each		LIIIK
Electrical Com	ponent	-			-	-			-	-
Camera Comp	onents	•			•	•		-	-	•
MakerSpace H	ardwares + 3D Prin	ts								-
Current Total								Total		

Major team goals for the next week

1. 3d printing and evaluation

Next week's individual goals

- Sam
 - o 3D printing and something about the light
- Aaron
 - 0
- Bobby
 - o 3D printing refinement
- Andy
 - o Develop test methods for optical distortion and light source brightness.

Timeline

Task	Se	ptem	ber		Oct	ober		November				December		
Tuon	13	20	27	4	11	18	25	1	8	15	22	25	6	13
Project R&D	Х	Χ	Х											

Empathize											
Background	Х										
Prototyping											
Testings											
Deliverables											
Progress Reports	Х	Х	Х	Х	Х	Х	Χ	Х			
PDS		Х	Х	Х	Х	Х	Х	Х			
Prelim presentation				Х							
Final Poster											
Meetings											
Client											
Advisor	Х	Х	Х	Х	Х	Х	Х	Х			
Website	Х										
Update	Х	Х	Х	Х	Х	Х	Х	Х			

Filled boxes = projected timeline **X** = task was worked on or completed

Previous week's goals and accomplishments

- Sam previous goal
 - o 3D modeling and 3D printing
- Bobby previous goal
 - o 3D modeling and 3D printing
- Aaron previous goal

0

- Andy previous goal
 - o Materials ordering.
- Team previous goal 6
 - o Continue working on design

Activities

Name	Date	Activity	Time (h)	Week Total (h)	Sem. Total (h)
Sam	11/1	Gathering and test on microscope camera	1	2	12
Bobby		3D model refinement	2	2	10.5
Aaron					4.5
Andy					