Dual Handheld and video otoscopy unit

Date: 11/8/2024

Client: Dr. Lara Tomich & Dr. Amy Nechelason Advisor: Professor Paul Campagnola Team:

Sam Tan — Leader

Aaron Marattil — Communicator

Haoming (Bobby) Fang — BWIG

Andy Slayton — BPAG

stan68@wisc.edu marattil@wisc.edu hfang45@wisc.edu

aslayton@wisc.edu

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

- Prototyping and testing protocols brainstorm
- Need to update to client as well

Difficulties / advice requests

• How to attach the microscope camera to the head of the otoscope

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		Mft Pt#		Vendor Cat#	Date	#	Cost Each	Total	Link
Electrical Com	ponent	-	-	-	-					
Camera Comp	onents									
MakerSpace H	ardwares + 3D Print	ts								
Current Total								Total		

Major team goals for the next week

1. 3d printing and evaluation

Next week's individual goals

- Sam
 - 3D printing and something about the light
- Aaron
- Bobby
 - ∘ Light
- Andy
 - Finalize test methods for optical distortion and illumination.

Timeline

Task	September			October				November					December	
	13	20	27	4	11	18	25	1	8	15	22	25	6	13
Project R&D	Х	Х	Х											

Empathize											
Background	Х										
Prototyping											
Testings											
Deliverables											
Progress Reports	Х	Х	Х	Х	Х	Х	Х	Х	Х		
PDS		Х	Х	Х	Х	Х	Х	Х	Х		
Prelim presentation				Х							
Final Poster											
Meetings											
Client											
Advisor	Х	Х	Х	Х	Х	Х	Х	Х	Х		
Website	Х										
Update	Х	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
 - 3D modeling of the first prototype and find dimensions
- Bobby previous goal
 - Microscope lightning attachments
- Aaron previous goal
- Andy previous goal
 - Research for test methods.
- Team previous goal 6
 - Continue working on design

Activities

Name	Date	Activity	Time (h)	Week Total (h)	Sem. Total (h)
Sam		3D modeling	2		14
Bobby		Attachment trials	2		12.5
Aaron					4.5
Andy					