

# Title: Low-Interference Wheelchair Footrest

Date: 3/8/2024

Client: Dan Dorszynski

Advisor: Dr. John Puccinelli

Team:

Charles Maysack-Landry — Leader

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## Problem statement:

The project aims to innovate wheelchair footrest design to overcome the limitations of current models which are often cumbersome, heavy, and restrict leg movement or access to the ground. The goal is to create a footrest that is lightweight, easily detachable, and foldable, enhancing the wheelchair user's comfort, and allows interactions with surroundings through the footrest.

## Brief status update

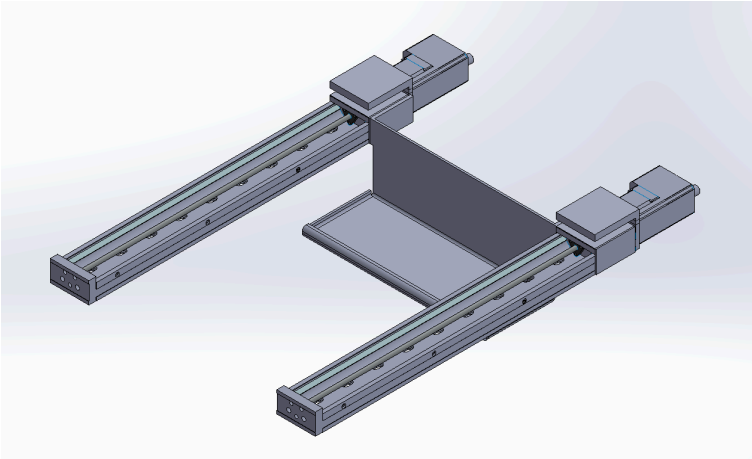
- Preliminary report completed
- Materials Order initiated

## Difficulties / advice requests

- Need to meet with electronics professors

## Current design:

Current design is a footrest on 2 linear actuators that will be controlled by a button on the wheelchair to move back and forth under the wheelchair. A new design that uses similar principles is being made to touch up on dimensions and aesthetic.



## Materials and expenses

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

## Major team goals for the next week

1. Finish Preliminary Report
2. Look for linear actuators and materials

## Next week's individual goals

- Jayson
  - Final CAD design
  - Order materials
  - Cardboard box prototype
- Sam
  - Material ordering and fabrication
- Bobby
  - Support CAD design and prototyping
- Charles
  - Finish Preliminary report and begin ordering components

## Timeline

Task	Jan	Feb				March					April				May	
	26	2	9	16	23	1	8	15	22	29	5	12	19	26	3	10
<b>Project R&amp;D</b>	X	X	X	X	X	X	X									
Empathize	X	X	X	X	X	X	X									
Background...	X	X	X	X	X	X	X									
Prototyping																
Testings																
<b>Deliverables</b>																
Progress Reports	X	X	X	X	X	X	X									
PDS			X	X	X	X	X									
Prelim presentation						X										
Final Poster																
<b>Meetings</b>																
Client			X													
Advisor	X	X	X	X	X	X	X									
<b>Website</b>	X	X	X	X	X	X	X									
Update	X	X	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 5
  - Preliminary Report
- Bobby previous goal 5
  - Footrest support modeling
  - Further demographic research
- Charles previous goal 5
  - Complete preliminary design and presentation
- Jayson previous goal 5
  - Finalize cad design prototype
  - Finish preliminary presentation
- Team previous goal 5
  - Finish preliminary presentation
  - Finish preliminary cad drawings

## Activities

Name	Date	Activity	Time (h)	Week Total (h)	Sem. Total (h)
Sam	3/8/2024	Report	3	3	20

BME Design: 301

Bobby	3/1/2024	Modeling, Presentation, Research	4	4	14
Jayson	3/1/2024	Preliminary Report, Cad Design, Meetings	5	5	25
Charles	3/1/2024	Research, Presentation	6	6	13