Title: Low-Interference Wheelchair Footrest

Date: 5/03/2024

Client: Dan Dorszynski
Advisor: Dr. John Puccinelli
Team:

Charles Maysack-Landry — Leader   maysacklandr@wisc.edu

Jayson O'Halloran — Communicator   ohalloran2@wisc.edu

Haoming (Bobby) Fang — BPAG   hfang45@wisc.edu

Sam Tan — BWIG   stan68@wisc.edu

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.
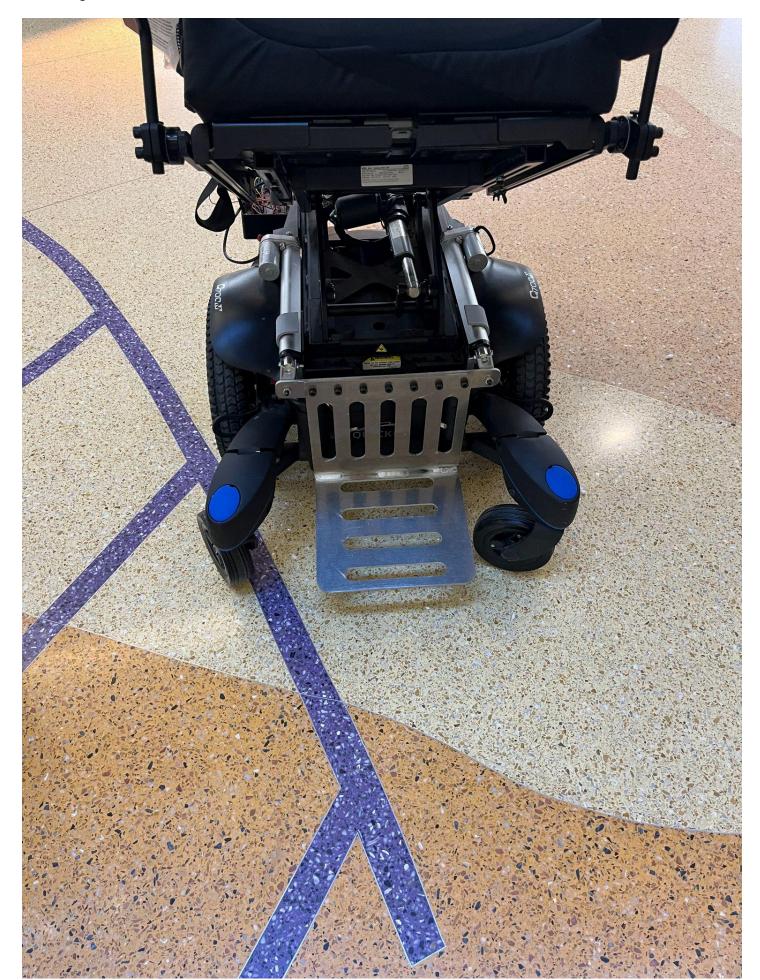
Brief status update

- Final deliverables completed

Difficulties / advice requests

- None

Current design:

Completed design below

Materials and expenses

Item	Description	Manufac-turer	Mft Pt#	Vendor	Vendor Cat#	Date	#	Cost Each	Total	Link
Linear Motion										
Linear Actuator	A device that converts rotational motion into linear motion to move or control objects in a straight line.	Demotor Performance				3/15/2024	2	$35.68	$71.36	https://www.amazon.com/Linear-Actuator-Stroke-Output-12-Volt/dp/B00VFXIRW4?th=1
									$0.00	
Raw Materials										
Aluminum	½''x36''x1/8''	MakerSpace				3/15/24	3	33	$99	
Mounting Bracket for PA-14, PA-14P, PA-08		PROGRESSIVE AUTOMATIONS				3/18/24			$13.92	link
Zinc ⅜ inch threaded screws	Zinc screws	Everbilt				3/18/24	1	$8.98	$8.98	https://www.homedepot.com/p/Everbilt-6-x-3-8-in-Zinc-Plated-Phillips-Pan-Head-Sheet-Metal-Screw-100-Pack-823322/317479248
MakerSpace Hardwares + 3D Prints										
3D prints	3D prints	MakerSpace				Varies		$28.1	$28.1	N/A
Hardwares	Screws, Caps, etc	MakerSpace				Varies		$1.25	$1.25	N/A
Current Total								**Total**	**$226.10**	

Major team goals for the next week

1. None, all deliverables are finished

Next week's individual goals

- Jayson
  - None
- Sam
  - None
- Bobby
  - None
- Charles
  - None

Timeline

Task	Jan	Feb				March					April				May	
	26	2	9	16	23	1	8	15	22	29	5	12	19	26	3	10
Project R&D	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Empathize	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Background	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Prototyping								X	X	X	X	X	X	X	X	X
Testings												X	X	X	X	X
Deliverables																
Progress Reports	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
PDS			X	X	X	X	X	X	X	X	X	X	X	X	X	X
Prelim presentation						X										
Final Poster														X		
Meetings																
Client			X			X		X		X		X	X	X	X	X
Advisor	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Website	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Update	X	X	X	X	X	X	X	X	X	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
  - Poster
- Bobby previous goal
  - Poster
- Charles previous goal
  - Finish deliverables
- Jayson previous goal
  - Finish final deliverables

- Team previous goal 6
  - Finish deliverables

Activities

Name	Date	Activity	Time (h)	Week Total (h)	Sem. Total (h)
Sam	5/03/2024	Final Deliverables	7	7	45
Bobby	5/03/2024	Final Deliverables	6	6	37
Jayson	5/03/2024	Final Deliverables	9	9	64
Charles	5/03/2024	Final Deliverables	7	7	54