# Disability Rights Education & Defense Fund

DREDF

**Virtual Capitol Hill Briefing**

*Autonomous Vehicle Safety & Accessibility for People with Disabilities*

March 7, 2023

Good morning. I am grateful for the opportunity to speak to you all today. Before I begin I'd like to acknowledge the passing earlier this week of Judy Heumann. Judy was a co-founder of the disability rights movement and life-long local, national and international advocate. She will be deeply missed.

The autonomous vehicle advocacy of the Disability Rights Education & Defense Fund, known as DREDF, is rooted in our belief that access to safe, affordable, reliable transportation is a civil right.

AVs have the potential to dramatically improve mobility, vehicle and road safety for the up to 1 in 4 people in the U.S. with a disability. Accessible transportation is integral for our participation in our communities, and to ensuring access to education, employment, spending time with family and friends getting to and from medical appointments – access that many of us take for granted. However, the promise and safety of AVs will only be realized if the vehicles and the surrounding infrastructure are fully accessible, and the safety elements consider the needs of *all* people with disabilities.

We know that safe and accessible AVs will be needed, and even required by law, when used by publicly-funded agencies, and that retrofitting will be more expensive for providers in the long run. Yet, news accounts of AV testing and industry requests for exemptions to deploy, do not mention accessibility.[i,ii] Proposed legislation has not mandated accessibility in vehicle design or disability-inclusive safety measures and would *not* increase mobility or safety for many people with disabilities.

Mandated standards and testing requirements must ensure the ability of all passengers, including those who are wheelchair users, who are Blind or low vision, or Deaf or hard of hearing, and those with cognitive disabilities to locate, enter and exit the vehicle, and to communicate with the vehicle in routine and emergency situations. These features are detailed in disability advocate AV principles and a report summarizing three days of meetings in 2019 between manufacturers, disability advocates, government and other stakeholders.[iii,iv]

In addition, DREDF recently published a brief on the need to address disability and ableist bias in AV detection, collision decision-making and data collection.[v] New technologies come with significant risks of embedding and perpetuating existing bias and discrimination. Without affirmative oversight AVs may not detect people with disabilities, particularly those who do not move or present as a vehicle has been trained to expect. In these cases, the vehicle's programming may inadvertently devalue disabled peoples' lives in its collision behavior.

A lack of disability representation within datasets creates significant risk for disabled people.

AV developers define what constitutes “normal” human appearance and movement for the purposes of identification by an AV’s decision-making. People with disabilities may be treated as “edge cases” and seen as less representative of the range of human experiences.

For example, a researcher tested a model with visual captures of a friend who propels herself backward in her wheelchair using her feet and legs. The AV’s system not only failed to recognize her as a person, but indicated that the vehicle should proceed through the intersection, colliding with her.

While there is a general lack of representation of disabled people in datasets used to train and test algorithms, disabled people who have additional marginalized identities, such as disabled women and non-binary people, or disabled people of color, are particularly underrepresented.

DREDF recommends standards be adopted for datasets and decision-making software, and should be subject to outside oversight and auditing. These standards must ensure the safety of disabled travelers and all pedestrians, cyclists and mobility device users outside the vehicle. Ideally, audits should be conducted both by external experts, who were not involved in development of the software under review, as well as disabled people. Involving the disability community in audits is important both because of the direct impact of AVs on disabled people and because of the relatively small number of disabled people who are involved in designing and developing AVs.

We also recommend safety evaluation reports include the accessibility features of the vehicle, whether testing is inclusive of disabled and other underrepresented people and whether people with disabilities were consulted as part of the design and testing. Finally, resources must be available for NHTSA and the U.S. Access Board to continue research and provide technical assistance to stakeholders to ensure fully accessible and safe service and compliance with the Americans with Disabilities Act.

DREDF views this moment as an opportunity to reimagine mobility in line with principles of equity, sustainability, community engagement and inclusion. We call on Congress to uphold the promise of AVs to transform the transportation system for the better, and ensure access to mobility and safety for all. Thank you for joining us today.

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[i] Rebecca Bellan (Nov 2022) Waymo can now charge for fully driverless services in San Francisco. *TechCrunch*. Available at: https://techcrunch.com/2022/11/09/waymo-can-now-charge-for-fully-driverless-services-in-san-francisco/. David Shepardson (March 2022) California issues permits to Cruise, Waymo for autonomous vehicle service. *Reuters*. Available at : https://www.reuters.com/technology/california-issues-permits-cruise-waymo-autonomous-vehicle-service-2022-02-28/.

[ii] National Highway Traffic Safety Administration (July 2022). Receipt of Petition for Temporary Exemption: General Motors; Various Requirements of the Federal Motor Vehicle Safety Standards for an Automated Driving System-Equipped Vehicle. NHTSA-2022-0067-0002. Available at: https://www.regulations.gov/document/NHTSA-2022-0067-0002.

[iii] Consortium for Constituents with Disabilities Transportation Task Force AV Principles (2022) available at: https://www.c-c-d.org/fichiers/CCD-Transpo-TF-AV-Principles-May-2022.pdf

[iv] Alliance of Automobile Manufacturers (an organization preceding the Alliance for Automotive Innovation) Workshop Series on AVs and Increased Accessibility (2019). Report, summaries and background materials available at: at: https://www.autosinnovate.org/avaccessibility

[v] Ian Moura (2022). Addressing Disability & Ableist Bias in Autonomous Vehicles: Ensuring Safety, Equity & Accessibility in Detection, Collision Algorithms & Data Collection. *Disability Rights Education & Defense Fund*. Available at: bit.ly/DREDFav