

Comment from Michael DeKort

I am a former system engineer, engineering and program manager for Lockheed Martin. I worked in aircraft simulation, the software engineering manager for all of NORAD, the Aegis Weapon System, and on C4ISR for DHS. I also worked in IT and Cybersecurity.

I am a member of the SAE On-Road Autonomous Driving Validation & Verification Task Force

I have also been presented the IEEE Barus Ethics Award

I would like to submit the following information for your consideration. It outlines why the use of public shadow driving is untenable and the casualties that have and will occur as a result are not necessary. The issue is not if steering wheels should be removed it is why are these AV makers using a process that can never get close to creating a legitimate AV and harming people for no reason when there is a far better way. That being aerospace/DoD/FAA level simulation and systems engineering. The paradigm should shift to 99.9% simulation, validated and informed by test tracks and the real world. Then move to test tracks then the real-world after proving they are ready for it.

It is impossible to drive the one trillion miles or spend over \$300B to stumble and restumble on all the scenarios necessary to complete the effort. Many of which are accident scenarios no one will want you to run once let alone thousands of times. Also handover cannot be made safe for most complex scenarios, by any monitoring and notification system, because they cannot provide the time to regain proper situational awareness and do the right thing the right way.

Regarding proper simulation. Unfortunately almost every simulation product in this industry is significantly flawed. They have significant issues with proper real-time and model precision. (Vehicles, tires, roads, sensors etc) this will lead to improperly training systems. false confidence and real-world tragedies.

(When I mention aerospace/DoD/FAA level simulation I am referring to DoD simulated urban war games when I mention this simulation tech is needed. Not air travel. DoD urban simulated war games are even more complex than what the public normally experiences because they drive outside the bounds of the roads and have to deal with the associated acts of battle. Anyone who says simulation cannot do most of what is needed here has not seen these systems.)

SAE Autonomous Vehicle Engineering Magazine End Public Shadow Driving
https://www.nxtbook.com/nxtbooks/sae/ave_201901/index.php

Common Misconceptions about Aerospace/DoD/FAA Simulation for Autonomous Vehicles
<https://medium.com/@imispgh/common-misconceptions-about-aerospace-dod-faa-simulation-for-autonomous-vehicles-2b3ad84b0aa1>

The Hype of Geofencing for Autonomous Vehicles
<https://medium.com/@imispgh/the-hype-of-geofencing-for-autonomous-vehicles-bd964cb14d16>

Rafaela Vasquez and Elaine Herzberg are both victims in Uber tragedy There is a better way
<https://medium.com/@imispgh/rafaela-vasquez-and-elaine-herzberg-are-both-victims-in-uber-tragedy-there-is-a-better-way-1fd0f2beb7fb>

The Crash of the Autonomous Vehicle Industry
<https://medium.com/predict/the-crash-of-the-autonomous-vehicle-industry-f71fd26c1ed0>

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