

NHTSA-2019-0102 – Advanced Driver Assistance Systems Draft Research Test Procedures

Michael DeKort Comments

1. NHTSA - Advanced Driver Assistance Systems Draft Research Test Procedures
 - a. Missing all relevant accident scenarios
 - b. Assumes AV systems do not have problems humans do not
 - c. Does not take in to account massive perception issues due to micro detection for ML
 - i. Patterns confuse or lock up system
 1. Could be on objects or road (shadows)
 2. Forces massive test of fabrics/patterns in massive time of day, weather and object combinations
 3. Shadow issue forces retest in most locations
 - d. Cannot be done in real world or on tracks
 - i. Cannot create most scenarios once let alone repeat
 - ii. Cannot test accident threads with safety drivers or other humans
 - iii. Need to use DoD simulation technology which can create a legitimate all model type visual and physics based digital twin (simulation technology, largely based on gaming, currently used in industry cannot do this. Too many real time and modeling architectural issues.)
 - e. Also does not include cybersecurity/hijacking or connectivity

Further information

Proposal for Successfully Creating an Autonomous Ground or Air Vehicle

<https://medium.com/@imispgh/proposal-for-successfully-creating-an-autonomous-ground-or-air-vehicle-539bb10967b1>

Autonomous Vehicles Need to Have Accidents to Develop this Technology

<https://medium.com/@imispgh/autonomous-vehicles-need-to-have-accidents-to-develop-this-technology-2cc034abac9b>

Using the Real World is better than Proper Simulation for AV Development - NONSENSE

<https://medium.com/@imispgh/using-the-real-world-is-better-than-proper-simulation-for-autonomous-vehicle-development-nonsense-90cde4ccc0ce>

Simulation can create a Complete Digital Twin of the Real World if DoD/Aerospace Technology is used

<https://medium.com/@imispgh/simulation-can-create-a-complete-digital-twin-of-the-real-world-if-dod-aerospace-technology-is-used-c79a64551647>

The Hype of Geofencing for Autonomous Vehicles

<https://medium.com/@imispgh/the-hype-of-geofencing-for-autonomous-vehicles-bd964cb14d16>

SAE Autonomous Vehicle Engineering Magazine - End Public Shadow/Safety Driving

https://www.nxtbook.com/nxtbooks/sae/ave_201901/index.php

My name is Michael DeKort - I am a former system engineer, engineering and program manager for Lockheed Martin. I worked in aircraft simulation, as the software engineering manager for all of NORAD and as a PM on the Aegis Weapon System.

Key Autonomous Vehicle Industry Participation

- Founder SAE On-Road Autonomous Driving Simulation Task Force
- Member SAE ORAD Verification and Validation Task Force
- SME - DIN/SAE International Alliance for Mobility Testing & Standardization (IAMTS) group to create sensor simulation specs
- Stakeholder for UL4600 - Creating AV Safety Guidelines
- Member of the IEEE Artificial Intelligence & Autonomous Systems Policy Committee (AI&ASPC)
- Presented the IEEE Barus Ethics Award for Post 9/11 DoD/DHS Efforts