WASHINGTON STATE AUTONOMOUS VEHICLE WORK GROUP

MEETING SUMMARY

Meeting:	Safety Subcommittee
Location:	Virtual Meeting - Zoom
Date:	June 9, 2021

Attendees:

Name	Organization
Bruce Agnew	ACES NW Network
Aidan Ali-Sullivan	Waymo
Debi Besser	Washington Traffic Safety Commission (WTSC)
Chief Gregory Cobb	Union Gap Police Department
Pete Corier	WTSC
Doug Dahl	TransitLab
Dr. Andrew Dannenberg	University of Washington
Mandie Dell	WTSC
Patricia Drennan	Venable, LLP
Tamara Jones	Washington State Transportation Commission
Joanne Kerrigan	WSTIP
Mi Ae Lipe	Driving in the Real World
Kyle Miller	Washington State Department of Transportation (WSDOT)
John Milton	WSDOT
Markell Moffett	WSP USA
Pam Pannkuk	WTSC
Manuela Papadopol	Designated Driver
Mathew Perkinson	Utilities and Transportation Commission
Abigail Potter	WA Trucking Associations
Ryan Spiller	Alliance for Automotive Innovation
Warren Stanley	WSDOT
Lt. Courtney Stewart	Washington State Patrol (WSP)
Brian Ursino	AAMVA
Dr. Yinhai Wang	Smart Transportation Applications & Research Laboratory (STAR Lab), University of Washington
Alan Werner	Washington Society of Professional Engineers
Bryce Yadon	Futurewise

WELCOME & INTRODUCTIONS
Manuela Papadopol & Debi Besser

- Introduction
- Walkthrough agenda

Topic closed.

AUTONOMOUS VEHICLE – LAW ENFORCEMENT CONSIDERATIONS

Brian Ursino – Director, Law Enforcement, American Association of Motor Vehicle Administrators

- American Association of Motor Vehicle Administrators (AAMVA) developed the "Safe Testing and Deployment of Vehicles Equipped with Automated Driving Systems Guidelines, Edition 2"[1]

- Purpose of the document is not to say whether or not to regulate automated driving systems (ADS), rather to facilitate a consistent regulatory framework for entities that choose to regulate

- Document provides guidelines for states, provinces, manufacturers and other entities

- AAMVA already working on Edition 3 of the guidelines, this is a rapidly changing industry

- Presentation today will cover areas within Edition 2, Chapter 6 Law Enforcement Considerations

- Subject matter experts in law enforcement from across the nation supported subgroup that developed Chapter 6 content

- Chapter 6 Law Enforcement Considerations

  - *Note this presentation does not cover all aspects of Chapter, focuses on key areas within Chapter 6 relevant to this subcommittee and current discussion*

  - Chapter 6 has a total of 36 recommendations – 16 recommendations for jurisdictions, and 20 recommendations for manufacturers and other entities (MOE)

  - Section 6.2 Crash and Incident Reporting

    - MOE recommendation #11: Design ADS to record vehicle location, behavior sensor data and the human machine interface (HMI). Law enforcement should be provided with access to this information as well as a minimum of 30 seconds pre-crash through the end of the crash event (cessation of involved vehicle movement) for completing a proper investigation.

      - Data 30 seconds pre-crash is critical, especially for vehicles with Level 2 and 3 automation where the vehicle is automated under limited circumstances

      - Investigators need to know who was in control of the vehicle leading up to the crash – the human or machine

      - Did the machine give the human driver a warning? Did the machine recognize a situation it was unable to handle and alerted the human to take over?

        - Need to know if an alert was given, exactly when it was given, and how long did the human take to react to the alert? Did they immediately take over or were they distracted and did not react quickly?

      - Crash reconstructionist needs to be able to reconstruct the sequence of events

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- Note that "post-crash" is the cessation of movement of all involved vehicles. This could be immediate, could take a minute. It depends on the vehicles involved, dynamics, force, etc.

  - MOE recommendation #12 – Manufacturers and other entities should include time stamping and GPS location in data collection mechanisms (DCM) data

    - DCMs are not the same as an electronic data recorder (EDR). There are other data collection mechanisms beyond the EDR that need to be included in the scope of data collection such as data stored in key fobs

    - Currently, when investigating a crash with vehicles from different/multiple manufacturers, retrieving data is difficult at best – there is a strong need to standardize the ability to retrieve needed data

  - 6.4 Distracted Driving

    - Recognized we needed to do a deeper dive but didn't have time to fall in the publication goals and timeline to address in Edition 2, developed a white paper to specifically address

    - [Strengthening Distracted Driving Education, Legislation, and Enforcement](2) [2] – released February 2021

      - 5 MOE recommendations, 2 jurisdictional recommendations

      - Contains model legislation for strengthening distracted driving laws

      - Manufacturers like to be individualized, name things differently (e.g. "autopilot")

      - A challenge in Washington is that the state is a hands-free state – Does that still apply if a person in a Tesla has self-pilot activated?

        - The police officer who sees it will see a person behind a steering wheel on the phone – How do they know if the person is in physical control of the vehicle or if automation is in control? Is it probable cause and they should take enforcement action?

      - *Note that Washington State has one of the strongest distracted driving regulatory frameworks in the country*

  - 6.6 Law Enforcement and First Responder Interaction Plans

    - Law Enforcement Interaction Plans (LEIP) and Law Enforcement Protocols are different

      - LEIP documents are written by the MOE, for the law enforcement audience – provides information on the vehicle(s), where things are located, how features function, etc.

      - Law Enforcement Protocols are written by law enforcement for law enforcement – talks about policy framework of law enforcement officers and how they should interact with the vehicles

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[2] AAMVA's Strengthening Distracted Driving Education, Legislation, and Enforcement
https://www.aamva.org/DistractedDrivingEducationLE-Whitepaper/

- Arizona example – The AZ Department of Public Safety (DPS) and the Arizona Highway Patrol authored a law enforcement protocol document for all law enforcement in the state of Arizona. The document was funneled through the Arizona Association Chiefs of Police to make available to all law enforcement across the state (county sheriffs, municipalities, etc.). It did not dictate policy but rather provided general policy guidelines and recommendations that Chiefs and Sheriffs could choose to adopt
    - SAE recently released LEIP best practices document – AAMVA subgroup is going to crosswalk the SAE document with Edition 2 to identify where we might revise our best practices to align with SAE (and vice versa), do not see any direct conflicts right now, do see areas to improve

- AAMVA committed to keeping pace with the evolution of automated vehicles, expecting to publish Edition 3 September 30, 2022

- [Automated Delivery Vehicles and Devices White Paper](#)[3] – published May 2021

    o Whitepaper focuses on automated delivery vehicles and devices that are humanless, operate on the travel portion of roadway operate on the sidewalk or other non-vehicle pathways

- Federal Role in ADS

    o The US Department of Transportation (USDOT) published the [Automated Vehicles Comprehensive Plan](#)[4] in January 2021, which supersedes the previous four guidance documents, and defines three goals to achieve USDOT's vision for ADS:

        - Promote collaboration and transparency

        - Modernize regulatory environment

        - Prepare the transportation system

    o Political reality is that there has been an administration change which may impact this guidance

        - This document was drafted and approved under the previous administration with Secretary Chao

        - With a new administration and Secretary Buttigieg, this guidance could be changing

        - USDOT and the National Highway Traffic Safety Administration (NHTSA) is evaluating this guidance

    o Federal vs. State responsibilities

        - Federal responsibility for the safety of the vehicle, mainly through NHTSA's Federal Motor Vehicle Safety Standards (FMVSS)

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[3] AAMVA's Automated Delivery Vehicles and Devices Whitepaper:
https://www.aamva.org/AutomatedDeliveryVehiclesAndDevicesWhitepaper-May2021/
[4] USDOT Automated Vehicles Comprehensive Plan: https://www.transportation.gov/av/avcp

- State/jurisdictional responsible for the safety of the driver, ensuring drivers are safe and qualified to operate the motor vehicle safely – Driver credentialing, enforcement of rules of the road, etc.

- Don't see the responsibilities changing with ADS

  o SAE Industry Technologies Consortia (SAE ITC) Automated Vehicle Safety Consortium (AVSC) published [Best Practice for First Responder Interactions with Fleet-Managed Automated Driving System-Dedicated Vehicles (ADS-DVs)][5]

  o Virginia Tech Transportation Institute (VTTI) was awarded two USDOT grants to advance research on the safe integration of automation into US roadways

  o Governors Highway Safety Administration (GSHA) awarded a grant for law enforcement, first responder, and crash investigator preparation for automated vehicle technology – publication anticipated October 2021

    - GSHA annual meeting planned in person in Denver, CO in late September 2021 – hoping to unveil this document

    - Purpose of the document is to get our arms around what is currently available in terms of training and preparedness for law enforcement and first responders to do a gap analysis of what is needed but does not exist and how to fill those gaps

    - Pushing for standardized national curriculum – Currently dangerously teaching different things in different jurisdictions

    - Also pushing for a delivery method to push out to as many First Responders, Emergency Management, and Law Enforcement as possible that have to engage in this space

    - This is not just about ADS-equipped vehicles, other areas of automated and vehicle technologies

      - Example: Electric vehicles and battery fires – law enforcement and reigniting hours after being extinguished

- Questions:

  o When the driver needs to take control, autonomy system hands off to the driver, how does that apply in the case of remote operations – a teleoperator sending waypoints if a system is failing or the teleoperator taking over?

    - Learning more about it, there is a whole host of concerns around teleoperations

      - Remote operator having control of more than one vehicle

      - How do we determine a remote operator is in control of the vehicle?

      - How do we investigate if the remote operator was under the influence?

      - What if the remote operator is in a different state?

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[5] SAE ITC AVSC's Best Practice for First Responder Interactions with Fleet-Managed Automated Driving System-Dedicated Vehicles (ADS-DVs) https://avsc.sae-itc.org/principle-5-5471WV-45187C7.html?respondentID=27577046

- - Questions we are starting to engage in discussion with the automotive alliance and other partners to discuss these concerns and what kind of measures we can recommend to ensure remote operation happens as safely as possible, and allows law enforcement the ability to investigate things such as impaired driving
  - Training and standards for teleoperations is important – need to be able to assist, drive, and monitor for multiple classes of vehicles, understand complexities around this task
  - Recommendation that remote operators be endorsed at the appropriate level (e.g. remote operator operating a heavy truck remotely needs to have a commercial drivers license – There could be loopholes / grey areas in state laws and the FMVSS that need to be identified and addressed
- **ACTION ITEM:** Subcommittee staff will post AAMVA's presentation on the Safety Subcommittee's meeting page[6]

Topic closed.

PUBLIC COMMENT AND OPEN DISCUSSION

- Public comment
  - *No public comment*
- Open discussion:
  - *No open discussion*

MEETING ADJOURNED

Next AV Safety Subcommittee meeting:
Wednesday, September 8, 2021 @ 10 am[7]

NOTE: The July 14, 2021 Safety Subcommittee meeting will be cancelled due to conflict with the Automated Road Transportation Symposium[8] (formerly AVS)

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[6] June 9th, 2021 Safety Subcommittee meeting materials: https://avworkgroupwa.org/committee-meeting/safety-subcommittee-meeting-21
[7] September 8th, 2021 Safety Subcommittee meeting materials: https://avworkgroupwa.org/committee-meeting/safety-subcommittee-meeting-24
[8] Automated Road Transportation Symposium: https://trb.secure-platform.com/a/page/arts2021