WASHINGTON STATE AUTONOMOUS VEHICLE WORK GROUP

MEETING SUMMARY

Meeting: Safety Subcommittee
Location: Virtual Meeting - Zoom
Date: August 27, 2020

Attendees:

Name	Organization
Ted Bailey	Washington Department of Transportation (WSDOT)
Shelly Baldwin	WTSC
Debi Besser	Washington Transportation Safety Commission (WTSC)
Daniela Bremmer	WSDOT
Kenton Brine	NW Insurance Council
Sheri Call	Washington Trucking Association
Barb Chamberlain	WSDOT
Brian Chandler	DKS Associates
Holly Cocci	Gordon Thomas Honeywell Governmental Affairs
Lt. Tim Coley	Washington State Patrol
Peter Corier	WTSC
Doug Dahl	TransitLab Consulting – TARGET ZERO
Dr. Andrew Dannenberg	University of Washington
Mandie Dell	WTSC
Representative Mary Dye	Washington House of Representatives
Rose Feliciano	Internet Association
Katharine Flug	Washington Department of Health
George Ivanov	Waymo
Francois Larrivee	Hopelink
Mi Ae Lipe	Driving in the Real World
Kyle Miller	WSDOT
John Milton	WSDOT
Markell Moffett	WSP USA
Pam Pannkuk	WTSC
Manuela Papadopol	Designated Driver
Ryan Peters	National Highway Traffic Safety Administration (NHTSA)
Terry Ponton	WTSC
Paula Reeves	Washington Department of Health
Jason Sharp	Unknown
Sadeeq Simmons	Washington Department of Licensing
Ryan Spiller	Alliance for Automotive Innovation
Warren Stanley	WSDOT

Name	Organization
Derek Viita	Strategy Analytics, In-Vehicle UX Service
Shannon Walker	City of Seattle
Yinhai Wang	University of Washington
Alan Werner	Washington Society of Professional Engineers
Ariel Wolf	Self-Driving Coalition for Safer Streets

WELCOME AND INTRODUCTIONS
Manuela Papadopol

- Introductions
- Review agenda

Topic closed.

AV Workgroup Executive Committee Updates
Debi Besser

- At June 24 Executive Committee meeting, a poll was conducted on focus areas and actions to get feedback from the Executive Committee on potential priorities moving forward
    - Looking to better understand what the Executive Committee is looking for from the subcommittees
    - Consultants went through the polling exercise results, synthesized what they heard from the Executive Committee
    - Draft results report and recommendations matrix out for review by the Executive Committee, to be brought to the September 23 meeting for more formalization
        - Report and recommendations matrix are suggestions, ideas of what the subcommittees can do, not a "must"
- Encourage all subcommittee members to attend the Sept 23 Executive Committee meeting

Topic closed.

Feedback on HB2470 Language
Manuela Papadopol

- Draft HB2470 feedback document with subcommittee feedback incorporated
- Differing perspectives reflected in the document
- Today, review and opportunity for final input
- If everyone happy with the outcome today, will submit to the Executive Committee as a discussion point

- Overview/background on how Safety Subcommittee has approached feedback on HB2470:
  - Goal is to provide insight and recommendations from a safety perspective
  - Executive Committee asked all subcommittees for feedback on the language of HB2470 this year
  - Safety Subcommittee has been gathering all feedback received on HB2470 language, differing perspectives, not trying to get consensus
  - Bill proposed last session, did not get very far in the process, this is an opportunity to discuss and provide feedback if it gets proposed again
  - Last Safety Subcommittee, we gathered feedback, and have received feedback between then and this meeting as well
- Definitions:
  - Sticking with the SAE Levels 1 through 5
  - Looking to define human intervention, human assistance when autonomous vehicle encountering situation that doesn't allow it to operate
    - Teleoperator to take control, provide assistance to vehicle
    - Currently, human assistance is not part of the definition
    - Our feedback is to consider human intervention as part of definition
    - Need to have consistent definitions that align with other states and federal laws
  - Questions/comments?
    - Incorporation of human assistance – Want to confirm that there is not an assumption that there will *always* be human assistance capabilities…not required for all levels of automation, correct?
      - Correct. Would not apply to levels 4 or 5 when AV is operating correctly. Human intervention may be required in the case of an incident or AV system failure.
    - Emphasize the need for consistency with other states and federal laws and regulations, automakers cannot make 50 different versions of a vehicle
    - Suggestion to adjust language so that it doesn't read that teleoperations is *expected* but rather than some companies may use it
    - Suggestion to include the name of the commenter to submit with the document so it is documented and passed along
      - Noted this is a good idea and can be done moving forward, too far down the road with this document/exercise to capture for HB2470
- Vehicle registration:
  - It is up to WA to determine what which vehicles are to be registered as Levels 4 or 5 based on traffic laws within the state
    - May need to defer to NHTSA for national traffic laws
      - Federal government regulates the vehicle, States regulate the driver. For Level 4/5 vehicles, the lines blur.

- Hope that whether a Level 4 vehicle is suitable to drive on public roads would be a Federal (NHTSA) responsibility
    - Do we need to have the traffic laws adjusted specifically for AVs?
        - Not sure that WA should certify the operation/functionality/level of autonomy a vehicle is to operate in their state
        - There is not industry interest in revising existing traffic laws in WA
    - How do operational safety provisions work as we have added multi-lane roundabouts? Same kind of thing as the Michigan U-turn problem?
        - Any operational design domain (ODD) in any geography, there is programming for traffic law requirements
            - Expectations are currently on the developer to program whether an ODD is in scope or not for the AV
            - Up to the company to determine if their ODD can handle something like a multi-lane roundabout
            - New conditions, new traffic laws happen all the time – something industry is planning for
- ACTION ITEM: Debi Besser will send out the latest version of the feedback document to subcommittee members
- ACTION ITEM: All subcommittee members, please provide feedback between now and the September 17th subcommittee meeting

Topic closed.

Clarifications/Additions to HB2676 for Next Legislative Session
Manuela Papadopol

- Licensing Subcommittee discussed adding a Law Enforcement Protocol for driverless testing to HB2676 in next legislative session, asked Safety Subcommittee to discuss
    - What have other states done?
    - What are some best practices that could be incorporated?
- Next step is to draft recommendations for discussion, bring to October Safety Subcommittee meeting for voting
- Law Enforcement Protocol would encompass driverless AV testing and deployments of AVs on WA public roadways
    - How to safely remove a vehicle from the roadway
    - How law enforcement can recognize if/when a vehicle is in autonomous mode

- o How to safely tow an AV
  - o How to communicate with fleet specialists while vehicle is in operations
  - o Note that most AV law enforcement protocols are repeating other state laws
- We do not want to conflict with what other states are doing – A handful of states have implemented something like this (CA and AZ two examples)
  - o Allows companies to have one guide for all states, rather than having different ones for each state – there are differences in geographies between states but the vehicle and its capabilities are the same
  - o Consistency also helpful for multistate law enforcement, such as the American Association for Chiefs of Police
- Suggestion that this may be premature – There is no driverless testing in WA. If testing gets to that phase, can all work together to make sure law enforcement criteria aligns with what other states are doing and are educational for law enforcement, not confusing
- How the protocol is implemented and managed differs between states
  - o Arizona has a database that law enforcement can access and pull from
  - o California has a 1-800 hotline to call
  - o Other states are operating off paper
  - o Helpful for industry to understand what barriers there are in WA for law enforcement that would require a protocol
- Goal for this is to be consistent at a state and federal level for the safe testing of AVs
  - o As the Safety Subcommittee, we want to make sure safety is taken into consideration if this is added to HB2676
  - o Should not have a huge impact on law enforcement in the testing sphere – May in mass production down the road
- Law enforcement on the call noted that they aren't seeing anything shaping up in the AV testing space that gives them pause or concern
  - o If there is a collision, officers are going to go in and do the same type of job we do now, collect evidence in the same ways
  - o Maybe having training on how to get video, black box data would be helpful
  - o Until the driving environment changes dramatically, AVs need to just follow the rules of the road as they stand now
- Law enforcement protocol could be helpful for understanding how to pull an AV over and interact
- Is there anything in HB2676 now that would prevent companies from coming to WA to test? Anything that would encourage companies to come test?
  - o HB2676 went through towards the end of last session, there were things industry wanted to get in the bill that didn't make it
  - o Concerns over reporting and registration issues – If those stay as-is in the bill, companies may not come to test in WA

- o Self-Driving Coalition for Safer Streets, Internet Association, and other groups in the industry are coming up with changes to this process more user friendly while keeping in the safety aspects, plan to introduce those in session
  - ▪ Timing of when issues are put on the table are important – Maybe this subcommittee review process is not the right place to do it, however the challenge becomes if comments come out of subcommittees that are not reflective of all perspectives, when it gets to legislative staffers tweaking the legislation, could head in the wrong direction
    - • Automakers do not want come forward just us, working with industry to come forward as a whole… if and when we come to agreement, we will share the industry's feedback
  - o Waymo started testing before the WA Executive Order was issued
    - ▪ Testing with a driver, not Level 4 testing
    - ▪ Conducting weather-based testing to gather data, Waymo has done in states for years
    - ▪ Nothing specific preventing Waymo from testing in WA
  - o Would be beneficial to the industry to not continue having more changes – The appetite to continue changing things prevents regulatory certainty and may start driving away companies from testing
  - o Balance to figure out what testing framework is needed
    - ▪ Some states that have a lot of testing have less of a self-certification approach and more of a shared risk model – Government endorses testing and extends the risk to the industry
    - ▪ Self-certification process is maybe too hands off – We don't want to create a patchwork of regulation, but is there an approach that more hands on that may be more effective?
      - • Seems states with more testing have more hands-on approaches
    - ▪ There is value in stability but needs to balance against the value of making subsequent, incremental changes
- • Neither California nor Arizona require Law Enforcement Protocols in law – in regulation instead
- • Suggest evaluating the process
  - o Core framework for AVs in WA is under the Executive Order
  - o Legislation supplements or modifies
  - o Suggest implementing things like Law Enforcement Protocol at a lower level, via cabinet agency rule or something that allows it to be more fluid and flexible
    - ▪ One line in the Executive Order, statute, etc. can take years
  - o If WA asked companies to provide a protocol voluntarily, likely that most companies would do it
- • ACTION ITEM: Subcommittee support to draft recommendation based on today's discussion and send out to subcommittee members for consideration by next subcommittee meeting.

Topic closed.

MEETING SUMMARY

Future Meetings

Debi Besser

- Next meeting, we want to talk about the safety goal in the CAT policy goals adopted by the Executive Committee in 2019
    - Make sure language aligns with what we believe safety goal should be or make adjustments
    - Look at draft strategies and actions
- Other topics subcommittee members want to discuss? Learn? Speakers to invite?
    - Partners for Automated Vehicle Education (PAVE) or what PAVE has for their guest panelists on safety related to AVs
        - PAVE holds a webinar almost every week, has great panelists – Industry speakers, automakers, SAE – can see replays of all webinars here
        - Topics include safety, technology, nomenclature, etc.
    - Kelly Funkhouser from consumer reports – highlight importance of ADAS terms and untangling nuisances
    - George Benson from AAA – Involved in ADAS education
    - SAE levels from the automakers perspective
        - Could have a Level 2 vehicle with auto emergency braking, driver can turn feature off and it becomes a Level 1 or 0
        - Vehicles don't always mean the same thing or remain in the same classifications – How we understand and talk about those nuisances
    - Algorithm bias would be an important contribution to the safety discussion
        - Dr. Safiya Noble – She goes beyond AVs, but relevant around factors like skin color detection
        - Active transportation users, people using bicycles or tricycles present the most variety in shape, would be good to understand more around detection for all modes
        - https://safiyaunoble.com/
    - Missy Cummings from Duke University on human factors and safety concerns
        - More nuts and bolts level…what a human is good at, not good at – Related to automating in all verticals, not just AVs
    - Arizona State Patrol
    - Updates from previous presenters on AV safety testing – what is working well, what needs to be improved

Topic closed.

Recap and Closing
Debi Besser

- PAVE launched a Public Sector Advisory Council
  - WTSC and WSDOT are both part of the council
  - Link to the council page: https://pavecampaign.org/advisory-councils/
- Encourage everyone to join the AV Work Group Executive Committee meeting on September 23
- Link to meeting information: https://avworkgroupwa.org/committee-meeting/executive-committee-meeting-7

Topic closed.

MEETING ADJOURNED.