TECHNICAL MEMORANDUM

TxDOT IAC – Technical Support to the CAV Task Force

DATE: November 12, 2021

TO: Zeke Reyna, TxDOT
Strategic Research Analyst, CAV

COPY TO: TTI_Reports@tti.tamu.edu
Tim Hein, Research Development Office, TTI
Ed Seymour, Executive Associate Agency Director, TTI
Robert Brydia, Senior Research Scientist, TTI

FROM: Beverly Kuhn Research Supervisor
Senior Research Engineer Texas A&M Transportation Institute

RE: Data, Connectivity, Cyber Security and Privacy Subcommittee
October 26, 2021, Meeting Notes

Attendees:

Alex Payson	City of Austin
Beverly West	Texas Department of Transportation
Bobby Cottam	Burns and McDonnell
Brent Skorup	Mercatus
Brian Steiner - CHAIR	Cisco
Cheng Zhang	Texas A&M Transportation Institute
Darran Anderson	Texas Department of Transportation
Erik Simpson	Vantage Trading LLC
Finch Fulton	Locomation.ai
James Kuhr	Texas Department of Transportation
Joe Hunt	Texas Department of Transportation
Leighton Yates	Alliance for Automotive Innovation
Robert Brydia	Texas A&M Transportation Institute

Sam Dreiman	Argo AI
Samer Rajab	Locomation.ai
Sly Majid	Argo AI
Sumeet Kishnani	Stantec
Thomas Bamonte	North Central Texas Council of Governments
Tony Reinhart	Ford
Zeke Reyna	Texas Department of Transportation

I. Opening Comments/Roll Call – Zeke Reyna, TxDOT
- Welcome to all subcommittee members
- Roll call of members and attendees
- Introductions of meeting facilitators

II. Chair Welcoming Statement – Brian Steiner, Cisco
- Thank you for the preparation, drive, transparency and open discussion in these meetings
- All that helps us navigate and get to end solutions
- Looking forward to new insight and discussion today

III. Preview of Website Changes – TTI Team
- We are working on improving the CAV Task Force website (currently in staging) to be made public within next two weeks.
- We've taken some of the products from last year, such as the Glossary from Terminology paper. It is now a completely interactive online tool.
  - TxDOT to do outreach to other states and entities to make sure awareness of this information and come to agreement about best definitions and verbiage.
- Revamped News links to display top ten, most recent. Updated weekly.
- Links to each subcommittee at bottom of webpage. Subcommittee pages have been updated with graphics and complete set of documents (meeting notes and products)
- The Deployment Map has been updated. We have listing that is being validated via websites and press releases.
  - This is a key component of the website, but we depend on your interaction for that.
    - We have chosen to display with pinpoints rather than sections of roadway.
    - Click on a pinpoint and more information will display.
    - If you would like your deployment added, please submit city and brief paragraph description via email to Zeke Reyna and/or Bob Brydia so we can keep the listing as accurate as possible.
- We would love to have your feedback to make sure we are capturing all information available on this website.

IV. Feedback Exercise on Subcommittee Deliverables – TTI Team

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- Please refer to read ahead material sent via email, accessible on the Mural Board.
- This document was laid out so that all participants could see:
    - What we are going to do
    - How we are going to do it
    - Who we are going to talk to
    - The subjects we want to talk about
- Today's meeting is important, as it sets the framework for everything we are doing now through the end of the calendar year.
- Process to Product Infographic

FOCUS OF PLAN

RESEARCH
- USDOT Data Exchange. DOD basis.
- Are we going to have to build our own or could we use something existing?
- Work zone data exchange
- Funding Mechanism

IDENTIFY GAPS
- What the are real specific things that have to be asked and discussed.

CONDUCT INTERVIEWS

POTENTIAL FRAMEWORK POINTS
- understanding the response from agencies. Do we need to change our responses to information received?
    - Ex: Emailed picture of a pothole to TxDOT
- pick something (some aspect of data) to start with and see how it works. How does it work in practice? Be specific.
- Many conversations necessary to define and clear the process for sharing data
- Should work zones be the starting point?
- Maybe the first utilization is work zones
- striping may be another area

QUESTIONS TO ASK
- Boil down on what types of data are we looking for?
- what data might be valuable for transportation
- Performance characteristics of vehicles, following distances, acceleration rates etc. to model expected impacts to roadways
- How often would the data be updated?
- Can the questions be more aspirational? If the data can be fully trusted (accuracy, availability), what would the magic data fairy bring you?
- Some performance metrics for sharing data. how do we know we're making an impact?
- Standardizing data across platforms
- Understand the costs associated with both setting up an exchange and participating.
- Anomalies, challenges. What could the state agency do differently to facilitate CAV operations. How could the state provide 3d visual representation of the roadway?

- Frequency of data provision? for data to remain relevant. Does frequency relate to participation?
- How do we ensure that the data exchange has value and a value proposition for everyone involved?
- How would an entity gain access to the data exchange?
- Are there minimum sharing requirements, and if so, who would enforce them?

V.   Next Steps – Zeke Reyna
- Thanks to everyone for sharing and input. Great Information
- We will take this information, dive in, and start engaging
- Time frame to bring information to this subcommittee for dialogue should be 4-6 weeks but will be determined in process
- If you have information you want included on the CAVTF website, please let us know ASAP as it will be going live soon.

VI.   Closing Remarks – Brian Steiner
- As always, very interesting pieces coming together to bring value
- Thanks to everyone for participating with questions and comments

Additional comments in chat:
3:22 PM
Please post link to data exchange just referenced. Thanks.

Link https://usdot-voices.atlassian.net/wiki/spaces/VP/overview
Link: https://transportationops.org/resources-connected-and-automated-vehicles

Here is the page on Work Zones (it is the platooning work group that is focusing on it...but the work will be broadly applicable)
https://usdot-voices.atlassian.net/wiki/spaces/VCPWG/pages/1295122433/Draft+Platooning+Scenario+Refinement

3:34 PM
Are we limiting data exchange to TxDOT and its system or are we going to cover all roadways and all IOOs?

3:35 PM
I don't think its limited to just TxDOT.

What helps one group could help others, too

3:38 PM
Work zones are important--but what about roadway issues that impact AV operations such as worn/conflicting striping?

3:41 PM
Truck parking could be the second use case - showing availability for drivers as well

3:42 PM
https://datahub.transportation.gov/Roadways-and-Bridges/Work-Zone-Data-Exchange-WZDx-Feed-Registry/69qe-yiui

3:42 PM
I believe work zones are a priority topic for AV, especially that it would impact the L1 to L5 operation.