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## TECHNICAL MEMORANDUM

### TxDOT IAC – Technical Support to the CAV Task Force

**DATE:** July 19, 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  
July 12, 2021, Meeting Notes

#### Attendees:

Ashley Myers	Grace & McEwan
Beverly Kuhn	Texas A&M Transportation Institute
Beverly West	Texas Department of Transportation
Blake Calvert	Texas Department of Transportation
Bobby Cottam	Burns and McDonnell
Brent Eastman	Texas Department of Transportation
Brian Steiner - Chair	Cisco
Darran Anderson	Texas Department of Transportation
Donald Davidson	Volkswagen Group of America
Erik Simpson	Vantage Trading LLC
Jeff Stewart	ATT
Jordan (Alex) Payson	Austin Transportation Smart Mobility
Katie Carmichael	Nuro

Kellen Pucher	Panasonic
Kelly Curbow	AT&T
Leighton Yates	Alliance for Automotive Innovation
Lori McMahan	Toyota
Matthew Smith	Michael Baker International
Mona Niazi	Matz & Co
Reza Langari	Texas A&M
Sam Dreiman	Argo AI
Steven Smith	McKinsey & Company
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 next round of meetings and looking at topics for this upcoming year and possibility to expand on ideas from last year.
- Roll call of members and attendees
- Introduced meeting facilitators.

**I. Chair Welcoming Statement – Brian Steiner, Cisco**

- Brian welcomed everyone and grateful for a new round of discussion.

**II. Review of Meeting Structure – Beverly Kuhn**

- Review of Mural Board
  - Basic overview of how meeting structured on Mural and how members of the subcommittee can interact with it.

**III. 2021 Subcommittee Opening Facilitated Discussion – Robert Brydia**

- Opportunities Identified from 2020 Meetings (*comments noted*)
  - Which entities are collecting, storing, and using what CV and AV data - how, for what purposes, and with what protections?
    - *TxDOT: information about pavements; data related to need for maintenance.*
    - *Are current schemas and technology processes adequate for data sharing? Are there security issues related to that as well? Want to be on the leading edge.*
    - *in the hybrid of managed lanes, is there a way to offer incentives for MLs to encourage drivers to utilize specific technologies.*
    - *TxDOT: work zone safety information*

- *Panasonic: focused on CV technology; looking at jobs to be done framework (use cases, how is the data going to be used, first)*
    - *TxDOT: challenge is that there is so much data / what is most useful? pavements, crashes, hard braking, seat-belt data (evaluate click-it-or-ticket campaigns)*
    - *Examples: prevent and respond to incidents; empowering or improvement mobility; planning; secure of tomorrow (alternatives to the gas tax)*
    - *TxDOT: narrow down the potential data sets that the public sector can provide to the private sector and vice versa (data sets, use cases, etc.)*
    - *Who should be owning/generating the data?*
    - *e.g., high resolution mapping should it be done by each private company or should a public agency do it once and distribute.*
    - *Consider having a focus on where data gaps are: Determine what is needed, and find data to fill that, rather than trying to figure out how to use data.*
  - *What data gaps exist that hinder innovation and furthering the public interest?*
    - *the cost to map the roadway is a large part of the implementation cost for a new corridor and can be a hindrance; no mechanism to share that data and each entity would need to create their own map.*
    - *Is there a way to make this a one and done (public agency develop and then share)?*
    - *TxDOT: lack of data standardization - is the data being collected by private vs. public sectors different or similar so that it can be shared?*
    - *What are companies currently offering? What are the current repositories that exist and what is available?*
    - *There is a plethora of data sources that it is difficult to have a complete inventory. Need that so that entities know what is available for different applications.*
  - *What data can be shared or exchanged to facilitate the safe and successful integration of AVs and CVs into the transportation ecosystem?*
    - *Covered under previous opportunity.*
  - *What security and privacy protections need to be addressed and incorporated into AV and CV data collection and sharing?*
    - *individuals vs. IP on the agency level? both*
    - *PII for both the individual and the entity is important.*
    - *Are there standardization opportunities for security and privacy? TxDOT tends to follow the NIST standards; is something that public and private sector could agree to without having to reinvent the wheel.*
    - *This is tricky since a lot of the entities are not operating at scale; need to be sensitive to that factor.*
- Potential topics for 2021 (comments noted)
  - **Topic 1:** Items surrounding data exchange: (covered under Opportunities)
    - a. Which entities are collecting, storing, and using what CV and AV data—how, for what purposes, and with what protections?

- *Lots of discussion that likely 1a will be the jumping off point for this topic; will get really complicated very quickly.*
  - b. What data gaps exist that hinder innovation and furthering the public interest?
  - c. What data can be shared or exchanged to facilitate the safe and successful integration of AVs and CVs into the transportation ecosystem?
  - d. What security and privacy protections need to be addressed and incorporated into AV and CV data collection and sharing?
    - <https://www.standards.its.dot.gov/LearnAboutStandards/ITSStandardsBackground>
    - <https://www.hl7.org/>
- **Topic 2:** Need to consider broadband from the subcommittee's perspective. Represents a huge change in how we might do things. Consider the infrastructure piece and where that stands, especially as related.
  - *Currently have a Division of Broadband - does this change things?*
  - *recent guidance from FHWA making it clear that broadband can be considered a utility; how does that factor into TxDOT's handling of broadband and potentially for CAVs?*
  - *Recent legislation allows broadband to be in the ROW for free via permit like other public utilities.*
- **Topic 3:** DAVI platform items: Data for Automated Vehicle Integration
  - <https://www.transportation.gov/av/data>
  - *Work zone data exchange could be a connection point for this Task Force and the WZDE Program could be an opportunity to leverage activities.*

#### IV. Voting – Beverly Kuhn

- Each person gets two votes regarding interest from committee on these topics.
- Voting Outcome:
  - 10 votes for Topic 1
    - 1 vote for Topic 1a
    - 1 vote for Topic 1b
    - 1 vote for Topic 1d
  - 5 votes for Topic 3
  - 3 votes for Topic 2

#### V. Next Steps – Zeke Reyna / Brian Steiner, Cisco

- Meet once per month.
- Next meeting these topics will be broken down into more detail.
- Thanks to everyone for participating.

#### VI. Closing Remarks – Brian Steiner, Cisco

- Look forward to making progress with next meetings.

Notes and Links shared in chat:

[4:42 PM]

<https://www.transportation.gov/av/data>

Data for Automated Vehicle Integration (DAVI) Overview

The U.S. Department of Transportation (U.S. DOT) launched DAVI as a multimodal initiative to identify, prioritize, monitor, and – where necessary – address data exchange needs for automat...[www.transportation.gov](http://www.transportation.gov)

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one lesson we can draw from is it seems the transit interoperability standards are quite a bit behind what HHS has done on the health care side. UTDOT would likely benefit from taking the HHS interoperability standards to get the industry ahead. As we can see the USDOT status is attached, and we can see this is "a work in progress"...whereas HHS for health data has this basically a good 5 years ahead...

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<https://www.standards.its.dot.gov/LearnAboutStandards/ITSSStandardsBackground>

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for reference...these are the HHS standards

<https://www.hl7.org/>